The Science of LONGEVITY

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Research Empowered

THE SCIENCE OF LONGEVITY:

How to Live a Long & Healthy Life

BY GREENMEDINFO RESEARCH GROUP

CONTENTS

"A human being would certainly not grow to be seventy or eighty years old if this longevity had no meaning for the species. The afternoon of human life must also have a significance of its own and cannot be merely a pitiful appendage to life's morning."

- Carl Jung

How would you feel if you could extend your life by 10 years? What about 20 or even 30? What if you were not only able to extend your lifespan, but also your *healthspan*—the years you spend disease and disability-free?

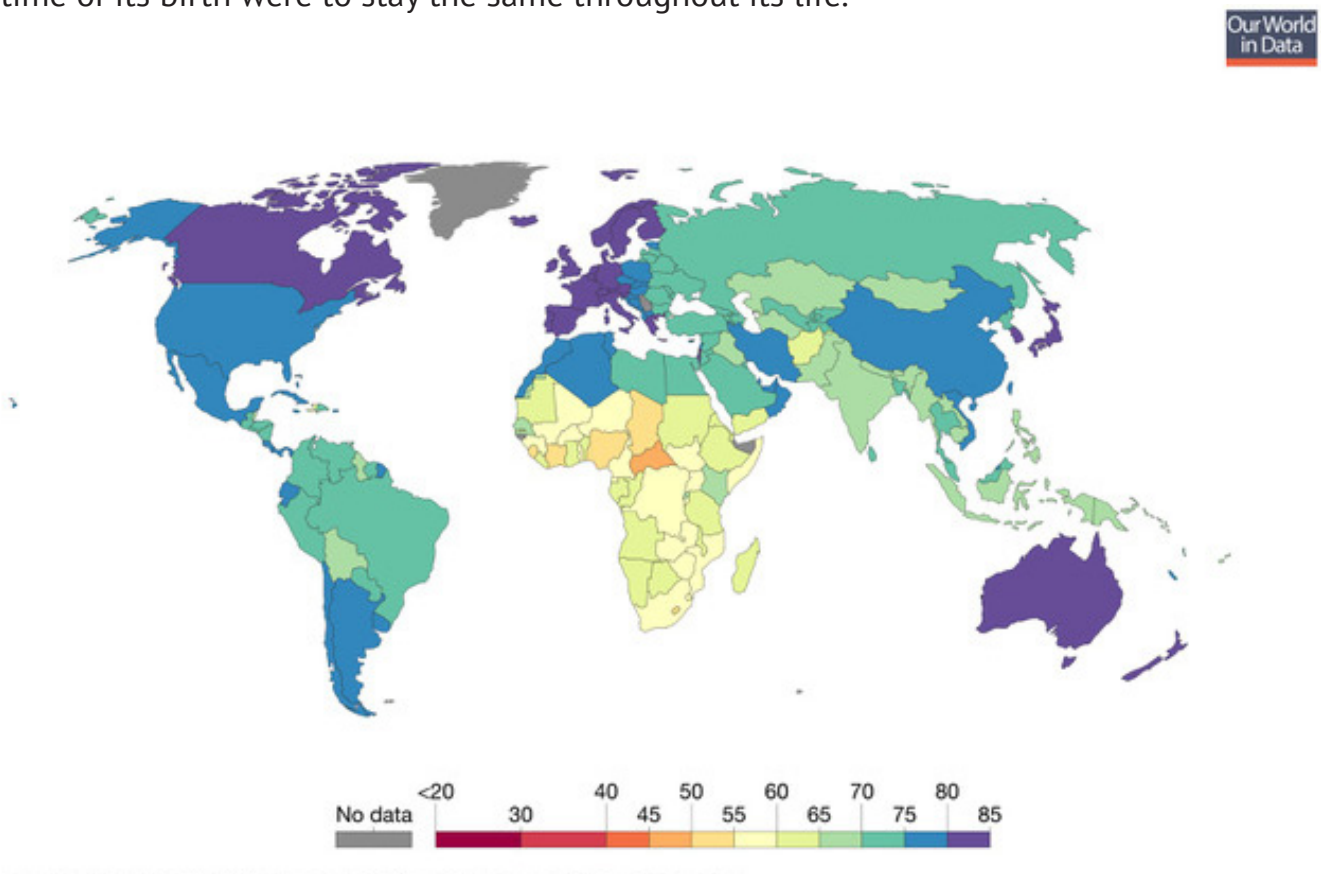
Today scientists around the globe are investigating what it takes to do just that, and they are closer than ever before. Answers may arrive just in the nick of time because the "Silver Tsunami" is coming—a groundswell of older individuals who will be retiring and facing a variety of health and socioeconomic challenges, for themselves and for society as a whole.

America's population is aging. Estimates are that by 2050, 20 percent of our population will be over age 65, compared to 15 percent today. The American lifespan is approaching 80 years—for men it's 76 and for women 81. In 1950, life expectancy had people living eight years post-retirement but today, retirement lasts nearly 20 years!

With all the money Americans spend on health care, it certainly isn't translating into life expectancy. According to the World Health Organization, the US ranks 30th in life expectancy. Japan ranks 1st.

Life expectancy, 2013

Shown is period life expectancy at birth. This corresponds to an estimate of the average number of years a newborn infant would live if prevailing patterns of mortality at the time of its birth were to stay the same throughout its life.



Source: *Max Roser (2018) - "Life Expectancy". Published online at OurWorldInData.org. Retrieved from: 'https://ourworldindata.org/life-expectancy' [Online Resource]*

The silvering of our population would not be such a concern were it not for the fact that in today's world, advanced age is not accompanied by good health in the majority of instances. Chronic disease is at an all-time high, and our world—along with our bodies—are riddled with toxicity from the foods we eat, the water we drink, and the air we breathe. One grim statistic is that by the year 2050, half of all Americans age 65 or older will suffer from Alzheimer's disease.[1]

Toxicity plays a heavy role in the so-called "age-related diseases" that are so ubiquitous today and is likely a major factor in our subpar global life expectancy ranking.

And then there are the Centenarians. They are the fastest growing segment of the American population with numbers doubling every decade. By 2050, the number of people

1 "Alzheimer's Statistics." Alzheimers.net. Accessed May 30, 2018. https://www.alzheimers.net/resources/alzheimers-statistics/

who will have reached the century mark is expected to exceed one million. There are twice as many centenarians in Japan as in the US.[2] Centenarians have better health profiles than their average-longevity counterparts, with 60 percent enjoying lower rates of heart disease, stroke, and high blood pressure. Ninety percent are disability-free at the age of 93.

As a group, Centenarians are happy and optimistic and have extremely low rates of depression and other psychiatric problems, suggesting that personality traits may be one of the most significant factors in longevity. Supercentenarians, or individuals older than 110, are very rare—only one in seven million have earned this title.

Is Longevity Inherited?

Why do we age? Is our longevity genetically programmed or environmentally determined? Why are increasing numbers of people living well beyond the century mark—and more importantly, what are their secrets?

Research suggests that, to a great degree, we decide how old we will get. Our mortality is not "inherited" to any large extent, but instead, the sum of our own habits has the greatest impact.[3]

Twin studies suggest genetics accounts for only 20 to 30 percent of an individual's chance of surviving to age 85.[4] Science has determined that exceptional longevity is strongly associated with complex combinations of genetic and epigenetic variants. You may inherit certain genetic variations that predispose you to disease or decreased longevity, but you may also have other gene variants conferring *disease resistance*—thereby increasing your longevity. If you are fortunate enough to inherit good longevity genes, then congratulations! Just realize that the best jeans in the world are no match for poor lifestyle choices!

If 25 percent of your longevity is determined by your genes, then what controls the other 75 percent? That is the focus of the remainder of this report.

For those not fortunate enough to inherit a fountain-of-youth genome, you can still live a long and healthy life by targeting the same pathways with appropriate lifestyle

2 Govindaraju, Diddahally, Gil Atzmon, and Nir Barzilai. "Genetics, Lifestyle and Longevity: Lessons from Centenarians." *Applied & Translational Genomics4* (March 2015): 23-32. Accessed May 30, 2018. doi:10.1016/j.atg.2015.01.001.

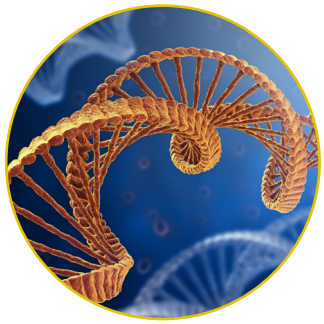
3 Manen, I.r. Van, and B. M. De Klerk. "Factors Associated with Reaching 90 years of Age: A Study of Men Born in 1913 in Gothenburg, Sweden." *Journal of Internal Medicine*270, no. 4 (November 26, 2010). Accessed May 30, 2018. doi:10.1111/j.1365-2796.2011.02426.x.

4 Passarino G, De Rango F, Montesanto A. Human longevity: Genetics or Lifestyle? It takes two to tango. *Immunity & Ageing* : I & A. 2016;13:12. doi:10.1186/s12979-016-0066-z.

interventions. And why not *maximize the benefits* of aging? After all, aging does have some—wisdom is just one example. Another is the slowing of cell replication, which means cancer later in life tends to be less aggressive than childhood cancer.

Before we dive into specific evidence-based strategies for living a long and healthy life, it is helpful to understand something about how and why we age.

The Biology of Aging: 7 Theories



Aging is not a programmed aspect of our development, but rather the deterioration of what might be thought of as a survival program. The original impulse of the life forms that gave rise to us was survival—*not death*. So why do we, as biological organisms, age and die? The answer, it turns out, is not simple.

A critical issue in aging research is to determine whether the aging process is controlled by one, several, or a multitude of underlying factors. If it's a multitude, then there is little hope of our altering our individual destiny, but if it's just a few factors, then we have much greater chances of influencing how long we live. Fortunately, evidence points toward the latter. Single-gene mutations have been discovered in roundworms, fruit flies, and mice that suggest a finite number of pathways influencing aging.

The American Federation of Aging Research (AFAR) published a report with an overview of the theories of aging, which I will summarize below. These theories tie together many important biological concepts and principles such as oxidative free radicals, glycation, IGF-1, mitochondria, and energy regulation.[5]

1. THE RATE OF LIVING THEORY

Although no longer accepted by modern day scientists, perhaps the oldest explanation of aging is the rate of living theory. Ancient philosophers believed we possess a finite amount of some "vital substance"—for example, a predetermined number of breaths of heartbeats. When that substance runs out, it's the end of the line.

2. THE EVOLUTIONARY SENESCENCE THEORY

Evolution does not seem to be favored by aging, so this theory focuses on the failure of natural selection to affect late-life traits. The term "senescence" refers to deterioration with age.

5 Theories of Aging. AFAR, Infoaging Guide to Theories of Aging, Biology of Aging, 2016 https://www.afar.org/docs/AFAR_INFOAGING_GUIDE_THEORIES_OF_AGING_2016.pdf

Certain undesirable genes and mutations do not express their harmful effects until later in life. These cannot be selectively passed on to future generations because they don't express themselves until the reproductive years are over. In other words, natural selection—because it operates via reproduction—can have little effect on later life. These undesirable genes cannot be eliminated through natural selection and result in aging.

3. THE CROSS-LINKING/GLYCATION HYPOTHESIS

This theory is based on the observation that our body's proteins and other structural molecules tend to develop dysfunctional attachments as we age—they form cross-linkages to one another. These inappropriate links or bonds cause problems by reducing the mobility or elasticity of proteins and other molecules. Some research suggests cross-linking is the mechanism for aging.

You might be familiar with the term "glycation." Glycation or glycosylation is one of the main ways crosslinking occurs. Glucose molecules can stick to proteins and transform them into brownish molecules called advanced glycosylation end products (AGEs). These molecules interfere with and disable the proteins' functions. Glycation is what causes food to brown when cooked. Additionally, evidence suggests glycation contributes to the formation of beta-amyloid, the protein found clumped together in the brains of Alzheimer's patients.

4. THE GENOME MAINTENANCE HYPOTHESIS

This theory proposes DNA damage and gene mutations as the mechanism for aging. Damage caused by oxidative free radicals, mistakes in replication, or outside environmental factors such as radiation or toxins are part of everyday life. Resulting mutations occurring in our egg or sperm cells can be passed on to future generations, whereas those occurring in other types of cells cannot be passed on. Our bodies have repair mechanisms to correct most of these disadvantageous mutations, but those that persist will accumulate and eventually cause cells to malfunction and die, resulting in aging.

Because a large proportion of free radicals comes from normal cellular energy production, this theory has particular implications for our mitochondria (intercellular powerhouses). Mutations in mitochondrial DNA accumulate with age and are associated with a decline in mitochondrial function. Many scientists believe that mitochondrial aging is an important contributor to overall aging.

5. THE OXIDATIVE DAMAGE/FREE RADICAL HYPOTHESIS

This theory suggests that aging is caused by oxidative damage by free radicals. Free radicals are toxic byproducts from normal cell metabolism. Antioxidants neutralize many of these free radicals, but those that persist can damage DNA, proteins, and mitochondria. Oxidative damage accumulating over time causes aging and age-related diseases.

As with the Genome Maintenance Hypothesis, mitochondria play a central role. More than 90 percent of a cell's free radicals are produced in the mitochondria, so they are at particularly vulnerable to damage. This creates a self-perpetuating cycle in which oxidative damage impairs mitochondrial function, which results in the propagation of even more free radicals. Although mitochondria have some capacity to repair their DNA, the mechanisms are not as effective as those used by the cell to repair nuclear DNA and deteriorate over time. Eventually, mitochondrial damage leads to apoptosis, or cell suicide.

6. THE NEUROENDOCRINE HYPOTHESIS

This theory ties aging to the deterioration of hormone function. As we age, the connections between our brain and endocrine system become dysfunctional, leading to a variety of problems such as high blood pressure, impaired sugar metabolism, and sleep abnormalities. A flood of recent evidence points to one hormone pathway in particular: IGF-1 (insulin growth factor-1). IGF is activated by human growth hormone. Higher IGF-1 levels are associated with shorter life expectancy.

Interestingly, this flies in the face of popular support for anti-aging treatments involving growth hormone injections, which increase circulating IGF-1. Rather than extending life, growth hormone treatment may actually do the opposite. A recent study found that people who genetically lack an ability to use growth hormone enjoy a lower risk of both cancer and type 2 diabetes.

7. THE REPLICATIVE SENESCENCE HYPOTHESIS

This theory of aging has to do with cell division and telomeres. Think of telomeres as the protective "end caps" on chromosomes. The theory is that repeated cell division leads to shortened telomeres, and short telomeres are associated with faster aging, therefore shortened lifespan. When telomeres become short they can break, leading to a variety of age-related diseases and conditions.

Many human cells have a limited capacity to reproduce themselves. Most scientists believe the limiting factor is the length of the cell's telomeres. Each time a cell divides, it must first

double its chromosomes so that each daughter cell receives a full complement of genetic material. Each division results in the loss of a small bit of the chromosomes' telomeres. After about 40 to 60 divisions, the telomeres reach a critically short length such that the cell can no longer replicate and stops dividing. These cells become "senescent" in the sense that, although they don't die, they can no longer reproduce.

For quite some time, scientists viewed telomeres as a sort of "cellular clock" that might hold the key to aging, but the thinking now is that while telomeres may contribute to aging, they do not govern it. They are merely one piece of the puzzle. In humans, not all types of tissue contain actively replicating cells—brain and heart, for example. Telomere shortening is not universal among species.

The Grim Reaper Exists—And His Name is "Stress"

As you might have noticed, some common threads emerge amongst the various aging theories. Free radical damage, oxidation, DNA damage, mitochondrial dysfunction, and disrupted hormone messaging are key elements. There is one common biological phenomenon that can wreak havoc with all these elements—a common denominator if you will. *That phenomenon is stress*.

Physical stress as well as mental or emotional stress exert powerful effects on the immune system and drive up inflammation, a key mechanism in aging and disease. Stress also destroys cells in the hippocampus, which is the part of your brain responsible for memory and retrieval.

It follows, then, that a good overall anti-aging strategy might be to reduce stress. And indeed, studies confirm stress is a notorious aging accelerant.

When we're stressed, our bodies begin producing the stress hormone cortisol. Cortisol is linked to lower levels of telomerase, and telomerase *prevents* telomere shortening.[6] Stress, especially when chronic, also triggers epigenetic changes, meaning how your genes are expressed. A variety of lifestyle and environmental factors can increase stress in the body. Poor diet, cigarettes, alcohol, chemicals, heavy metals, pharmaceuticals, EMFs, pollution—and the list goes on.

6 Choi J, Fauce SR, Effros RB. Reduced telomerase activity in human T lymphocytes exposed to cortisol. *Brain, behavior, and immunity.* 2008;22(4):600-605. doi:10.1016/j.bbi.2007.12.004.

Psychological Stress Has a HUGE Impact on Lifespan

Just as with physical factors such as diet and toxicity, psychological stress is linked to accelerated cellular aging and increased risk for aging-related diseases, although the underlying molecular mechanism remains unclear. People with chronic stress, depression, anxiety or phobias, social isolation, or trauma have all been shown to exhibit shorter telomeres.[7,8,9]

Nothing is more illustrative of the lasting impact of psychological stress on health and longevity than the ACEs study (Adverse Childhood Experiences). ACEs is a large-scale epidemiological study about the cumulative impact of childhood experiences on a person throughout the lifespan.[10] The study measures one's exposure to eight categories of childhood abuse or dysfunction ranging from physical or sexual abuse to neglect, divorce, domestic violence, and other forms of family dysfunction, and then correlates it with health, longevity, and overall function.

Does your level of childhood stress influence how long you will live? *Absolutely!* And it's not a minor influence.

The ACEs study finds that individuals who experienced moderate to high levels of childhood stress may see *20 years* cut from their lives. They also have a higher risk for everything from depression to heart disease, liver disease, COPD, alcoholism, suicide, smoking and drug use, social problems, disability, and a disturbing array of other risks. They are prone to poor academic achievement, financial strife, and maladaptive relationships as adults.

The good news is, stress is controllable and manageable, to a large extent. All you need are the right tools in your tool bag.

7 Zannas, A., T. Carrillo-Roa, S. Iurato, K. Ressler, C. Nemeroff, A. Smith, J. Lange, B. Bradley, C. Heim, T. Brückl, M. Ising, N. Wray, A. Erhardt, E. Binder, and D. Mehta. "Lifetime Stress Accelerates Epigenetic Aging." *European Psychiatry*30, no. 1 (March 28, 2015): 799. Accessed May 30, 2018. doi:10.1016/s0924-9338(15)31949-0.

8 Bergland, Christopher. "Emotional Distress Can Speed Up Cellular Aging." Psychology Today. April 7, 2014. Accessed May 30, 2018. https://www.psychologytoday.com/us/blog/the-athletes-way/201404/emotional-distress-can-speed-cellular-aging.

9 "Depression and Chronic Stress Accelerates Aging." ScienceDaily. November 10, 2011. Accessed May 30, 2018. https://www.sciencedaily.com/releases/2011/11/111109093729.htm.

10 "Adverse Childhood Experiences (ACEs)." Centers for Disease Control and Prevention. April 01, 2016. Accessed May 30, 2018. https://www.cdc.gov/violenceprevention/acestudy/index.html.

In 2013, a small pilot study led by Dr. Dean Ornish, published in The Lancet, showed that positive changes in diet, exercise, stress management, and social support may actually *lengthen* telomeres.[11] Dr. Ornish is quoted as saying:[12]

> *"So often people think, 'Oh, I have bad genes, there's nothing I can do about it.' But these findings indicate that telomeres may lengthen to the degree that people change how they live. Research indicates that longer telomeres are associated with fewer illnesses and longer life."*

Blue Zones

Across the Aegean Sea from Athens lies a little Greek Island called Ikaria (sometimes spelled "Icaria"), home to about 300 residents. Ikaria is special. One third of the island's population lives to celebrate their 90th birthday—twice as many as Americans. Ikaria is one of five longevity hotspots in the world, called Blue Zones. The other four are Sardinia, Italy; Nicoya, Costa Rica; Okinawa, Japan; and Loma Linda, California.[13]

In Ikaria, life is not a race. People focus on good food, active lifestyle, family, social connections, and spirituality. The elderly play significant roles in the community. Stress is not only avoided—it's practically forbidden. No one sets appointments as time is a highly valued resource, viewed and managed differently. They sleep and awaken according to their internal clocks. Depression and dementia are rare. Not only do the Ikarians live longer, *but they live healthier too*.

A typical Ikarian diet consists of fresh garden vegetables, olive oil, legumes, potatoes, goat's milk yogurt, whole grain bread, honey, wild herbs, herbal tea, coffee, fish, and the occasional pig. The typical family will slaughter just one animal per year. There is no processed sugar or refined food in their diet. The Ikarians age in stark contrast to the Americans.

11 Ornish, Dean, Jue Lin, June M. Chan, Elissa Epel, Colleen Kemp, Gerdi Weidner, Ruth Marlin, Steven J. Frenda, Mark Jesus M Magbanua, Jennifer Daubenmier, Ivette Estay, Nancy K. Hills, Nita Chainani-Wu, Peter R. Carroll, and Elizabeth H. Blackburn. "Effect of Comprehensive Lifestyle Changes on Telomerase Activity and Telomere Length in Men with Biopsy-proven Low-risk Prostate Cancer: 5-year Follow-up of a Descriptive Pilot Study." *The Lancet Oncology*14, no. 11 (October 2013): 1112-120. Accessed May 30, 2018. doi:10.1016/s1470-2045(13)70366-8.

12 Fernandez, Elizabeth. "Lifestyle Changes May Lengthen Telomeres, A Measure of Cell Aging." UC San Francisco. September 16, 2013. Accessed May 30, 2018. https://www.ucsf.edu/news/2013/09/108886/lifestyle-changes-may-lengthen-telomeres-measure-cell-aging.

13 "THE SECRETS OF LIVING LONGER, BETTER ARE ALL AROUND US." Blue Zones Project. Accessed May 30, 2018. https://www.bluezonesproject.com/.

Strategies for Adding Years to Your Life and Life to Your Years

Unfortunately, medical care for the elderly has turned into a game of whack-a-mole. The standard medical system deals with each disease in isolation, rather than treating the whole person and correcting the underlying biological processes that have caused an immune system to run amuck. The result is that individuals get "cured" of one disease, such as cancer, only to develop another one two or three years down the road.

Rather than tackling individual diseases, our focus should be on extending our healthspan, not just our lifespan. Who wants to live longer if those years are filled with misery? In order to achieve this, we must address the root cause of illness and aging, and intervene before the damage accumulates. We can do this by addressing the following factors:

1. **DIET AND NUTRITION**
2. **TOXIC EXPOSURES**
3. **PHYSICAL ACTIVITY**
4. **BRAIN FITNESS**
5. **HIGH-QUALITY SLEEP**
6. **STRESS**
7. **LIVING WITH PURPOSE AND GRATITUDE**

1. A DIET FOR LONGEVITY

As the Ikarians so aptly demonstrate, when it comes to diet we need to get back to the basics. Whole foods with abundant fresh produce and minimal processed food are necessary for optimal longevity. Other than eating cleanly, there are a few other dietary strategies that science suggests may lead to a longer and healthier life.

While excessive food consumption leads to metabolic syndrome and shortens overall lifespan, calorie restriction has been shown to flip on longevity genes and prevent or delay age-related diseases. The problem is, fasting long-term is not practical for most humans and nearly impossible to sustain for years on end.

What is sustainable? Intermittent fasting, or periodic calorie restriction. A fasting-mimicking diet offers many of the same benefits as fasting but without the downsides. Various versions go by various names… intermittent fasting, feast-or-famine diet, periodic calorie restriction, etc. In all versions, calories are restricted for periods of time, followed by periods of eating normally. When calories are intermittently restricted, the body maintains a "lasting memory" of optimal metabolic function. There are even greater benefits if proteins and sugars are restricted.

Fasting-mimicking diets have positive long-term benefits for IGF-1 levels. As you will recall, lower IGF-1 is associated with greater longevity. Intermittent calorie restriction also boosts cellular regeneration and rejuvenation, as well as stem cell production. Cells are cleaned out during the fasting phase, and then rebuilt during the "refeeding" phase. Fasting has proven benefits for blood sugar regulation, hormone function, fat burning, cardiovascular function, overall immune function, and longevity.

Protein seems to have a Goldilocks zone. It is important to consume "just enough" protein to avoid losing lean muscle mass as you age but not enough to activate the mTOR pathway, which accelerates aging.[14,15]

Valter Longo, Ph.D., UCLA professor and director of The Longevity Institute, has done extensive research on diet and aging and provides specific guidelines for a fasting-mimicking diet in his 2018 book, *The Longevity Diet*, which might be a helpful resource.

14 Johnson SC, Rabinovitch PS, Kaeberlein M. mTOR is a key modulator of ageing and age-related disease. *Nature*. 2013;493(7432):338-345. doi:10.1038/nature11861.

15 O'Leary, Mary Beth. "Controlling Protein Intake May Be Key to Longevity, Studies Show." 1st Edition. March 4, 2014. Accessed May 30, 2018. https://www.elsevier.com/connect/controlling-protein-intake-may-be-key-to-longevity.

Many foods and supplements have been shown to benefit longevity. To go into them all is beyond the scope of this report, but you will find a summary in the table below with links to more information. Many of these foods are in the top ten on GreenMedInfo's Aging research database.

Astaxanthin	A compound in astaxanthin, CDX-08, increases the "longevity gene" (FOXO3) in mice, which increases longevity;[16] proven benefits for lipid profile, oxidative stress, blood sugar, cognition, athletic performance, and more
Blueberry	Rich in anti-aging polyphenols; study shows blueberries slow brain aging by 2.5 years; reduces cognitive decline; improves insulin sensitivity; protects heart, lungs, and blood vessels; anticancer
Berberine	Activates AMPK; inhibits mTOR; extremely beneficial for lipid profile; improves insulin sensitivity; ameliorates NAFLD and IBS
Coffee	According to NEJM, older adults who drink coffee have a lower risk of death overall than non-coffee drinkers (no difference between caffeinated and decaf); mechanism unclear, but coffee contains more than 1,000 health-benefitting compounds
Flaxseed	Just one ounce daily can neutralize age-associated inflammation by modulating oxylipins, a type of fat molecule that plays a critical role in chronic disease progression; reduces blood pressure and arterial damage
Gingko Biloba	Stimulates BDNF (brain-derived neurotrophic factor) which extends life of brain cells and long-term memory; modulates neural stem cells; increases brain circulation; as effective as donepezil in treating Alzheimer's; ginkgo plants themselves can live more than 1,000 years!
Ginseng (Red)	Red ginseng (panax ginseng) improves blood vessel wall health, boosts vessel dilation and flexibility; better blood sugar and insulin control; extends lives of HIV positive individuals
Green Tea	Contains EGCG, shown to produce aging-slowing, lifespan-extending effects; mitochondrial biogenesis

16 UHCancerCenter. "Astaxanthin Compound Found to Switch on the FOX03 'longevity Gene' in Mice." EurekAlert! March 28, 2017. Accessed May 30, 2018. https://www.eurekalert.org/pub_releases/2017-03/uohc-acf032717.php.

Magnesium	Supports cardiovascular health and longevity; prolongs cell health and ability to divide; prevention of age-related diseases; adrenal support, adaptation to stress, and "buffering effect" for fight-flight hormones; sleep, helps reverse nighttime neuroendocrine age-related changes
Mushrooms	Loaded with antioxidants and age-extending nutrients such as ergothioneine, vitamin D, and glutathione; in one study, the acetic acid and Reishi polysaccharide fraction 3 (RF3) in reishi mushrooms was found to increase lifespan and expression of longevity-related transcription factor DAF-16 in C. elegans, leading to an increase in 15 different lifespan-extending proteins
Resveratrol	Increases mitochondrial biogenesis; anti-inflammatory; anticarcinogenic; antioxidant; regulates insulin; increases blood flow; animal studies indicate it may extend lifespan; study shows resveratrol with calorie restriction promotes longevity; may reduce clumps of proteins linked to Alzheimer's disease
Turmeric (curcumin)	The "one-stop shop" herb for longevity! Curcumin prevents telomere shortening and may promote elongation by increasing telomerase expression; preserves brain health by preventing age-related brain damage; reduces oxidative stress; promotes mitochondrial homeostasis; increases AMPK activity (see exercise section below)
Vitamin E	Linked to longer telomeres in women; reduces DNA damage; upregulates telomerase; slows skin aging; maintains muscle
Zinc	Reduces oxidative damage; binds with certain proteins linked to inflammation and age-related immunodeficiency

2. MINIMIZING TOXIC EXPOSURES

When it comes to damaging DNA and compromising mitochondria, environmental toxins really leave their mark. Cumulative toxicity affects longevity—take air quality, for example.

Americans living in places with cleaner air are known to live longer. Many public health studies show that those who live near chemical factories and other polluting industries show greater risk for premature death. The CDC's statistics reveal that residents of eight states (most in the South) show reduced longevity from dirtier air related to looser air pollution regulations.[17] There is even an online tool called "Air Quality Life Index," developed by the University of Chicago.[18] It allows you estimate how much longer you would live if your country of residence reduced air pollution to comply with either national or WHO standards.

The best thing you can do to lengthen your lifespan and healthspan is eat cleanly, avoid toxic products, and filter your water and air. Supporting your body's natural detoxification efforts is also a necessity in today's toxic world.

3. TO LIVE LONGER, GET PHYSICAL

Research published in the *American Journal of Physiology* indicates exercise may minimize and even reverse age-associated declines in mitochondrial function. This has wide-ranging implications, as the health of your mitochondria intimately affects every single cell, tissue, and organ in your body.

Mitochondrial density and function decline as we age. While this is a natural process, it can be accelerated by excessive stress, environmental radiation, chemical exposures (including pharmaceutical drugs), nutritional deficiencies, and inherited mitochondrial DNA defects. Exercise has the benefit of rejuvenating mitochondria and prompting your body to make more of them, whereas lack of exercise hastens mitochondrial degeneration.

In older adults, high-intensity exercise is associated with preservation of telomere length, which might relate to changes in telomerase activity.[19] Telomerase physiology is

17 Gilderbloom, John I., and Gregory D. Squires. "How Environmental Toxins Reduce Life Expectancy in Many American Neighborhoods." Scholars Strategy Network. April 13, 2016. Accessed May 30, 2018. https://scholars.org/brief/how-environmental-toxins-reduce-life-expectancy-many-american-neighborhoods.

18 "The Air Quality Life Index™." EPIC Pollution Index. Accessed May 30, 2018. https://aqli.epic.uchicago.edu/.

19 LaRocca TJ, Seals DR, Pierce GL. Leukocyte Telomere Length is Preserved with Aging in Endurance Exercise-Trained Adults and Related to Maximal Aerobic Capacity. *Mechanisms of ageing and development.* 2010;131(2):165-167. doi:10.1016/j.mad.2009.12.009.

complicated, and some warn that lengthening telomeres by overexpressing telomerase may actually increase one's cancer risk. Perhaps moderation is the key.

Another reason exercise is such a beneficial anti-aging strategy is that it stimulates AMPK activity. What is AMPK? AMPK, which stands for adenosine monophosphate-activated protein kinase, is a cellular enzyme found in every cell of the body. It's kind of a master metabolic switch, controlling a gamut of energy pathways. AMPK performs the following roles:[20]

- **MONITORING CELLULAR ENERGY, AND THEN TRIGGERING RESPONSES THAT MAINTAIN OPTIMAL LEVELS**
- **REGULATING METABOLIC HOMEOSTASIS AND CELL SURVIVAL DURING TIMES OF STRESS**
- **STIMULATING PRODUCTION OF MITOCHONDRIA**
- **COORDINATING SIGNALING OF MANY AGE-RELATED TRANSCRIPTION FACTOR PATHWAYS**

Research suggests increased AMPK activity can extend lifespan, but responsiveness of AMPK activation declines with age. Regardless of which disease or organ system is involved, if you trace a pathological process back far enough, you will likely track down an AMPK activity insufficiency problem.

Besides exercise, AMPK activity can be boosted a number of ways—fasting or calorie restriction, high-quality sleep, cold water immersion, acupuncture, and by eating various foods. The best AMPK-activating foods include turmeric, legumes, green tea, red wine, blueberries, and extra virgin olive oil. A Vietnamese herb called *Gynostemma pentaphyllum* is also a powerful AMPK activator.

How much should you exercise?

Any amount of exercise is better than none, according to the latest Harvard studies. LINK Individuals who do not exercise at all have the highest risk of early death. Those who exercise just a little can lower their risk by 20 percent, and those who meet current governmental health guidelines (150 minutes of moderate exercise per week) enjoy a 31 percent lower risk of premature death.

20 Salminen, Antero, and Kai Kaarniranta. "AMP-activated Protein Kinase (AMPK) Controls the Aging Process via an Integrated Signaling Network." *Ageing Research Reviews* 11, no. 2 (April 2012): 230-41. Accessed May 30, 2018. doi:10.1016/j.arr.2011.12.005.

The sweet spot, however, seems to be in tripling the current exercise recommendations. Walking 450 minutes per week, or a little over an hour per day, lowers the risk of premature death by 39 percent. Beyond that, the benefits plateau.

4. BRAIN FITNESS

Sustained engagement in learning new skills that activate working memory, episodic memory, and reasoning are important in maintaining cognitive function as we age. Studies show that ongoing engagement in cognitively demanding, novel activities is what enhances memory function into older adulthood.[21] It isn't as simple as doing crossword puzzles and sudoku—the brain must be challenged with new tasks you're not used to performing. Try adding a new hobby such as quilting or digital photography. Play a different game. Volunteer at something you haven't done before.

5. RESTORATIVE SLEEP

Sleep clears out brain toxins, and this alone helps optimize both lifespan and healthspan. One reason sleep is so critical is it facilitates the function of the glymphatic system, your brain's trash removal system. During sleep, the brain works 10 times as hard to remove toxic proteins like the ones responsible for Alzheimer's damage.[22] A University of Oregon study shows middle-aged or older people who get six to nine hours of sleep per night have better cognition than those sleeping either fewer or more hours.[23]

6. MANAGING STRESS

As already discussed, stress management is critical for living a long, healthy life. Many physical activities have the added benefit of being good stress busters. Some examples include yoga, Tai Chi, dance, and hiking out in nature.

While yoga's longevity-promoting effects have been the subject of legend for millennia, modern science is confirming this ancient technology for spiritual

22 Xie, L., H. Kang, Q. Xu, M. J. Chen, Y. Liao, M. Thiyagarajan, J. Odonnell, D. J. Christensen, C. Nicholson, J. J. Iliff, T. Takano, R. Deane, and M. Nedergaard. "Sleep Drives Metabolite Clearance from the Adult Brain." *Science342*, no. 6156 (October 18, 2013): 373-77. Accessed May 30, 2018. doi:10.1126/science.1241224.

23 Gildner, Theresa E., Melissa A. Liebert, Paul Kowal, Somnath Chatterji, and J. Josh Snodgrass. "Associations between Sleep Duration, Sleep Quality, and Cognitive Test Performance among Older Adults from Six Middle Income Countries: Results from the Study on Global Ageing and Adult Health (SAGE)." *Journal of Clinical Sleep Medicine,* 2014. Accessed May 30, 2018. doi:10.5664/jcsm.3782.

and physical well-being can slow actually slow aging and stimulate our regenerative potential. Yoga has been shown to improve age-related respiratory problems, cognitive decline, hormone insufficiency, sleep issues, and aging-related depression.

According to Dr. John Denninger of the Benson-Henry Institute, certain genes turn on and off during yoga, triggering beneficial responses in the body and the brain. In a powerful 2014 study in the journal Age, researchers concluded:

> *"Yogic practices might help in the prevention of age-related degeneration by changing cardiometabolic risk factors, autonomic function, and BDNF."*

People who do yoga and meditation enjoy a significantly reduced rate of cellular aging, according to one 2017 study. Meditation itself is associated with longer telomeres and increased cellular longevity.

Another evidence-supported practice is Tai Chi, which is akin to a moving meditation. Tai Chi boasts a mountain of science backing its health benefits for people of all ages and abilities—from healthy young adults to the elderly or wheelchair-bound.

As an overall tool for stress management, a technique called EFT (emotional freedom techniques, aka "tapping") is hard to beat. Tapping can be learned at home and is effective with a wide variety of conditions, from PTSD and major depression to general anxiety and everyday stress. Even children can learn tapping!

If you want to live a longer and happier, consider adopting a pet. Science shows pet owners are reaping an impressive number of health benefits, including reduced risk for heart attack and stroke, lower levels of pain, better immune function—and yes, improved longevity! A large recent Swedish study found that dog owners have a lower risk of death from all causes, especially those who live without the company of other humans.[24]

That said, if stress and anxiety are your primary concern, you might opt for a cat because cats appear to be better stress-reducers.[25]

24 Mubanga, Mwenya, Liisa Byberg, Christoph Nowak, Agneta Egenvall, Patrik K. Magnusson, Erik Ingelsson, and Tove Fall. "Dog Ownership and the Risk of Cardiovascular Disease and Death – a Nationwide Cohort Study." *Scientific Reports*7, no. 1 (November 17, 2017). doi:10.1038/s41598-017-16118-6.

25 PhD, Catharine Paddock. "Cat Owners Have Lower Heart Attack Risk, Study." Medical News Today. February 25, 2008. Accessed May 30, 2018. https://www.medicalnewstoday.com/articles/98432.php.

7. PURPOSEFUL LIVING

When it comes to psychosocial factors that can extend your life, having a purpose rises to the top of the list. One way to define purpose is, "a central, self-organizing life aim that organizes and stimulates goals, manages behaviors, and provides a sense of meaning."[26]

Purpose is what links everything together. A sense of purpose is much like the Japanese concept of ikigai, or "life worth living," which they believe is associated with longer life. We should take note—the Japanese are doing something right! Feeling that your life is worth living brings mental and physical benefits in a kind of positive feedback loop.

Not only is purpose one of the most commonly cited values by Centenarians, but recent reports show that a sense of purpose is an actual mortality predictor across adulthood.[27] People with a greater sense of purpose are motivated to engage in healthier lifestyle behaviors, such as eating their veggies or getting more exercise. Purpose is also linked to sleep quality.

In the Blue Zones, people value healthy rituals, community, and meaningful purpose. They don't identify with disease or compare themselves with neighbors or friends. They are quick to forgive others and even quicker to forgive themselves.

Speaking of community, loneliness or social isolation is another influence on life expectancy. In a large meta-analysis, people who reported being lonely were 26 percent more likely to have died during the seven-year research study. Mortality risk was 20 percent higher among those who were socially isolated versus those who were not, and 32 percent higher for people who lived alone versus those who did not.[28]

An interesting study was performed using African grey parrots. The parrots with parrot companions *had longer telomeres* than parrots without partners.[29]

Does gratitude affect life expectancy? Possibly! The more gratitude one feels, the lower the risk of heart attack. And the more grateful people feel, the better they tend to take care of themselves. Gratitude and positive emotions benefit physical health and stress management, so it's likely a life-extender as well.

26 Mcknight, Patrick E., and Todd B. Kashdan. "Purpose in Life as a System That Creates and Sustains Health and Well-being: An Integrative, Testable Theory." *Review of General Psychology*13, no. 3 (2009): 242-51. doi:10.1037/a0017152.

27 Hill, Patrick L., and Nicholas A. Turiano. "Purpose in Life as a Predictor of Mortality Across Adulthood." *Psychological Science*25, no. 7 (2014): 1482-486. Accessed May 30, 2018. doi:10.1177/0956797614531799.

28 Holt-Lunstad, Julianne, Timothy B. Smith, Mark Baker, Tyler Harris, and David Stephenson. "Loneliness and Social Isolation as Risk Factors for Mortality." *Perspectives on Psychological Science*10, no. 2 (March 11, 2015): 227-37. Accessed May 30, 2018. doi:10.1177/1745691614568352.

29 "Press Release 04-04-2014 - Loneliness Impacts DNA Repair." Vetmeduni Vienna. April 03, 2014. Accessed May 30, 2018. http://www.vetmeduni.ac.at/en/infoservice/presseinformation/press-releases-2014/press-release-04-04-2014-loneliness-impacts-dna-repair/.

The Long and Short of It

How long you live is a complex interaction between genetics and environment, nature and nurture, lifestyle and personality. Longevity extends far beyond your genetic predispositions and foods, although those things are certainly important. None of us knows our expiration date—and that's probably a good thing. Regardless of your age, there are many evidence-based strategies that can help you stack the odds in your favor. This report just skims the surface but provides a good launching point for identifying what your "longevity weak spots" might be.

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Research Topic

Aging

Research Subtopics

Aging Skin
Aging: Brain
Aging: Immunosenecence
Aging: Prostate
Skin Diseases: Photo-Aging
Wrinkles, Aging Skin

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Overview of Terms Associated with Your Search Topic

221 Relevant Results for Substances

Substance Name	Cumulative Knowledge	Article Count
Resveratrol	65	32
Flavonoids	60	16
Polyphenols	18	11
Vitamin E	58	10
Green Tea	53	15
Soy	49	10
Vitamin C	37	8
Melatonin	36	14
Catechin	29	12
Alpha-Lipoic Acid	27	6
Curcumin	25	14
Tea	9	6
Blueberry	53	11
Zinc	49	10
Ginkgo biloba	45	13
Multivitamin	30	3
Genistein	17	5
Echinacea	16	5
Pomegranate	16	6
Grape Seed Extract	15	4

Selenium	14	4
Isoflavones	12	2
NAC (N-acetyl-L-cysteine)	9	5
Sulforaphane	8	5
Vitamin D	7	3
Creatine	4	2
Artichoke	3	2
Pycnogenol (Pine Bark)	22	3
Vegetables: All	21	3
Coenzyme Q10	16	4
Bacopa	15	4
Anthocyanins	14	3
Probiotics	14	4
Chocolate	12	2
Kaempferia parviflora	12	2
Persimmon	12	2
Pine Bark Extract	12	2
Strawberry	12	2
White Tea	12	3
Antioxidant formulas	11	2
Berries: All	11	2
Black Tea	11	2
Fermented Foods and Beverages	11	2
Tomato	11	2
Aloe Vera	10	1
Horse Chestnut	10	1
Acetyl-l-carnitine	7	4
Apples	7	4

Astaxanthin	6	4
Astragalus	6	5
Lotus	6	3
Oleuropein	6	4
Arginine	5	3
Cocoa	5	3
Rose	5	3
Amla Fruit	4	2
Broccoli	4	2
Chinese Skullcap	4	2
OPC (Oligomeric Proanthocyanidins)	4	2
Rosemary	4	3
Royal Jelly	4	2
Sprouts	4	2
Thioproline	4	2
Blackberry	3	2
Cannabinoids	3	2
EGCG (Epigallocatechin gallate)	3	2
Epimedium	3	2
Folic Acid	3	2
Myricetin	3	2
Boswellia	2	1
Cistanche deserticola	2	1
DHA (Docosahexaenoic Acid)	2	1
Huperzine	2	1
Icariin	2	1
Polyunsaturated Fatty Acids (PUFAs)	2	1
Pterostilbene	2	1

Soybean Oil	2	1
Spinach	2	1
Spirulina	2	1
Black Poplar	1	1
Magnesium	22	4
Cynanchum Auriculatum	20	1
Fish extract	20	2
Omega-3 Fatty Acids	20	2
Flaxseed	12	2
DHEA (Dehydroepiandrosterone)	11	2
Ginseng (Siberian)	11	3
5-Methyltetrahydrofolate (MTHF)	10	1
Amino Acids	10	1
Beta-glucan	10	1
Caffeine	10	1
Chamomile	10	1
Cholesterol	10	1
Coffee	10	1
Corni Fructus	10	1
Cruciferous Vegetables	10	1
Fiber	10	1
Fig	10	1
Fish Oil	10	1
Frankincense	10	1
Ginseng	10	1
Glucose	10	1
Glycosaminoglycans	10	1
Green Leafy Vegetables	10	1

Green Tea (topical)	10	1
Nuts	10	1
Silica: Orthosilicic acid	10	1
Torilus Fructus	10	1
Turmeric	10	1
Unspecified Species	10	1
Vitamin B-12	10	1
White Mulberry	10	1
Wine	10	1
X-xyloside	10	1
Yoghurt	10	1
Phosphatidylserine	6	3
Methionine	5	1
Rhodiola (Tibetan Ginseng)	5	4
Acai	4	2
Purslane	4	2
Quercetin	4	2
Reishi Mushroom	4	3
Spermidine	4	3
Tetrahydrocurcumin	4	2
Vitamin K	4	2
Vitamin K2: Menaquinone-7	4	2
Estradiol (E(2))	3	3
Olive leaf extract	3	2
Stilbenes	3	2
Walnut	3	2
Acetic Acid	2	1
Apigenin	2	1

Banana	2	1
Bifidobacterium Breve	2	1
Black Raspberry	2	1
Carnitine	2	1
Carnosic Acid	2	1
Chaga Mushroom (Inonotus obliquus)	2	1
Chuānxiōng	2	1
Cinnamaldehyde	2	1
Cinnamon	2	1
Cordyceps sinensis	2	1
Cranberry	2	1
Cryptoxanthin	2	1
Cynomorium songaricum	2	1
Fennel	2	1
Ghee	2	1
Ginseng (Korean)	2	1
Glucomannan	2	1
GlyceroPhosphoCholine (alpha-GPC)	2	1
HDTIC-1	2	2
HDTIC-2	2	2
Krill	2	1
Lactobacillus probiotics	2	1
Lactobacillus rhamnosus GG	2	1
Malic Acid	2	1
Molasses	2	1
Nicotinamide adenine dinucleotide (NADH)	2	1
Onion	2	1
Orange: Mandarin	2	1

Oregano	2	1
Oyster Mushroom	2	1
Phyllanthus emblica	2	1
Plum	2	1
Progesterone	2	1
Rehmannia	2	1
Rice Bran	2	1
Rosmarinic acid	2	1
Shiitake Mushroom	2	1
Shorea robusta	2	1
Spearmint	2	1
St. Johns Wort	2	1
Superoxide dismutase	2	1
TA-65 (Astragalus compound)	2	1
Traditional Chinese Medicine: Sijunzi Decoction	2	1
Ubiquinol	2	1
Vitamin B-6	2	1
Water: Deuterium Depleted	2	1
Wheat Grass	2	1
beta-Carotene	2	1
Acerola	1	1
Ashwagandha	1	1
Black Tea Theaflavins	1	1
Carnosine	1	1
Chlorella (Algae)	1	1
Coconut oil: topical	1	1
Cordyceps Militaris	1	1
Cork Extract	1	1
Cyanidin	1	1

Date Kernel Extract	1	1
Dill	1	1
Ellagic Acid	1	1
Fruit: All	1	1
Glycyrrhizin	1	1
Goji	1	1
Grape	1	1
Hesperidin	1	1
Krameria lappacea: topical	1	1
Kudzu	1	1
Loquat Seeds	1	1
Natto	1	1
Olive	1	1
Olive oil: topical	1	1
Orange	1	1
Peanut oil: topical	1	1
Peony	1	1
Prebiotics	1	1
Rutin	1	1
Schisandra	1	1
Sesame oil: topical	1	1
Sesamol	1	1
Silymarin	1	1
Terminalia	1	1
Terminalia Chebula Gall Extract	1	1
Testosterone	1	1
Thistle	1	1
Tocotrienol: Gamma	1	1

Vitamin A	1	1
Whey	1	1
Burdock	0	1
Cysteine (see N-Acetylcysteine)	0	1

19 Relevant Results for Problem Substances

Problem Substance Name	Cumulative Knowledge	Article Count
Tobacco: Smoking	10	1
Rosiglitazone (trade name Avandia)	4	2
Corticosteroid	3	1
Prednisone	3	1
Insulin	2	1
Pravastatin	2	1
Statin Drugs	2	1
Acesulfame potassium	1	1
Artificial Sweeteners	1	1
Aspartame	1	1
Fluoride	1	1
Fructose	1	1
Glucose	1	1
Homocysteine	1	1
Lovastatin	1	1
Parabens	1	1
Saccharin	1	1
Sirolimus	1	1
Sodium Fluoride	1	1

29 Relevant Results for Therapeutic Actions

Therapeutic Action Name	Cumulative Knowledge	Article Count
Acupuncture	19	6
Meditation	31	4
Exercise	30	8
Fasting/Caloric Restriction	19	11
Yoga	14	3
Music	11	2
Exercise: Endurance	20	2
Exercise: Resistance Training	20	2
Light-Emitting Diodes (LEDs) Therapy	11	2
Dancing	10	1
Dietary Modification: Mediterranean Diet	10	1
Exercise: Aerobic	10	1
Exercise: Cycling	10	1
Homeopathic Treatment	10	1
Kindness	10	1
Lifestyle Changes: Positive	10	1
Marital Status: Married	10	1
Pilates	10	1
Tai Chi	10	1
Dietary Modification: Caloric Restriction	2	1
Electroacupuncture	2	1
Light Therapy	2	2
Moxibustion	2	1
Traditional Chinese Medicine	2	1
Acupressure	1	1
Dietary Modification: Vegan Diet	1	1

Light Therapy: Colored	1	1
Light Therapy: Red Colored	1	1
Sunlight exposure	1	1

4 Relevant Results for Problematic Actions

Problematic Action Name	Cumulative Knowledge	Article Count
Hormone Replacement Therapy	2	1
Childhood Trauma	10	1
Prenatal Stress	10	1
Vaccination: Pneumococcal	10	1

159 Relevant Results for Diseases

Disease/Symptom	Cumulative Knowledge	Article Count
Lipid Peroxidation	14	8
Aging	920	287
Oxidative Stress	123	49
DNA damage	37	19
Aging Skin	294	63
Ovariectomy Associated Adverse Changes	6	3
Cognitive Decline/Dysfunction	141	32
Hypertension	42	5
Elderly: Age Specific Diseases	40	3
Inflammation	33	9
Wrinkles	33	5
Memory Disorders	32	16
Dry Skin	31	4
Skin Diseases	31	4

Postmenopausal Disorders	23	4
Sunburn	21	10
Stress	20	1
Mitochondrial Dysfunction	18	11
Learning disorders	17	9
Neurodegenerative Diseases	17	10
Immune Disorders: Low Immune Function	16	4
Lipopolysaccharide-Induced Toxicity	14	3
Advanced Glycation End products (AGE)	13	3
Ultraviolet Radiation Induced Damage	13	8
Alzheimer's Disease	12	8
Diabetes Mellitus: Type 2	11	2
Memory Loss	10	5
Nicotine/Tobacco Toxicity	10	1
Skin Cancer	5	4
Brain Inflammation	4	2
Brain: Microglial Activation	4	2
Radiation Induced Illness	4	3
Aluminum Toxicity	2	1
Prostate Diseases	2	1
Wound Healing	2	1
Aging: Brain	248	85
Skin Diseases: Photo-Aging	132	51
Aging: Immunosenecence	52	13
Dementia	33	5
Insomnia	20	2
Kidney Failure: Chronic	20	2
Metabolic Syndrome X	20	2

Osteoporosis	16	8
Anxiety Disorders	15	2
Insulin Resistance	15	4
Obesity	15	2
Cardiovascular Diseases	14	4
Atherosclerosis	12	3
Erythema	12	2
Muscle Atrophy	12	2
Cancers: All	11	2
Fatigue	11	2
Hyperglycemia	11	2
Autism Spectrum Disorders	10	1
Balance Disorders	10	1
Bone Fractures	10	1
Cholesterol: Oxidation	10	1
Chronic Wasting Disease	10	1
Dehydration	10	1
Depression	10	1
Diabetes: Skin	10	1
Dysbiosis	10	1
Endothelial Dysfunction	10	9
Endotoxemia	10	1
Hair Quality Problems	10	1
Hemodialysis	10	1
High Homocysteine	10	1
Hip Fracture	10	1
Infant Neurological Development	10	1
Nail Diseases	10	1

Obstructive uropathy	10	1
Periodontal Diseases	10	1
Pigmentation Disorders	10	1
Post-Traumatic Stress Disorders (PTSD)	10	1
Pregnancy: Psychological and Physical Distress.	10	1
Schizophrenia	10	1
Sitting Sickness	10	1
Telangiectasias	10	1
Vitamin B 12 Deficiency	10	1
Wrinkles, Aging Skin	10	1
Graying Hair	7	2
Osteopenia	6	3
African-American Specific Deficiencies/Diseases	5	1
Immune System Diseases	5	1
Low Immune Function: Natural Killer Cells	4	2
Brain: Oxidative Stress	3	2
Low Immune Function: Thymus Dysfunction	3	2
Rheumatoid Arthritis	3	1
Skin: Thinning	3	1
Statin-Induced Pathologies	3	2
Aging: Liver	2	1
Aging: Prostate	2	1
Alcohol Toxicity	2	1
Amyloidosis	2	1
Amyotrophic lateral sclerosis (ALS)	2	1
Atopic Dermatitis	2	1
Brain Injury: Hippocampal Damage	2	1
Cataract	2	1

Drug-Induced Nutrient Depletion: Statin Drugs	2	1
Dyskeratosis Congenita	2	1
Estrogen Deficiency	2	1
Fatty Liver	2	1
Generalized Anxiety Disorder	2	1
Hair: Graying	2	1
Heavy Metal Toxicity	2	1
Hyperinsulinism	2	1
Hyperpigmentation	2	2
Hyperuricemia	2	1
Hypoxia	2	1
Immune Dysregulation: TH1/TH2 imbalance	2	1
Infertility: Aging Associated	2	1
Infertility: Female	2	1
Inflammation: Brain	2	1
Kidney Damage	2	1
Kidney Diseases	2	1
Lactose Malabsorption	2	1
Leptin Resistance	2	1
Light Sensitivity	2	1
Liver Disease	2	1
Low Disorders: Low TH1	2	1
Low Libido	2	1
Lymphoma	2	1
Memory Disorders: Drug-Induced	2	1
Mitochondrial Diseases	2	1
Muscle Damage: Exercise-Induced	2	1
Muscular Dystrophy	2	1

Photooxidative Stress	2	1
Respiratory Diseases	2	1
Sarcopenia	2	1
Sexual Arousal Disorder	2	1
Sexual Dysfunction	2	1
Smoking	2	2
Sugar (Sucrose) Toxicity	2	1
Thymic disease: Atrophy	2	1
Triglycerides: Elevated	2	1
Werner Syndrome	2	1
Wound Healing: Delayed	2	1
Xeroderma Pigmentosum	2	1
Acid Reflux	1	1
Adrenopause	1	1
Androgen Deficiency	1	1
Arterial Calcification	1	1
Athlete's foot	1	1
Athletic Performance	1	1
Coronary Artery Disease	1	1
Coronary Stenting	1	1
Glutathione Deficiency	1	1
Heart Failure	1	1
Hypercholesterolemia	1	1
Hypothyroidism	1	1
Left Ventricular Dysfunction	1	1
Leukemia	1	1
Low DHEA	1	1
Low Testosterone	1	1
Neurotoxicity	1	1

Peripheral Vascular Diseases	1	1
Photochemotherapy	1	1
Retinal Degeneration: Light-Induced	1	1
Retinal Diseases	1	1

87 Relevant Results for Pharmacological Actions

Pharmacological Action Name	Cumulative Knowledge	Article Count
Antioxidants	218	78
NF-kappaB Inhibitor	16	10
Interleukin-6 Downregulation	8	5
Superoxide Dismutase Up-regulation	31	7
Anti-Inflammatory Agents	20	11
Antiproliferative	13	9
Apoptotic	10	8
Cyclooxygenase 2 Inhibitors	7	5
Enzyme Inhibitors	7	6
Malondialdehyde Down-regulation	36	5
Tumor Necrosis Factor (TNF) Alpha Inhibitor	15	4
Interleukin-1 beta downregulation	7	4
Anticarcinogenic Agents	6	4
Glutathione Upregulation	3	2
Interleukin-8 downregulation	3	2
Inhibitor of Nuclear Factor Kappa-B Kinase (IKK)	2	2
Neuroprotective Agents	163	60
Telomerase Upregulation	96	23
Immunomodulatory	57	12
Dermatologic Agents	22	3

Heat Shock Protein Inducer	20	1
Photoprotective	20	7
Matrix metalloproteinase-1 (MMP-1) inhibitor	16	5
Cytoprotective	14	3
Immunostimulatory	14	3
Interleukin-10 downregulation	14	3
Radioprotective	14	4
Anti-collagenase	13	3
Hepatoprotective	6	3
Neuritogenic	6	3
Chemopreventive	5	3
Catalase Up-Regulation	4	2
Neurogenesis	4	2
Matrix Metalloproteinase-13 (MMP-13) Inhibitor	3	2
Tumor Suppressor Protein p53 Upregulation	3	2
Vascular Endothelial Growth Factor A Inhibitor	3	2
Calcium Channel Blockers	2	1
Immunomodulatory: CD8+ Up-regulation	2	1
Receptor-Related Orphan Receptor (ROR)-Alpha1 Inhibitor	2	1
Telomere Protective	51	6
Telomerase Inhibitor	24	4
Matrix metalloproteinase-2 (MMP-2) inhibitor	16	5
Hypotensive	12	2
Antihypertensive Agents	10	1
Autophagy Up-regulation	7	5
Anti-Apoptotic	6	3
Cardioprotective	5	3
Matrix metalloproteinase-9 (MMP-9) inhibitor	5	3

Genoprotective	4	3
Regenerative	4	2
Cell cycle arrest	3	3
SIRT1 Activator	3	2
Antioxidant Effects	2	1
Anxiolytic	2	1
Aphrodisiac	2	1
Bcl-2 protein down-regulation	2	1
Brain-derived neurotrophic factor modulator	2	1
Caspase-3 Activation	2	1
Chelating Agents	2	1
Cyclin-Dependent Kinase Inhibitor: P16	2	2
Hypoglycemic Agents	2	1
Hypolipidemic	2	1
Insulin Sensitizers	2	1
Interleukin-2 upregulation	2	1
Matrix metalloproteinase-3 (MMP-3) inhibitor	2	1
Neurorestorative	2	1
Renoprotective	2	1
Tyrosinase inhibitors	2	2
Anti-elastase	1	1
Anticholesteremic Agents	1	1
Antimutagenic Agents	1	1
C-Jun N-Terminal Kinases (JNK) Modulator	1	1
Cyclin-Dependent Kinase Inhibitor	1	1
Extracellular Signal-Regulated Kinases Modulator	1	1
Forkhead Transcription Factor Family O (FOXO) Modulator	1	1
Histone deacetylase inhibitor	1	1
Interleukin-1 alpha downregulation	1	1

Matrix Metalloproteinase-8 Inhibitor	1	1
NF-kappa-B-inducing kinase (NIK) modulator	1	1
Neuroplasticity enhancement	1	1
Nitric Oxide Inhibitor	1	1
P38 Mitogen-Activated Protein Kinase Modulator	1	1
Prostaglandin PGE2 downregulation	1	1
Radiosensitizer	1	1
Secretagogue	1	1
Tyrosinase Inhibition	1	1
Vasoprotective	1	1

50 Relevant Results for Keywords

Keyword Name	Cumulative Knowledge	Article Count
Plant Extracts	178	57
Stilbenes	47	20
Proanthocyanidins	30	7
Dose Response	21	3
Telomere Length	9	5
Risk Reduction	52	6
Risk Factors	20	2
Natural Substance Synergy	11	2
Ovariectomy-Induced Changes	8	4
Cancer Hypotheses	2	2
Disease Regression	2	1
Drug Synergy	2	1
Epigenetic Modification	1	1
Senescensce	1	1

Diseases that are Linked	34	6
Anti-Obesity Agents	10	1
Cholesterol Myth	10	1
Increased Risk	10	1
Natural Substances Versus Drugs	10	1
Physical Activity	10	1
Physical Inactivity	10	1
Phytotherapy	10	1
Psychobiology	10	1
Socioeconomic Status	10	1
Mind-Body Medicine	5	1
Accelerated Aging	4	2
Mitochondrial Biogenesis	4	2
Upregulation of Telemere Length	3	2
Adult Stem Cells	2	1
Ayurvedic Formulas	2	1
Bioavailability	2	1
Blood Activator	2	1
Cannabinoid Receptors	2	1
Drug: Raloxifene	2	1
Drug: Tamoxifen	2	1
Gene Expression Regulation	2	1
Longevity	2	1
Metabolome	2	1
Microbiota	2	1
Nutrient Differences: Reduced/Oxidized Forms	2	1
Qi Promotion	2	1
Regenerative Substances	2	1

Thymopoiesis	2	1
Aging Is Not A Disease	1	1
Biophotons	1	1
Caloric Restriction	1	1
Phase 2 Antixodiant Booster	1	1
Science Confirms Tradition	1	1
Whole Food is Superior to the Isolated Parts	1	1
Withanone	1	1

4 Relevant Results for Adverse Pharmacological Actions

Adverse Pharmacological Action Name	Cumulative Knowledge	Article Count
Telomerase Inhibition	12	3
Cardiotoxic	3	3
Progeriatric	2	2
Neurotoxic	1	1

View the Evidence.
438 Research Articles in Total.

Category : Substances

5-Methyltetrahydrofolate (MTHF) (AC 1) (CK 10)

High-dose short-term folate administration modifies ambulatory blood pressure in postmenopausal women.

Pubmed Data : Eur J Clin Nutr. 2009 Oct;63(10):1266-8. Epub 2009 Jul 15. PMID: **19603054**

Article Published Date : Oct 01, 2009

Authors : A Cagnacci, M Cannoletta, A Volpe

Study Type : Human Study
Additional Links
Substances : 5-Methyltetrahydrofolate (MTHF) : CK(42) : AC(5)
Diseases : Aging : CK(1658) : AC(438), Cardiovascular Diseases : CK(7200) : AC(911), High Homocysteine : CK(453) : AC(66), Hypertension : CK(2984) : AC(406), Insulin Resistance : CK(1683) : AC(346), Metabolic Syndrome X : CK(916) : AC(158), Postmenopausal Disorders : CK(329) : AC(42)
Pharmacological Actions : Hypotensive : CK(435) : AC(59)

Acai (AC 2) (CK 4)

"A botanical containing freeze dried açai pulp promotes healthy aging and reduces oxidative damage in sod1 knockdown flies."

Pubmed Data : Age (Dordr). 2012 May 26. Epub 2012 May 26. PMID: **22639178**

Article Published Date : May 26, 2012

Authors : Mara Laslo, Xiaoping Sun, Cheng-Te Hsiao, Wells W Wu, Rong-Fong Shen, Sige Zou

Study Type : Insect Study
Additional Links
Substances : Acai : CK(45) : AC(16)
Diseases : Aging : CK(1658) : AC(438)
Additional Keywords : Mitochondrial Biogenesis : CK(28) : AC(14)

Acai palm fruit pulp improves the survival of flies on a high fat diet.

Pubmed Data : Exp Gerontol. 2010 Jan 18. Epub 2010 Jan 18. PMID: **20080168**

Article Published Date : Jan 18, 2010

Authors : Xiaoping Sun, Jeanne Seeberger, Thomas Alberico, Chunxu Wang, Charles T Wheeler, Alexander G Schauss, Sige Zou

Study Type : Animal Study
Additional Links
Substances : Acai : CK(45) : AC(16)
Diseases : Aging : CK(1658) : AC(438), Oxidative Stress : CK(3871) : AC(1382)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682)

Acerola (AC 1) (CK 1)

Acerola fruit polyphenol has a skin-lightening effect on UV-induced pigmentation.

Pubmed Data : Biosci Biotechnol Biochem. 2008 Dec;72(12):3211-8. Epub 2008 Dec 7. PMID: 19060403

Article Published Date : Dec 01, 2008

Authors : Takayuki Hanamura, Eriko Uchida, Hitoshi Aoki

Study Type : In Vitro Study
Additional Links
Substances : Acerola : CK(10) : AC(7) , Polyphenols : CK(931) : AC(335)
Diseases : Hyperpigmentation : CK(19) : AC(11) , Skin Diseases: Photo-Aging : CK(132) : AC(51)
Pharmacological Actions : Tyrosinase inhibitors : CK(4) : AC(4)
Additional Keywords : Plant Extracts : CK(7484) : AC(2463)

Acetic Acid (AC 1) (CK 2)

Acetic acid and Reishi mushroom polysaccharide contain lifespan-promoting activity in the nematode.

Pubmed Data : Bioorg Med Chem.2009 Nov 15;17(22):7831-40. Epub 2009 Sep 6. PMID: 19837596

Article Published Date : Nov 15, 2009

Authors : Ming-Hong Chuang, Shyh-Horng Chiou, Chun-Hao Huang, Wen-Bin Yang, Chi-Huey Wong

Study Type : Animal Study
Additional Links
Substances : Acetic Acid : CK(15) : AC(2) , Reishi Mushroom : CK(167) : AC(76)
Diseases : Aging : CK(1658) : AC(438)

Acetyl-l-carnitine (AC 4) (CK 7)

Acetyl-l-carnitine and R-alpha-lipoic acid partially reverses brain decay and RNA/DNA oxidation associated with memory loss in rats.

Pubmed Data : Proc Natl Acad Sci U S A.2002 Feb 19;99(4):2356-61. PMID: 11854529

Article Published Date : Feb 19, 2002

Authors : Jiankang Liu, Elizabeth Head, Afshin M Gharib, Wenjun Yuan, Russell T Ingersoll, Tory M Hagen, Carl W Cotman, Bruce N Ames

Study Type : Animal Study
Additional Links
Substances : Acetyl-l-carnitine : CK(211) : AC(36), Alpha-Lipoic Acid : CK(476) : AC(116)
Diseases : Aging: Brain : CK(248) : AC(85), DNA damage : CK(993) : AC(382) , Memory Disorders : CK(342) : AC(104), Memory Loss : CK(153) : AC(40)
Pharmacological Actions : Neuroprotective Agents : CK(2268) : AC(1071)

Acetyl-l-carnitine delays the mitochondrial decay of aging and improves cognitive function in Alzheimers disease.

Pubmed Data : Planta Med. 1999 Apr;65(3):266-8. PMID: 15591008

Article Published Date : Apr 01, 1999

Authors : Bruce N Ames, Jiankang Liu

Study Type : Review
Additional Links
Substances : Acetyl-l-carnitine : CK(211) : AC(36)
Diseases : Aging: Brain : CK(248) : AC(85), Alzheimer's Disease : CK(1292) : AC(382)

Acetyl-l-carnitine supplementation partly reduces the leptin resistance that occurs in old rats, and improves ATP production in skeletal muscle mitochondria through an increase in mitochondrial protein content.

Pubmed Data : J Nutr.2002 Apr;132(4):636-42. PMID: 11925454

Article Published Date : Apr 01, 2002

Authors : Susanna Iossa, Maria Pina Mollica, Lillà Lionetti, Raffaella Crescenzo, Monica Botta, Antonio Barletta, Giovanna Liverini

Study Type : Animal Study
Additional Links

Substances : Acetyl-l-carnitine : CK(211) : AC(36)
Diseases : Aging : CK(1658) : AC(438), Leptin Resistance : CK(10) : AC(5)

R-lipoic acid and acetyl-l-carnitine ameliorate age-associated oxidative damage to the brain, in a rat experimental model.

Pubmed Data : Neurochem Res. 2009 Apr;34(4):755-63. Epub 2008 Oct 10. PMID: 18846423

Article Published Date : Apr 01, 2009

Authors : Jiangang Long, Feng Gao, Liqi Tong, Carl W Cotman, Bruce N Ames, Jiankang Liu

Study Type : Animal Study
Additional Links
Substances : Acetyl-l-carnitine : CK(211) : AC(36), Alpha-Lipoic Acid : CK(476) : AC(116)
Diseases : Aging: Brain : CK(248) : AC(85), Alzheimer's Disease : CK(1292) : AC(382), Cognitive Decline/Dysfunction : CK(1151) : AC(215)

Aloe Vera (AC 1) (CK 10)

Aloe gel significantly improves wrinkles and elasticity in photoaged human skin.

Pubmed Data : Ann Dermatol. 2009 Feb;21(1):6-11. Epub 2009 Feb 28. PMID: 20548848

Article Published Date : Feb 01, 2009

Authors : Soyun Cho, Serah Lee, Min-Jung Lee, Dong Hun Lee, Chong-Hyun Won, Sang Min Kim, Jin Ho Chung

Study Type : Human Study
Additional Links
Substances : Aloe Vera : CK(339) : AC(74)
Diseases : Aging Skin : CK(426) : AC(101), Skin Diseases: Photo-Aging : CK(132) : AC(51), Wrinkles : CK(10) : AC(1)
Pharmacological Actions : Matrix metalloproteinase-1 (MMP-1) inhibitor : CK(32) : AC(16)

Alpha-Lipoic Acid (AC 6) (CK 27)

A multi-nutrient mixture of marine proteins, alpha-lipoic acid, pine bark extract, vitamins and minerals is safe and efficacious in the treatment of aging symptoms of the skin in women.

Pubmed Data : J Int Med Res. 2005 May-Jun;33(3):267-72. PMID: 15938587

Article Published Date : May 01, 2005

Authors : E Thom

Study Type : Human Study
Additional Links
Substances : Alpha-Lipoic Acid : CK(476) : AC(116) , Fish extract : CK(32) : AC(4), Multivitamin : CK(257) : AC(25), Pine Bark Extract : CK(567) : AC(96)
Diseases : Aging Skin : CK(426) : AC(101)

A topical cream containing 5% alpha-lipoic acid improves clinical symptoms of photoageing of facial skin.

Pubmed Data : Br J Dermatol. 2003 Oct;149(4):841-9. PMID: 14616378

Article Published Date : Oct 01, 2003

Authors : H Beitner

Study Type : Human Study
Additional Links
Substances : Alpha-Lipoic Acid : CK(476) : AC(116)
Diseases : Aging Skin : CK(426) : AC(101) , Skin Diseases: Photo-Aging : CK(132) : AC(51)

Acetyl-L-carnitine and lipoic acid decrease age-related oxidative insult in the mitochondria of the rat heart.

Pubmed Data : Ann N Y Acad Sci. 2002 Apr;959:491-507. PMID: 11976222

Article Published Date : Apr 01, 2002

Authors : Tory M Hagen, Régis Moreau, Jung H Suh, Francesco Visioli

Study Type : Animal Study
Additional Links
Substances : Alpha-Lipoic Acid : CK(476) : AC(116)
Diseases : Aging : CK(1658) : AC(438) , Mitochondrial Diseases : CK(224) : AC(90)

Acetyl-l-carnitine and R-alpha-lipoic acid partially reverses brain decay and RNA/DNA oxidation associated with memory loss in rats.

Pubmed Data : Proc Natl Acad Sci U S A.2002 Feb 19;99(4):2356-61. PMID: **11854529**

Article Published Date : Feb 19, 2002

Authors : Jiankang Liu, Elizabeth Head, Afshin M Gharib, Wenjun Yuan, Russell T Ingersoll, Tory M Hagen, Carl W Cotman, Bruce N Ames

Study Type : Animal Study
Additional Links
Substances : Acetyl-l-carnitine : CK(211) : AC(36), Alpha-Lipoic Acid : CK(476) : AC(116)
Diseases : Aging: Brain : CK(248) : AC(85), DNA damage : CK(993) : AC(382) , Memory Disorders : CK(342) : AC(104), Memory Loss : CK(153) : AC(40)
Pharmacological Actions : Neuroprotective Agents : CK(2268) : AC(1071)

Alpha lipoic acid exerts a rejuvenative impact on mitochrondria in various tissue.

Pubmed Data : Med Hypotheses. 2009 Jan;72(1):29-33. Epub 2008 Sep 11. PMID: **18789599**

Article Published Date : Jan 01, 2009

Authors : Mark F McCarty, Jorge Barroso-Aranda, Francisco Contreras

Study Type : In Vitro Study
Additional Links
Substances : Alpha-Lipoic Acid : CK(476) : AC(116)
Diseases : Aging : CK(1658) : AC(438), Mitochondrial Dysfunction : CK(225) : AC(91)
Additional Keywords : Phase 2 Antixodiant Booster : CK(1) : AC(1)

R-lipoic acid and acetyl-l-carnitine ameliorate age-associated oxidative damage to the brain, in a rat experimental model.

Pubmed Data : Neurochem Res. 2009 Apr;34(4):755-63. Epub 2008 Oct 10. PMID: **18846423**

Article Published Date : Apr 01, 2009

Authors : Jiangang Long, Feng Gao, Liqi Tong, Carl W Cotman, Bruce N Ames, Jiankang Liu

Study Type : Animal Study
Additional Links
Substances : Acetyl-l-carnitine : CK(211) : AC(36), Alpha-Lipoic Acid : CK(476) : AC(116)
Diseases : Aging: Brain : CK(248) : AC(85), Alzheimer's Disease : CK(1292) : AC(382) , Cognitive Decline/Dysfunction : CK(1151) : AC(215)

Amino Acids (AC 1) (CK 10)

A multi-nutrient mixture of vitamin C, vitamin E, carotenoids, selenium, zinc, amino acids and glycosaminoglycans, blueberry extract and pycnogenol improves visible signs of ageing in women 45-73 years of age.

Pubmed Data : J Dermatolog Treat. 2004 Jul;15(4):222-6. PMID: 15764035

Article Published Date : Jul 01, 2004

Authors : D Segger, F Schönlau

Study Type : Human Study

Additional Links

Substances : Amino Acids : CK(100) : AC(16) , Blueberry : CK(260) : AC(90) , Glycosaminoglycans : CK(12) : AC(2), Pycnogenol (Pine Bark) : CK(556) : AC(94) , Selenium : CK(784) : AC(139) , Vitamin C : CK(1957) : AC(404), Vitamin E : CK(1656) : AC(290) , Zinc : CK(941) : AC(139)

Diseases : Aging Skin : CK(426) : AC(101) , Skin Diseases : CK(67) : AC(12)

Amla Fruit (AC 2) (CK 4)

A traditional Indian medical formula containing clarified butter (ghee), flax seed oil, amla (P. emblica fruits), Shorea robusta resin and zinc (Yashada bhasma) stimulates wound healing and tissue regeneration.

Pubmed Data : Evid Based Complement Alternat Med. 2009 Feb 27. PMID: 19252191

Article Published Date : Feb 27, 2009

Authors : Hema Sharma Datta, Shankar Kumar Mitra, Bhushan Patwardhan

Study Type : Animal Study

Additional Links

Substances : Amla Fruit : CK(80) : AC(33) , Flaxseed : CK(453) : AC(90) , Ghee : CK(24) : AC(4) , Shorea robusta : CK(2) : AC(1), Zinc : CK(941) : AC(139)

Diseases : Aging Skin : CK(426) : AC(101) , Wound Healing: Delayed : CK(74) : AC(29)

Additional Keywords : Ayurvedic Formulas : CK(2) : AC(1) , Regenerative Substances : CK(42) : AC(19)

Amla prevents dyslipidemia and oxidative stress in the aging process.

Pubmed Data : Br J Nutr. 2007 Jun;97(6):1187-95 PMID: 17506915

Article Published Date : Jun 01, 2007

Authors : Takako Yokozawa, Hyun Young Kim, Hyun Ju Kim, Tsutomu Okubo, Djoing-Chi Chu, Lekh Raj Juneja

Study Type : Animal Study
Additional Links
Substances : Amla Fruit : CK(80) : AC(33)
Diseases : Aging : CK(1658) : AC(438)

Anthocyanins (AC 3) (CK 14)

A higher dietary intake of anthocyanins was associated with an attenuation of lung function decline.

Pubmed Data : Am J Clin Nutr. 2016 Feb ;103(2):542-50. Epub 2016 Jan 20. PMID: 26791184

Article Published Date : Jan 31, 2016

Authors : Amar J Mehta, Aedín Cassidy, Augusto A Litonjua, David Sparrow, Pantel Vokonas, Joel Schwartz

Study Type : Human Study
Additional Links
Substances : Anthocyanins : CK(342) : AC(115), Blueberry : CK(260) : AC(90)
Diseases : Aging : CK(1658) : AC(438)
Pharmacological Actions : Cytoprotective : CK(190) : AC(94)
Additional Keywords : Risk Reduction : CK(6417) : AC(686)

Anthocyanins in aged blueberry-fed rats are found centrally and may enhance memory.

Pubmed Data : BMB Rep. 2010 Jan;43(1):46-51. PMID: 16053243

Article Published Date : Jan 01, 2010

Authors : Cristina Andres-Lacueva, Barbara Shukitt-Hale, Rachel L Galli, Olga Jauregui, Rosa M Lamuela-Raventos, James A Joseph

Study Type : Animal Study
Additional Links
Substances : Anthocyanins : CK(342) : AC(115), Blueberry : CK(260) : AC(90)
Diseases : Aging: Brain : CK(248) : AC(85), Memory Disorders : CK(342) : AC(104)
Pharmacological Actions : Neuroprotective Agents : CK(2268) : AC(1071)

Lotus seedpod proanthyocyanins have an ameliorative effect on cognitive deficits and oxidative damage in senescence-accelerated mice.

Pubmed Data : Behav Brain Res. 2008 Dec 1;194(1):100-7. Epub 2008 Jul 4. PMID: 18652848

Article Published Date : Dec 01, 2008

Authors : Yushi Gong, Liegang Liu, Bijun Xie, Yongcheng Liao, Erling Yang, Zhida Sun

Study Type : Animal Study
Additional Links
Substances : Anthocyanins : CK(342) : AC(115) , Lotus : CK(73) : AC(46)
Diseases : Aging : CK(1658) : AC(438) , Aging: Brain : CK(248) : AC(85), Oxidative Stress : CK(3871) : AC(1382)
Pharmacological Actions : Neuroprotective Agents : CK(2268) : AC(1071)
Additional Keywords : Proanthocyanidins : CK(203) : AC(54)

Antioxidant formulas (AC 2) (CK 11)

Review: natural approaches to reduce skin aging.

Pubmed Data : Acta Dermatovenerol Alp Panonica Adriat. 2008 Jun;17(2):47-54. PMID: 18709289

Article Published Date : Jun 01, 2008

Authors : Neira Puizina-Ivić

Study Type : Review
Additional Links
Substances : Antioxidant formulas : CK(492) : AC(76) , Fruit: All : CK(3727) : AC(793) , Vegetables: All : CK(1092) : AC(118)
Diseases : Aging Skin : CK(426) : AC(101)

Supplementation with antioxidant vitamins and minerals slows cognitive decline in middle-aged adults.

Pubmed Data : Am J Clin Nutr. 2011 Jan;93(1):200-10. Epub 2010 Nov 24. PMID: 21106918

Article Published Date : Jan 01, 2011

Authors : Emmanuelle Kesse-Guyot, Hélène Amieva, Katia Castetbon, Adina Henegar, Monique Ferry, Claude Jeandel, Serge Hercberg, Pilar Galan,

Study Type : Human Study
Additional Links
Substances : Antioxidant formulas : CK(492) : AC(76) , Multivitamin : CK(257) : AC(25)

Diseases : Aging: Brain : CK(248) : AC(85), Cognitive Decline/Dysfunction : CK(1151) : AC(215)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682) , Neuroprotective Agents : CK(2268) : AC(1071)

Apigenin (AC 1) (CK 2)

Apigenin inhibits UVA-induced cytotoxicity in vitro and prevents signs of skin aging in vivo.

Pubmed Data : Int J Mol Med. 2016 Jun 6. Epub 2016 Jun 6. PMID: 27279007

Article Published Date : Jun 05, 2016

Authors : Sungjin Choi, Jeungyeun Youn, Karam Kim, Da Hye Joo, Shanghun Shin, Jeongju Lee, Hyun Kyung Lee, In-Sook An, Seungbin Kwon, Hae Jeong Youn, Kyu Joong Ahn, Sungkwan An, Hwa Jun Cha

Study Type : Animal Study, In Vitro Study
Additional Links
Substances : Apigenin : CK(158) : AC(101)
Diseases : Aging Skin : CK(426) : AC(101) , Ultraviolet Radiation Induced Damage : CK(80) : AC(34)
Pharmacological Actions : Matrix metalloproteinase-1 (MMP-1) inhibitor : CK(32) : AC(16) , Photoprotective : CK(74) : AC(27)

Apples (AC 4) (CK 7)

Apple exhibits anti-aging properties.

Pubmed Data : Oxid Med Cell Longev. 2012 ;2012:491759. Epub 2012 Aug 30. PMID: 22970337

Article Published Date : Dec 31, 2011

Authors : Vanessa Palermo, Fulvio Mattivi, Romano Silvestri, Giuseppe La Regina, Claudio Falcone, Cristina Mazzoni

Study Type : Review
Additional Links
Substances : Apples : CK(374) : AC(100)
Diseases : Aging : CK(1658) : AC(438)
Additional Keywords : Whole Food is Superior to the Isolated Parts : CK(13) : AC(4)

Apple juice concentrate prevents oxidative damage and impaired maze performance in aged mice.

Pubmed Data : Ann Clin Psychiatry. 2009 Jul-Sep;21(3):148-61. PMID: **16340085**

Article Published Date : Jul 01, 2009

Authors : Flaubert Tchantchou, Amy Chan, Lydia Kifle, Daniela Ortiz, Thomas B Shea

Study Type : Animal Study
Additional Links
Substances : Apples : CK(374) : AC(100)
Diseases : Aging: Brain : CK(248) : AC(85), Cognitive Decline/Dysfunction : CK(1151) : AC(215)
Pharmacological Actions : Neuroprotective Agents : CK(2268) : AC(1071)

Procyanidins from apples extend the lifespan of caenorhabditis elegans.

Pubmed Data : Planta Med. 2010 Aug 17. Epub 2010 Aug 17. PMID: **20717869**

Article Published Date : Aug 17, 2010

Authors : Tadahiro Sunagawa, Takahiko Shimizu, Tomomasa Kanda, Motoyuki Tagashira, Manabu Sami, Takuji Shirasawa

Study Type : Animal Study
Additional Links
Substances : Apples : CK(374) : AC(100)
Diseases : Aging : CK(1658) : AC(438)

The consumption of apples can prevent the decline in cognitive performance that accompanies dietary and genetic deficiencies and aging.

Pubmed Data : J Alzheimers Dis. 2006 Aug;9(3):287-91. PMID: **16914839**

Article Published Date : Aug 01, 2006

Authors : [No authors listed]

Study Type : Animal Study
Additional Links
Substances : Apples : CK(374) : AC(100)
Diseases : Aging: Brain : CK(248) : AC(85), Cognitive Decline/Dysfunction : CK(1151) : AC(215), Neurodegenerative Diseases : CK(3376) : AC(850)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682)

Arginine (AC 3) (CK 5)

A selenium/arginine mixture prevents chemically-induced immunosuppresion and accelerated aging.

Pubmed Data : Xi Bao Yu Fen Zi Mian Yi Xue Za Zhi. 2007 Dec;23(12):1126-9. PMID: 18062883

Article Published Date : Dec 01, 2007

Authors : Yan-Hong Ma, An-Jun Liu, Guo-Rong Zhang, Jing Lang

Study Type : Animal Study
Additional Links
Substances : Arginine : CK(1012) : AC(176), Selenium : CK(784) : AC(139)
Diseases : Aging : CK(1658) : AC(438), Aging: Immunosenecence : CK(52) : AC(13), Immune Disorders: Low Immune Function : CK(489) : AC(118)
Pharmacological Actions : Antiproliferative : CK(2479) : AC(1685), Immunomodulatory : CK(1287) : AC(358)

Long-term dietary supplementation with L-arginine prevents age-related reduction in renal function.

Pubmed Data : Am J Physiol. 1997 Jun;272(6 Pt 2):R1768-74. PMID: 9227589

Article Published Date : Jun 01, 1997

Authors : J F Reckelhoff, J A Kellum, L C Racusen, D A Hildebrandt

Study Type : Animal Study
Additional Links
Substances : Arginine : CK(1012) : AC(176)
Diseases : Aging : CK(1658) : AC(438), Kidney Damage : CK(193) : AC(64), Kidney Diseases : CK(501) : AC(84)
Pharmacological Actions : Renoprotective : CK(558) : AC(247)

Meta-Analysis: L-arginine has a wide range of potential therapeutic applications.

Pubmed Data : J Med. 1999;30(3-4):131-48. PMID: 17312667

Article Published Date : Jan 01, 1999

Authors : E Z Fisman, A Tenenbaum, I Shapira, A Pines, M Motro

Study Type : Review
Additional Links
Substances : Arginine : CK(1012) : AC(176)
Diseases : Aging : CK(1633) : AC(434), Coronary Artery Disease : CK(1468) : AC(155), Diabetes Mellitus: Type 2 : CK(3384) : AC(595), Heart Failure : CK(918) : AC(124), Hypercholesterolemia : CK(1428) : AC(227), Peripheral Vascular Diseases : CK(221) : AC(23), Smoking : CK(676) : AC(102)

Artichoke (AC 2) (CK 3)

"Cynaropicrin from Cynara scolymus L. suppresses photoaging of skin by inhibiting the transcription activity of nuclear factor-kappa B."

Pubmed Data : Bioorg Med Chem Lett. 2012 Nov 21. Epub 2012 Nov 21. PMID: 23232059

Article Published Date : Nov 20, 2012

Authors : Yuka Tsuda Tanaka, Kiyotaka Tanaka, Hiroyuki Kojima, Tomoji Hamada, Teruaki Masutani, Makoto Tsuboi, Yukihiro Akao

Study Type : In Vitro Study
Additional Links
Substances : Artichoke : CK(157) : AC(33)
Diseases : Aging Skin : CK(426) : AC(101), Skin Diseases: Photo-Aging : CK(132) : AC(51)
Pharmacological Actions : Inhibitor of Nuclear Factor Kappa-B Kinase (IKK) : CK(2) : AC(2)

Artichoke extract ameliorates age-related endothelial dysfunction in rats.

Pubmed Data : Ophthalmic Res. 2009;42(2):112-6. Epub 2009 Jun 26. PMID: 16366729

Article Published Date : Jan 01, 2009

Authors : Giuseppe Rossoni, Simona Grande, Claudio Galli, Francesco Visioli

Study Type : Animal Study
Additional Links
Substances : Artichoke : CK(157) : AC(33)
Diseases : Aging : CK(1658) : AC(438), Endothelial Dysfunction : CK(1176) : AC(232)

Ashwagandha (AC 1) (CK 1)

Ashwaganda contains a compound, withanone, which demonstrates antiaging properties in normal human fibroblasts.

Pubmed Data : Basic Clin Pharmacol Toxicol. 2007 Feb;100(2):121-6. PMID: **19587106**

Article Published Date : Feb 01, 2007

Authors : Nashi Widodo, Navjot Shah, Didik Priyandoko, Tetsuro Ishii, Sunil C Kaul, Renu Wadhwa

Study Type : In Vitro Study
Additional Links
Substances : Ashwagandha : CK(154) : AC(74)
Diseases : Aging : CK(1658) : AC(438)
Additional Keywords : Withanone : CK(1) : AC(1)

Astaxanthin (AC 4) (CK 6)

Astaxanthin attenuates the UVB-induced secretion of prostaglandin E(2) and interleukin-8, indicating its possible role in minimizing inflammation associated with skin damage.

Pubmed Data : Exp Dermatol. 2012 Jul ;21 Suppl 1:11-7. PMID: **22626465**

Article Published Date : Jul 01, 2012

Authors : Shuko Terazawa, Hiroaki Nakajima, Mori Shingo, Takao Niwano, Genji Imokawa

Study Type : In Vitro Study
Additional Links
Substances : Astaxanthin : CK(406) : AC(146)
Diseases : Skin Diseases: Photo-Aging : CK(132) : AC(51) , Sunburn : CK(41) : AC(19)
Pharmacological Actions : Anti-Inflammatory Agents : CK(4688) : AC(1630) , Cyclooxygenase 2 Inhibitors : CK(464) : AC(272), Interleukin-8 downregulation : CK(166) : AC(61) , Prostaglandin PGE2 downregulation : CK(96) : AC(46)

Astaxanthin positively modulates age-associated mitochondrial dysfunction in healthy dogs.

Pubmed Data : J Anim Sci. 2012 Oct 16. Epub 2012 Oct 16. PMID: **23100599**

Article Published Date : Oct 15, 2012

Authors : J S Park, B D Mathison, M G Hayek, J Zhang, G A Reinhart, B P Chew

Study Type : Animal Study
Additional Links
Substances : Astaxanthin : CK(406) : AC(146)
Diseases : Aging : CK(1658) : AC(438) , Mitochondrial Dysfunction : CK(225) : AC(91), Oxidative Stress : CK(3871) : AC(1382)

Pharmacological Actions : Antioxidants : CK(7331) : AC(2682)

Review: Astaxanthin shows demonstrable promise for slowing a broad range of age-related functional declines.

Pubmed Data : Altern Med Rev. 2011 Dec ;16(4):355-64. PMID: 22214255

Article Published Date : Dec 01, 2011

Authors : Parris Kidd

Study Type : Review
Additional Links
Substances : Astaxanthin : CK(406) : AC(146)
Diseases : Acid Reflux : CK(298) : AC(43) , Aging : CK(1633) : AC(434) , Cognitive Decline/Dysfunction : CK(1151) : AC(215), DNA damage : CK(993) : AC(382) , Oxidative Stress : CK(3871) : AC(1382) , Smoking : CK(676) : AC(102)

Supplemental astaxanthin protects cellular function extending lifespan in the roundworm.

Pubmed Data : Oxid Med Cell Longev. 2011 ;2011:596240. Epub 2011 Oct 12. PMID: 22013497

Article Published Date : Jan 01, 2011

Authors : Koumei Yazaki, Chinatsu Yoshikoshi, Satoru Oshiro, Sumino Yanase

Study Type : Animal Study
Additional Links
Substances : Astaxanthin : CK(406) : AC(146)
Diseases : Aging : CK(1658) : AC(438) , Oxidative Stress : CK(3871) : AC(1382)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682)

Astragalus (AC 5) (CK 6)

A fermented soybean (natto) and astragalus combination stimulates hyaluronic acid synthesis in human skin cells.

Pubmed Data : J Ethnopharmacol. 2009 Jul 17. PMID: 19619633

Article Published Date : Jul 17, 2009

Authors : Mei-Fang Hsu, Been-Huang Chiang

Study Type : In Vitro Study
Additional Links

Substances : Astragalus : CK(260) : AC(60) , Fermented Foods and Beverages : CK(864) : AC(194) , Natto : CK(105) : AC(17), Soy : CK(1787) : AC(399)
Diseases : Aging Skin : CK(426) : AC(101)

Astragalus contains compounds which slow cell aging through reduced telomere shortening rate, oxidative stress and increasing DNA repair ability.

Pubmed Data : DNA Cell Biol. 2010 Jan;29(1):33-9. PMID: **19839736**

Article Published Date : Jan 01, 2010

Authors : Peichang Wang, Zongyu Zhang, Ying Sun, Xinwen Liu, Tanjun Tong

Study Type : In Vitro Study
Additional Links
Substances : Astragalus : CK(260) : AC(60) , HDTIC-1 : CK(3) : AC(3), HDTIC-2 : CK(3) : AC(3)
Diseases : Aging : CK(1658) : AC(438) , DNA damage : CK(993) : AC(382) , Oxidative Stress : CK(3871) : AC(1382)
Pharmacological Actions : Telomerase Upregulation : CK(102) : AC(28)

Astragalus contains two isomers which decrease the expression of p16, which may slow aging.

Pubmed Data : Chin Med J (Engl). 2008 Feb 5;121(3):231-5. PMID: **18298915**

Article Published Date : Feb 05, 2008

Authors : Pei-chang Wang, Zong-yu Zhang, Jian Zhang, Tan-jun Tong

Study Type : In Vitro Study
Additional Links
Substances : Astragalus : CK(260) : AC(60)
Diseases : Aging : CK(1658) : AC(438)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682) , Cyclin-Dependent Kinase Inhibitor: P16 : CK(2) : AC(2)
Additional Keywords : Science Confirms Tradition : CK(74) : AC(50)

Astragalus demonstrates anti-aging effects through improvement of brain function and immune status in mice.

Pubmed Data : Acta Pharmacol Sin. 2003 Mar;24(3):230-4. PMID: **12617771**

Article Published Date : Mar 01, 2003

Authors : Hong Lei, Bin Wang, Wei-Ping Li, Yan Yang, Ai-Wu Zhou, Min-Zhu Chen

Study Type : Animal Study
Additional Links
Substances : Astragalus : CK(260) : AC(60)

Diseases : Aging : CK(1658) : AC(438)

Two compounds extracted from Astragalus delay replicative senescence (aging) in human cells.

Pubmed Data : Mech Ageing Dev. 2003 Dec;124(10-12):1025-34. PMID: **14659591**

Article Published Date : Dec 01, 2003

Authors : Peichang Wang, Zongyu Zhang, Xiaofeng Ma, Yu Huang, Xinwen Liu, Pengfei Tu, Tanjun Tong

Study Type : In Vitro Study
Additional Links
Substances : Astragalus : CK(260) : AC(60) , HDTIC-1 : CK(3) : AC(3), HDTIC-2 : CK(3) : AC(3)
Diseases : Advanced Glycation End products (AGE) : CK(231) : AC(73) , Aging : CK(1658) : AC(438)
Pharmacological Actions : Cell cycle arrest : CK(810) : AC(612)

Bacopa (AC 4) (CK 15)

Bacopa enhances cognitive performance in the aging.

Pubmed Data : J Altern Complement Med. 2008 Jul;14(6):707-13. PMID: **18611150**

Article Published Date : Jul 01, 2008

Authors : Carlo Calabrese, William L Gregory, Michael Leo, Dale Kraemer, Kerry Bone, Barry Oken

Study Type : Human Study
Additional Links
Substances : Bacopa : CK(125) : AC(52)
Diseases : Aging : CK(1633) : AC(434) , Aging: Brain : CK(248) : AC(85), Cognitive Decline/Dysfunction : CK(1151) : AC(215)
Pharmacological Actions : Neuroprotective Agents : CK(2268) : AC(1071)

Bacopa extract reduces brain amyloid levels in mice by as much as 60%.

Pubmed Data : J Alzheimers Dis. 2006 Aug;9(3):243-51. PMID: **16914834**

Article Published Date : Aug 01, 2006

Authors : Leigh A Holcomb, Muralikrishnan Dhanasekaran, Angie R Hitt, Keith A Young, Mark Riggs, Bala V Manyam

Study Type : Animal Study
Additional Links

Substances : Bacopa : CK(125) : AC(52)
Diseases : Aging: Brain : CK(248) : AC(85), Alzheimer's Disease : CK(1292) : AC(382) , Amyloidosis : CK(23) : AC(8)
Pharmacological Actions : Neurorestorative : CK(71) : AC(21)
Additional Keywords : Plant Extracts : CK(7484) : AC(2463)

Bacopa monnieri is a potential therapeutic antioxidant to reduce oxidative stress and improve cognitive function.

Pubmed Data : Evid Based Complement Alternat Med. 2015 ;2015:615384. Epub 2015 Aug 27. PMID: **26413126**

Article Published Date : Dec 31, 2014

Authors : Tamara Simpson, Matthew Pase, Con Stough

Study Type : Review
Additional Links
Substances : Bacopa : CK(125) : AC(52)
Diseases : Aging: Brain : CK(248) : AC(85), Alzheimer's Disease : CK(1292) : AC(382) , Brain: Oxidative Stress : CK(79) : AC(46), Mitochondrial Dysfunction : CK(225) : AC(91), Neurodegenerative Diseases : CK(3376) : AC(850)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682) , Neuroprotective Agents : CK(2268) : AC(1071)
Additional Keywords : Plant Extracts : CK(7484) : AC(2463)

Brahmi exerts distinct age-related effects on the cell-mediated immune responses through selective modulation of antioxidant enzyme activities.

Pubmed Data : Int Immunopharmacol. 2013 Feb ;15(2):260-74. Epub 2012 Dec 17. PMID: **23257614**

Article Published Date : Jan 31, 2013

Authors : Hannah P Priyanka, Ran Vijay Singh, Miti Mishra, Srinivasan ThyagaRajan

Study Type : Animal Study, In Vitro Study
Additional Links
Substances : Bacopa : CK(125) : AC(52)
Diseases : Aging: Brain : CK(248) : AC(85), Neurodegenerative Diseases : CK(3376) : AC(850)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682) , Catalase Up-Regulation : CK(118) : AC(42), Neuroprotective Agents : CK(2268) : AC(1071)

Banana (AC 1) (CK 2)

The consumption of bananas may prevent UVB skin damage.

Pubmed Data : Food Chem Toxicol. 2012 Sep 8 ;50(12):4292-4301. Epub 2012 Sep 8. PMID: 22986089

Article Published Date : Sep 07, 2012

Authors : Jarupa Viyoch, Khuanrudee Mahingsa, Kornkanok Ingkaninan

Study Type : Animal Study
Additional Links
Substances : Banana : CK(194) : AC(53)
Diseases : Skin Diseases: Photo-Aging : CK(132) : AC(51)

Berries: All (AC 2) (CK 11)

Grape juice, berries, and walnuts may decelerate brain aging.

Pubmed Data : J Ethnopharmacol. 2008 Aug 13;118(3):396-404. Epub 2008 May 20. PMID: 19640963

Article Published Date : Aug 13, 2008

Authors : James A Joseph, Barbara Shukitt-Hale, Lauren M Willis

Study Type : Commentary
Additional Links
Substances : Berries: All : CK(1443) : AC(356) , Grape : CK(1720) : AC(430) , Walnut : CK(187) : AC(43)
Diseases : Aging: Brain : CK(248) : AC(85)
Pharmacological Actions : Neuroprotective Agents : CK(2268) : AC(1071)

Higher intake of flavonoids, particularly from berries, appears to reduce rates of cognitive decline in older adults.

Pubmed Data : Ann Neurol. 2012 Jul ;72(1):135-43. Epub 2012 Apr 26. PMID: 22535616

Article Published Date : Jun 30, 2012

Authors : Elizabeth E Devore, Jae Hee Kang, Monique M B Breteler, Francine Grodstein

Study Type : Human Study
Additional Links

Substances : Berries: All : CK(1443) : AC(356) , Blueberry : CK(260) : AC(90) , Flavonoids : CK(1215) : AC(379), Strawberry : CK(145) : AC(37)
Diseases : Aging : CK(1633) : AC(434) , Cognitive Decline/Dysfunction : CK(1151) : AC(215)
Pharmacological Actions : Neuroprotective Agents : CK(2268) : AC(1071)
Additional Keywords : Risk Reduction : CK(6417) : AC(686)

Beta-glucan (AC 1) (CK 10)

Oral intake of soy isoflavone aglycone improves the aged skin of adult women.

Pubmed Data : J Nutr Sci Vitaminol (Tokyo). 2007 Feb;53(1):57-62. PMID: 17484381

Article Published Date : Feb 01, 2007

Authors : Toru Izumi, Makoto Saito, Akio Obata, Masayuki Arii, Hideyo Yamaguchi, Asahi Matsuyama

Study Type : Human Study
Additional Links
Substances : Beta-glucan : CK(249) : AC(44) , Isoflavones : CK(631) : AC(129) , Soy : CK(1787) : AC(399)
Diseases : Aging Skin : CK(426) : AC(101)

Bifidobacterium Breve (AC 1) (CK 2)

Bifidobacterium breve supplementation has a photoprotective effect against skin damage induced by ultraviolet irradiation in hairless mice.

Pubmed Data : Photodermatol Photoimmunol Photomed. 2012 Dec ;28(6):312-9. PMID: 23126293

Article Published Date : Nov 30, 2012

Authors : Saho Sugimoto, Yuki Ishii, Naoki Izawa, Norie Masuoka, Mitsuyoshi Kano, Toshiro Sone, Katsuyoshi Chiba, Kouji Miyazaki, Fumiyasu Ishikawa

Study Type : Animal Study

Additional Links
Substances : Bifidobacterium Breve : CK(60) : AC(11)
Diseases : Photooxidative Stress : CK(1) : AC(1) , Skin Diseases: Photo-Aging : CK(132) : AC(51)
Pharmacological Actions : Photoprotective : CK(74) : AC(27)

Black Poplar (AC 1) (CK 1)

Black popular has potential antioxidant antiaging properties.

Pubmed Data : J Agric Food Chem. 2011 Mar 22. Epub 2011 Mar 22. PMID: 21425781

Article Published Date : Mar 22, 2011

Authors : Stéphanie Dudonné, Pascal Poupard, Philippe Coutière, Marion Woillez, Tristan Richard, Jean-Michel Mérillon, Xavier Vitrac

Study Type : In Vitro Study
Additional Links
Substances : Black Poplar : CK(1) : AC(1)
Diseases : Aging : CK(1658) : AC(438) , Aging Skin : CK(426) : AC(101)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682)

Black Raspberry (AC 1) (CK 2)

Black raspberry extracts may benefit osteoporotic patients with prostatic disease by simultaneously altering the activation of osteoblasts and osteoclasts.

Pubmed Data : Aging Male. 2015 Jun ;18(2):124-32. Epub 2014 Aug 19. PMID: 25136745

Article Published Date : May 31, 2015

Authors : Hae-Kyoung Lim, Hye-Rim Lee, Sun Hee Do

Study Type : Animal Study
Additional Links
Substances : Black Raspberry : CK(111) : AC(30)
Diseases : Aging : CK(1658) : AC(438) , Osteoporosis : CK(1283) : AC(245)

Additional Keywords : Cannabinoid Receptors : CK(67) : AC(37) , Plant Extracts : CK(7484) : AC(2463)

Black Tea (AC 2) (CK 11)

Black tea polyphenols may positively modulate a longevity factor (FOXO1).

Pubmed Data : Aging Cell. 2008 Jan;7(1):69-77. Epub 2007 Dec 19. PMID: **18005251**

Article Published Date : Jan 01, 2008

Authors : Amy R Cameron, Siobhan Anton, Laura Melville, Nicola P Houston, Saurabh Dayal, Gordon J McDougall, Derek Stewart, Graham Rena

Study Type : In Vitro Study
Additional Links
Substances : Black Tea : CK(360) : AC(80) , Black Tea Theaflavins : CK(1) : AC(1) , Catechin : CK(512) : AC(169), Flavonoids : CK(1215) : AC(379) , Polyphenols : CK(931) : AC(335) , Tea : CK(1840) : AC(385)
Diseases : Aging : CK(1658) : AC(438)
Pharmacological Actions : Forkhead Transcription Factor Family O (FOXO) Modulator : CK(3) : AC(2)

Intake of flavonoid-rich wine, tea, and chocolate by elderly men and women is associated with better cognitive test performance.

Pubmed Data : J Nutr. 2009 Jan;139(1):120-7. Epub 2008 Dec 3. PMID: **19056649**

Article Published Date : Jan 01, 2009

Authors : Eha Nurk, Helga Refsum, Christian A Drevon, Grethe S Tell, Harald A Nygaard, Knut Engedal, A David Smith

Study Type : Human Study
Additional Links
Substances : Black Tea : CK(360) : AC(80) , Flavonoids : CK(1215) : AC(379) , Green Tea : CK(1971) : AC(562), Wine : CK(197) : AC(44)
Diseases : Aging: Brain : CK(248) : AC(85), Cognitive Decline/Dysfunction : CK(1151) : AC(215)

Black Tea Theaflavins (AC 1) (CK 1)

Black tea polyphenols may positively modulate a longevity factor (FOXO1).

Pubmed Data : Aging Cell. 2008 Jan;7(1):69-77. Epub 2007 Dec 19. PMID: 18005251

Article Published Date : Jan 01, 2008

Authors : Amy R Cameron, Siobhan Anton, Laura Melville, Nicola P Houston, Saurabh Dayal, Gordon J McDougall, Derek Stewart, Graham Rena

Study Type : In Vitro Study
Additional Links
Substances : Black Tea : CK(360) : AC(80), Black Tea Theaflavins : CK(1) : AC(1), Catechin : CK(512) : AC(169), Flavonoids : CK(1215) : AC(379), Polyphenols : CK(931) : AC(335), Tea : CK(1840) : AC(385)
Diseases : Aging : CK(1658) : AC(438)
Pharmacological Actions : Forkhead Transcription Factor Family O (FOXO) Modulator : CK(3) : AC(2)

Blackberry (AC 2) (CK 3)

Blackberries improve motor and cognitive performance in aged rats.

Pubmed Data : Nutr Neurosci. 2009 Jun;12(3):135-40. PMID: 19356316

Article Published Date : Jun 01, 2009

Authors : Barbara Shukitt-Hale, Vivian Cheng, James A Joseph

Study Type : Animal Study
Additional Links
Substances : Blackberry : CK(33) : AC(22), Flavonoids : CK(1215) : AC(379), Polyphenols : CK(931) : AC(335)
Diseases : Aging: Brain : CK(248) : AC(85), Cognitive Decline/Dysfunction : CK(1151) : AC(215)
Pharmacological Actions : Anti-Inflammatory Agents : CK(4688) : AC(1630), Antioxidants : CK(7331) : AC(2682), Neuroprotective Agents : CK(2268) : AC(1071)

Blackberry leaf extract contains phytonutrients that

prevent wrinkle formation.

Pubmed Data : Int J Cosmet Sci. 2007 Oct;29(5):411. PMID: 18489379

Article Published Date : Oct 01, 2007

Authors : [No authors listed]

Study Type : In Vitro Study
Additional Links
Substances : Blackberry : CK(33) : AC(22)
Diseases : Aging Skin : CK(426) : AC(101)
Pharmacological Actions : Interleukin-1 alpha downregulation : CK(42) : AC(17) , Matrix metalloproteinase-1 (MMP-1) inhibitor : CK(32) : AC(16), Matrix metalloproteinase-2 (MMP-2) inhibitor : CK(285) : AC(147), Matrix metalloproteinase-9 (MMP-9) inhibitor : CK(209) : AC(128)

Blueberry (AC 11) (CK 53)

"Blueberry anthocyanins: protection against ageing and light-induced damage in retinal pigment epithelial cells."

Pubmed Data : Br J Nutr. 2011 Oct 12:1-12. Epub 2011 Oct 12. PMID: 22018225

Article Published Date : Oct 12, 2011

Authors : Yixiang Liu, Xue Song, Di Zhang, Feng Zhou, Dan Wang, Ying Wei, Fengyi Gao, Liyang Xie, Gang Jia, Wei Wu, Baoping Ji

Study Type : In Vitro Study
Additional Links
Substances : Blueberry : CK(260) : AC(90)
Diseases : Aging : CK(1658) : AC(438) , Retinal Degeneration: Light-Induced : CK(11) : AC(7) , Retinal Diseases : CK(66) : AC(21)

A higher dietary intake of anthocyanins was associated with an attenuation of lung function decline.

Pubmed Data : Am J Clin Nutr. 2016 Feb ;103(2):542-50. Epub 2016 Jan 20. PMID: 26791184

Article Published Date : Jan 31, 2016

Authors : Amar J Mehta, Aedín Cassidy, Augusto A Litonjua, David Sparrow, Pantel Vokonas, Joel Schwartz

Study Type : Human Study
Additional Links
Substances : Anthocyanins : CK(342) : AC(115) , Blueberry : CK(260) : AC(90)
Diseases : Aging : CK(1658) : AC(438)

Pharmacological Actions : Cytoprotective : CK(190) : AC(94)
Additional Keywords : Risk Reduction : CK(6417) : AC(686)

A multi-nutrient mixture of vitamin C, vitamin E, carotenoids, selenium, zinc, amino acids and glycosaminoglycans, blueberry extract and pycnogenol improves visible signs of ageing in women 45-73 years of age.

Pubmed Data : J Dermatolog Treat. 2004 Jul;15(4):222-6. PMID: **15764035**

Article Published Date : Jul 01, 2004

Authors : D Segger, F Schönlau

Study Type : Human Study
Additional Links
Substances : Amino Acids : CK(100) : AC(16) , Blueberry : CK(260) : AC(90) , Glycosaminoglycans : CK(12) : AC(2), Pycnogenol (Pine Bark) : CK(556) : AC(94) , Selenium : CK(784) : AC(139) , Vitamin C : CK(1957) : AC(404), Vitamin E : CK(1656) : AC(290) , Zinc : CK(941) : AC(139)
Diseases : Aging Skin : CK(426) : AC(101) , Skin Diseases : CK(67) : AC(12)

A topical product containing C-xyloside and blueberry extract improves the appearance of type II diabetic skin.

Pubmed Data : J Cosmet Dermatol. 2009 Jun;8(2):147-51. PMID: **19527341**

Article Published Date : Jun 01, 2009

Authors : Zoe Diana Draelos, Margarita Yatskayer, Susana Raab, Christian Oresajo

Study Type : Human Study
Additional Links
Substances : Blueberry : CK(260) : AC(90) , X-xyloside : CK(10) : AC(1)
Diseases : Advanced Glycation End products (AGE) : CK(231) : AC(73) , Aging Skin : CK(426) : AC(101), Diabetes: Skin : CK(10) : AC(1) , Diabetes Mellitus: Type 2 : CK(3384) : AC(595)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682)
Additional Keywords : Plant Extracts : CK(7484) : AC(2463)

Anthocyanins in aged blueberry-fed rats are found centrally and may enhance memory.

Pubmed Data : BMB Rep. 2010 Jan;43(1):46-51. PMID: **16053243**

Article Published Date : Jan 01, 2010

Authors : Cristina Andres-Lacueva, Barbara Shukitt-Hale, Rachel L Galli, Olga Jauregui, Rosa M Lamuela-Raventos, James A Joseph

Study Type : Animal Study
Additional Links

Substances : Anthocyanins : CK(342) : AC(115) , Blueberry : CK(260) : AC(90)
Diseases : Aging: Brain : CK(248) : AC(85), Memory Disorders : CK(342) : AC(104)
Pharmacological Actions : Neuroprotective Agents : CK(2268) : AC(1071)

Blueberry attenuates microglial activation in the brain suggesting it may attenuate age-induced inflammation.

Pubmed Data : Glia. 2009 Dec 14. PMID: **20014277**

Article Published Date : Dec 14, 2009

Authors : Lauren M Willis, Linnea Freeman, Paula C Bickford, E Matthew Quintero, Claudia D Umphlet, Alfred B Moore, Laura Goetzl, Ann-Charlotte Granholm

Study Type : Animal Study
Additional Links
Substances : Blueberry : CK(260) : AC(90)
Diseases : Aging: Brain : CK(248) : AC(85), Brain: Microglial Activation : CK(82) : AC(53) , Brain Inflammation : CK(263) : AC(145)
Pharmacological Actions : Anti-Inflammatory Agents : CK(4688) : AC(1630) , Interleukin-6 Downregulation : CK(1095) : AC(342), Neuroprotective Agents : CK(2268) : AC(1071)

Blueberry diets in early life prevent senescence of osteoblasts and bone loss in ovariectomized adult female rats.

Pubmed Data : PLoS One. 2011 ;6(9):e24486. Epub 2011 Sep 2. PMID: **21912699**

Article Published Date : Jan 01, 2011

Authors : Jian Zhang, Oxana P Lazarenko, Michael L Blackburn, Kartik Shankar, Thomas M Badger, Martin J J Ronis, Jin-Ran Chen

Study Type : Animal Study
Additional Links
Substances : Blueberry : CK(260) : AC(90)
Diseases : Aging : CK(1658) : AC(438) , Osteoporosis : CK(1283) : AC(245)
Additional Keywords : Ovariectomy-Induced Changes : CK(84) : AC(39)

Blueberry extract prolongs lifespan of the fruit fly.

Pubmed Data : Exp Gerontol. 2012 Feb ;47(2):170-8. Epub 2011 Dec 17. PMID: **22197903**

Article Published Date : Feb 01, 2012

Authors : Cheng Peng, Yuanyuan Zuo, Kin Ming Kwan, Yintong Liang, Ka Ying Ma, Ho Yin Edwin Chan, Yu Huang, Hongjian Yu, Zhen-Yu Chen

Study Type : Animal Study
Additional Links
Substances : Blueberry : CK(260) : AC(90)
Diseases : Aging : CK(1658) : AC(438)

Dietary supplementation with blueberry, spinach, or strawberry reverses age-related declines in neuronal signal transduction, cognitive, and motor behavioral deficits.

Pubmed Data : J Gastroenterol. 2002 Nov;37 Suppl 14:67-72. PMID: **10479711**

Article Published Date : Nov 01, 2002

Authors : J A Joseph, B Shukitt-Hale, N A Denisova, D Bielinski, A Martin, J J McEwen, P C Bickford

Study Type : Animal Study
Additional Links
Substances : Blueberry : CK(260) : AC(90) , Spinach : CK(9) : AC(7) , Strawberry : CK(145) : AC(37)
Diseases : Aging : CK(1633) : AC(434) , Aging: Brain : CK(248) : AC(85), Cognitive Decline/Dysfunction : CK(1151) : AC(215)
Pharmacological Actions : Neuroprotective Agents : CK(2268) : AC(1071)
Additional Keywords : Disease Regression : CK(150) : AC(26) , Plant Extracts : CK(7484) : AC(2463)

Higher intake of flavonoids, particularly from berries, appears to reduce rates of cognitive decline in older adults.

Pubmed Data : Ann Neurol. 2012 Jul ;72(1):135-43. Epub 2012 Apr 26. PMID: **22535616**

Article Published Date : Jun 30, 2012

Authors : Elizabeth E Devore, Jae Hee Kang, Monique M B Breteler, Francine Grodstein

Study Type : Human Study
Additional Links
Substances : Berries: All : CK(1443) : AC(356) , Blueberry : CK(260) : AC(90) , Flavonoids : CK(1215) : AC(379), Strawberry : CK(145) : AC(37)
Diseases : Aging : CK(1633) : AC(434) , Cognitive Decline/Dysfunction : CK(1151) : AC(215)
Pharmacological Actions : Neuroprotective Agents : CK(2268) : AC(1071)
Additional Keywords : Risk Reduction : CK(6417) : AC(686)

Polyphenols potentiate dietary restriction-induced lifespan extension.

Pubmed Data : Biochim Biophys Acta. 2012 Jan 11 ;1822(4):522-526. Epub 2012 Jan 11. PMID: **22265987**

Article Published Date : Jan 11, 2012

Authors : Daniel J Aires, Graham Rockwell, Ting Wang, Jennifer Frontera, Jo Wick, Wenfang Wang, Marija Tonkovic-Capin, Jianghua Lu, Lezi E, Hao Zhu, Russell H Swerdlow

Study Type : Animal Study
Additional Links

Substances : Blueberry : CK(260) : AC(90) , Green Tea : CK(1971) : AC(562) , Polyphenols : CK(931) : AC(335), Pomegranate : CK(499) : AC(168)
Diseases : Aging : CK(1658) : AC(438)
Therapeutic Actions : Fasting/Caloric Restriction : CK(297) : AC(63)
Pharmacological Actions : Anti-Inflammatory Agents : CK(4688) : AC(1630)

Boswellia (AC 1) (CK 2)

Topical application of Boswellia reduces photo-aging of the skin.

Pubmed Data : Planta Med. 2009 Nov 16. Epub 2009 Nov 16. PMID: 19918712

Article Published Date : Nov 16, 2009

Authors : Alessandra Pedretti, Rossana Capezzera, Cristina Zane, Elena Facchinetti, Piergiacomo Calzavara-Pinton

Study Type : Animal Study
Additional Links
Substances : Boswellia : CK(98) : AC(26)
Diseases : Aging Skin : CK(426) : AC(101) , Skin Diseases: Photo-Aging : CK(132) : AC(51)

Broccoli (AC 2) (CK 4)

Broccoli sprouts contain compounds which protect the skin against damage by UV radiation.

Pubmed Data : Proc Natl Acad Sci U S A. 2007 Oct 30;104(44):17500-5. Epub 2007 Oct 23. PMID: 17956979

Article Published Date : Oct 30, 2007

Authors : Paul Talalay, Jed W Fahey, Zachary R Healy, Scott L Wehage, Andrea L Benedict, Christine Min, Albena T Dinkova-Kostova

Study Type : Animal Study
Additional Links
Substances : Broccoli : CK(962) : AC(298) , Sprouts : CK(87) : AC(38) , Sulforaphane : CK(533) : AC(262)

Diseases : Aging Skin : CK(426) : AC(101)

Sulforaphane-containing broccoli sprout extracts protect against UV-light-induced skin carcinogenesis.

Pubmed Data : Cancer Lett. 2006 Aug 28;240(2):243-52. Epub 2005 Nov 3. PMID: 16271437

Article Published Date : Aug 28, 2006

Authors : Albena T Dinkova-Kostova, Stephanie N Jenkins, Jed W Fahey, Lingxiang Ye, Scott L Wehage, Karen T Liby, Katherine K Stephenson, Kristina L Wade, Paul Talalay

Study Type : Animal Study

Additional Links

Substances : Broccoli : CK(962) : AC(298) , Sprouts : CK(87) : AC(38) , Sulforaphane : CK(533) : AC(262)

Diseases : DNA damage : CK(993) : AC(382) , Light Sensitivity : CK(2) : AC(1) , Oxidative Stress : CK(3871) : AC(1382), Skin Diseases: Photo-Aging : CK(132) : AC(51)

Pharmacological Actions : Anticarcinogenic Agents : CK(1099) : AC(519) , Chemopreventive : CK(2835) : AC(787), Radioprotective : CK(756) : AC(262)

Additional Keywords : Plant Extracts : CK(7484) : AC(2463)

Burdock (AC 1) (CK 0)

Topical application of Burdock (Arctium lappa) fruit extract improves the clinical signs of aging.

Pubmed Data : J Cosmet Dermatol. 2008 Dec;7(4):281-9. PMID: 19146605

Article Published Date : Dec 01, 2008

Authors : Anja Knott, Katja Reuschlein, Heiko Mielke, Ursula Wensorra, Christopher Mummert, Urte Koop, Martina Kausch, Ludger Kolbe, Nils Peters, Franz Stäb, Horst Wenck, Stefan Gallinat

Additional Links

Substances : Burdock : CK(42) : AC(26)

Diseases : Aging Skin : CK(426) : AC(101)

Caffeine (AC 1) (CK 10)

Caffeine intake was related to moderately better cognitive maintenance over 5 years in older women with vascular disorders.

Pubmed Data : J Alzheimers Dis. 2013 ;35(2):413-21. PMID: **23422357**

Article Published Date : Dec 31, 2012

Authors : Marie-Noël Vercambre, Claudine Berr, Karen Ritchie, Jae H Kang

Study Type : Human Study
Additional Links
Substances : Caffeine : CK(197) : AC(31)
Diseases : Aging : CK(1633) : AC(434), Cognitive Decline/Dysfunction : CK(1151) : AC(215)

Cannabinoids (AC 2) (CK 3)

Cannabinoids attenuate the effects of aging upon neuroinflammation and neurogenesis.

Pubmed Data : Neurobiol Dis. 2009 May ;34(2):300-7. PMID: **19385063**

Article Published Date : Apr 30, 2009

Authors : Yannick Marchalant, Holly M Brothers, Greg J Norman, Kate Karelina, A Courtney DeVries, Gary L Wenk

Study Type : Animal Study
Additional Links
Substances : Cannabinoids : CK(717) : AC(279)
Diseases : Aging : CK(1633) : AC(434), Aging: Brain : CK(248) : AC(85), Brain Inflammation : CK(263) : AC(145)
Pharmacological Actions : Anti-Inflammatory Agents : CK(4688) : AC(1630), Calcium Channel Blockers : CK(87) : AC(23), Neuritogenic : CK(133) : AC(59), Neuroprotective Agents : CK(2268) : AC(1071)

The current article provides an overview of the potential of cannabinoids in the treatment of late-onset Alzheimer's disease.

Pubmed Data : Clin Pharmacol Ther. 2015 Jun ;97(6):597-606. Epub 2015 Apr 17. PMID: **25788394**

Article Published Date : May 31, 2015

Authors : Aia Ahmed, M A van der Marck, Gah van den Elsen, Mgm Olde Rikkert

Study Type : Review
Additional Links
Substances : Cannabinoids : CK(717) : AC(279)
Diseases : Aging : CK(1633) : AC(434), Alzheimer's Disease : CK(1292) : AC(382)
Pharmacological Actions : Neuroprotective Agents : CK(2268) : AC(1071)

Carnitine (AC 1) (CK 2)

L-carnitine improves mitochondrial enzymes in heart and skeletal muscle of aged rats.

Pubmed Data : Exp Aging Res. 2005 Jan-Mar;31(1):55-67. PMID: **15842073**

Article Published Date : Jan 01, 2005

Authors : S Kumaran, M Subathra, M Balu, C Panneerselvam

Study Type : Animal Study
Additional Links
Substances : Carnitine : CK(436) : AC(67)
Diseases : Aging : CK(1658) : AC(438), Mitochondrial Dysfunction : CK(225) : AC(91)

Carnosic Acid (AC 1) (CK 2)

Extracts from spearmint and rosemary have beneficial effects on learning and memory and brain tissue markers of oxidation.

Pubmed Data : Physiol Behav. 2016 Aug 12. Epub 2016 Aug 12. PMID: **27527000**

Article Published Date : Aug 11, 2016

Authors : Susan A Farr, Michael L Niehoff, Michael A Ceddia, Kelli A Herrlinger, Brandon J Lewis, Shulin Feng, Andrew Welleford, D Allan Butterfield, John E Morley

Study Type : Animal Study
Additional Links
Substances : Carnosic Acid : CK(29) : AC(21), Rosemary : CK(218) : AC(78), Rosmarinic acid : CK(27) : AC(14), Spearmint : CK(45) : AC(7)

Diseases : Aging: Brain : CK(248) : AC(85), Brain: Oxidative Stress : CK(79) : AC(46) , Learning disorders : CK(190) : AC(51), Memory Disorders : CK(342) : AC(104)
Pharmacological Actions : Neuroprotective Agents : CK(2268) : AC(1071)
Additional Keywords : Plant Extracts : CK(7484) : AC(2463)

Carnosine (AC 1) (CK 1)

Synergistic effect of L-Carnosine and EGCG in prevention of physiological brain aging.

Pubmed Data : Curr Pharm Des. 2012 Oct 18. Epub 2012 Oct 18. PMID: 23092324

Article Published Date : Oct 17, 2012

Authors : Sergio Davinelli, Roberto Di Marco, Renata Bracale, Alessandro Quattrone, Davide Zella, Giovanni Scapagnini

Study Type : In Vitro Study
Additional Links
Substances : Carnosine : CK(9) : AC(5) , EGCG (Epigallocatechin gallate) : CK(1951) : AC(314)
Diseases : Aging: Brain : CK(248) : AC(85)
Additional Keywords : Natural Substance Synergy : CK(537) : AC(247)

Catechin (AC 12) (CK 29)

Black tea polyphenols may positively modulate a longevity factor (FOXO1).

Pubmed Data : Aging Cell. 2008 Jan;7(1):69-77. Epub 2007 Dec 19. PMID: 18005251

Article Published Date : Jan 01, 2008

Authors : Amy R Cameron, Siobhan Anton, Laura Melville, Nicola P Houston, Saurabh Dayal, Gordon J McDougall, Derek Stewart, Graham Rena

Study Type : In Vitro Study
Additional Links
Substances : Black Tea : CK(360) : AC(80) , Black Tea Theaflavins : CK(1) : AC(1) , Catechin : CK(512) : AC(169), Flavonoids : CK(1215) : AC(379) , Polyphenols : CK(931) : AC(335) , Tea : CK(1840) : AC(385)
Diseases : Aging : CK(1658) : AC(438)

Pharmacological Actions : Forkhead Transcription Factor Family O (FOXO) Modulator : CK(3) : AC(2)

Daily consumption of green tea catechin delays memory regression in aged mice.

Pubmed Data : Biogerontology. 2007 Apr;8(2):89-95. Epub 2006 Sep 7. PMID: **16957869**

Article Published Date : Apr 01, 2007

Authors : Keiko Unno, Fumiyo Takabayashi, Hirotoshi Yoshida, Daisuke Choba, Rie Fukutomi, Naomi Kikunaga, Takahiro Kishido, Naoto Oku, Minoru Hoshino

Study Type : Animal Study
Additional Links
Substances : Catechin : CK(512) : AC(169), Green Tea : CK(1971) : AC(562)
Diseases : Aging : CK(1658) : AC(438) , DNA damage : CK(993) : AC(382) , Learning disorders : CK(190) : AC(51), Memory Disorders : CK(342) : AC(104) , Oxidative Stress : CK(3871) : AC(1382)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682) , Genoprotective : CK(270) : AC(97) , Neuroprotective Agents : CK(2268) : AC(1071)
Additional Keywords : Plant Extracts : CK(7484) : AC(2463)

Daily ingestion of green tea catechins from adulthood suppressed brain dysfunction in aged mice.

Pubmed Data : Biofactors. 2008;34(4):263-71. PMID: **19850981**

Article Published Date : Jan 01, 2008

Authors : Keiko Unno, Yuichi Ishikawa, Fumiyo Takabayashi, Toru Sasaki, Nina Takamori, Kazuaki Iguchi, Minoru Hoshino

Study Type : Animal Study
Additional Links
Substances : Catechin : CK(512) : AC(169), Green Tea : CK(1971) : AC(562) , Tea : CK(1840) : AC(385)
Diseases : Aging : CK(1658) : AC(438) , Aging: Brain : CK(248) : AC(85), Learning disorders : CK(190) : AC(51)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682) , Neuroprotective Agents : CK(2268) : AC(1071)

EGCG's survival-enhancing effect on C. elegans under stress may be relevant to antiaging research.

Pubmed Data : Free Radic Biol Med. 2009 Feb 1;46(3):414-21. Epub 2008 Nov 5. PMID: **19061950**

Article Published Date : Feb 01, 2009

Authors : Longze Zhang, Guoliang Jie, Junjing Zhang, Baolu Zhao

Study Type : Animal Study
Additional Links
Substances : Catechin : CK(512) : AC(169)

Diseases : Aging : CK(1658) : AC(438)

EGCH inhibits UVB irradiation associated changes associated with aging in human skin cells.

Pubmed Data : Food Chem Toxicol. 2008 Apr;46(4):1298-307. Epub 2007 Dec 8. PMID: 18226437

Article Published Date : Apr 01, 2008

Authors : Ji-Young Bae, Jung-Suk Choi, Yean-Jung Choi, Seung-Yong Shin, Sang-Wook Kang, Seoung Jun Han, Young-Hee Kang

Study Type : In Vitro Study
Additional Links
Substances : Catechin : CK(512) : AC(169)
Diseases : Skin Diseases: Photo-Aging : CK(132) : AC(51)
Pharmacological Actions : Matrix Metalloproteinase-13 (MMP-13) Inhibitor : CK(23) : AC(11) , Matrix metalloproteinase-1 (MMP-1) inhibitor : CK(32) : AC(16) , Matrix Metalloproteinase-8 Inhibitor : CK(1) : AC(1)

Epigallocatechin gallate from green tea increases lifespan and stress resistance in C. elegans.

Pubmed Data : Planta Med. 2009 Feb;75(3):216-21. Epub 2008 Dec 11. PMID: 19085685

Article Published Date : Feb 01, 2009

Authors : Sami Abbas, Michael Wink

Study Type : Animal Study
Additional Links
Substances : Catechin : CK(512) : AC(169)
Diseases : Aging : CK(1658) : AC(438)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682)
Additional Keywords : Plant Extracts : CK(7484) : AC(2463)

Green tea catechin prevents the decline of glutathione peroxidase activity and protein oxidative damage in aging mouse brain.

Pubmed Data : Biogerontology. 2007 Aug;8(4):423-30. Epub 2007 Feb 20. PMID: 17310319

Article Published Date : Aug 01, 2007

Authors : Takahiro Kishido, Keiko Unno, Hirotoshi Yoshida, Daisuke Choba, Rie Fukutomi, Shunsuke Asahina, Kazuaki Iguchi, Naoto Oku, Minoru Hoshino

Study Type : Animal Study
Additional Links
Substances : Catechin : CK(512) : AC(169), Green Tea : CK(1971) : AC(562)
Diseases : Aging : CK(1658) : AC(438) , Aging: Brain : CK(248) : AC(85), Oxidative Stress : CK(3871) : AC(1382)

Pharmacological Actions : Antioxidants : CK(7331) : AC(2682) , Glutathione Upregulation : CK(152) : AC(53), Neuroprotective Agents : CK(2268) : AC(1071)

Green tea catechins have a suppressive effect on morphologic and functional regression of the brain in aged mice with accelerated senescence .

Pubmed Data : Exp Gerontol. 2004 Jul;39(7):1027-34. PMID: **15236762**

Article Published Date : Jul 01, 2004

Authors : Keiko Unno, Fumiyo Takabayashi, Takahiro Kishido, Naoto Oku

Study Type : Animal Study
Additional Links
Substances : Catechin : CK(512) : AC(169), Tea : CK(1840) : AC(385)
Diseases : Aging : CK(1658) : AC(438) , Aging: Brain : CK(248) : AC(85), DNA damage : CK(993) : AC(382), Learning disorders : CK(190) : AC(51) , Oxidative Stress : CK(3871) : AC(1382)
Pharmacological Actions : Neuroprotective Agents : CK(2268) : AC(1071)
Additional Keywords : Plant Extracts : CK(7484) : AC(2463)

Long-term administration of green tea catechins prevents age-related spatial learning and memory decline in mice.

Pubmed Data : Neuroscience. 2009 Apr 10;159(4):1208-15. Epub 2009 Feb 11. PMID: **19409206**

Article Published Date : Apr 10, 2009

Authors : Q Li, H F Zhao, Z F Zhang, Z G Liu, X R Pei, J B Wang, M Y Cai, Y Li

Study Type : Animal Study
Additional Links
Substances : Catechin : CK(512) : AC(169), Green Tea : CK(1971) : AC(562)
Diseases : Aging : CK(1633) : AC(434) , Aging: Brain : CK(248) : AC(85), Cognitive Decline/Dysfunction : CK(1151) : AC(215), Learning disorders : CK(190) : AC(51) , Memory Disorders : CK(342) : AC(104)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682)

Long-term ingestion of high flavanol cocoa provides photoprotection against UV-induced erythema and improves skin condition in women.

Pubmed Data : J Nutr. 2006 Jun;136(6):1565-9. PMID: **16702322**

Article Published Date : Jun 01, 2006

Authors : Ulrike Heinrich, Karin Neukam, Hagen Tronnier, Helmut Sies, Wilhelm Stahl

Study Type : Human Study
Additional Links
Substances : Catechin : CK(512) : AC(169)
Diseases : Aging Skin : CK(426) : AC(101) , Dry Skin : CK(104) : AC(17), Skin Diseases: Photo-Aging :

CK(132) : AC(51)
Pharmacological Actions : Radioprotective : CK(756) : AC(262)

Tea catechin ingestion combined with habitual exercise suppresses the aging-associated decline in physical performance in senescence-accelerated mice.

Pubmed Data : Am J Physiol Regul Integr Comp Physiol. 2008 Jul;295(1):R281-9. Epub 2008 May 14. PMID: **18480242**

Article Published Date : Jul 01, 2008

Authors : Takatoshi Murase, Satoshi Haramizu, Noriyasu Ota, Tadashi Hase

Study Type : Animal Study
Additional Links
Substances : Catechin : CK(512) : AC(169), Green Tea : CK(1971) : AC(562)
Diseases : Aging : CK(1658) : AC(438)
Therapeutic Actions : Exercise : CK(1256) : AC(196)

Tea catechins protect red blood cells subjected to oxidative stress during human aging.

Pubmed Data : Nat Prod Res. 2009;23(12):1072-9. PMID: **18846469**

Article Published Date : Jan 01, 2009

Authors : Pawan Kumar Maurya, Syed Ibrahim Rizvi

Study Type : In Vitro Study
Additional Links
Substances : Catechin : CK(512) : AC(169), Tea : CK(1840) : AC(385)
Diseases : Aging : CK(1658) : AC(438), Oxidative Stress : CK(3871) : AC(1382)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682)

Chaga Mushroom (Inonotus obliquus) (AC 1) (CK 2)

I. obliquus can prevent the aging process by attenuating oxidative stress in a model of stress-induced premature senescence.

Pubmed Data : Mol Cells. 2011 May ;31(5):423-9. Epub 2011 Feb 22. PMID: 21359681

Article Published Date : Apr 30, 2011

Authors : Jong Seok Yun, Jung Woon Pahk, Jong Seok Lee, Won Cheol Shin, Shin Young Lee, Eock Kee Hong

Study Type : Animal Study, In Vitro Study

Additional Links

Substances : Chaga Mushroom (Inonotus obliquus) : CK(70) : AC(46)

Diseases : Aging Skin : CK(426) : AC(101) , Lipid Peroxidation : CK(695) : AC(255) , Oxidative Stress : CK(3871) : AC(1382), Ultraviolet Radiation Induced Damage : CK(80) : AC(34)

Pharmacological Actions : Antioxidants : CK(7331) : AC(2682) , Cytoprotective : CK(190) : AC(94) , Matrix metalloproteinase-1 (MMP-1) inhibitor : CK(32) : AC(16) , Matrix metalloproteinase-9 (MMP-9) inhibitor : CK(209) : AC(128)

Chamomile (AC 1) (CK 10)

A multi-nutrient mixture of soy extract, fish protein polysaccharides, extracts from white tea, grape seed and tomato, vitamins C and E as well as zinc and chamomile extract improves signs of skin aging in post-menopausal women.

Pubmed Data : Eur J Clin Nutr. 2006 Oct;60(10):1201-6. Epub 2006 May 3. PMID: 16670692

Article Published Date : Oct 01, 2006

Authors : G R Lange Skovgaard, A S Jensen, M L Sigler

Study Type : Human Study

Additional Links

Substances : Chamomile : CK(182) : AC(30) , Fish extract : CK(32) : AC(4), Grape Seed Extract : CK(316) : AC(88), Soy : CK(1787) : AC(399) , Tomato : CK(557) : AC(109) , Vitamin C : CK(1957) : AC(404), Vitamin E : CK(1656) : AC(290) , White Tea : CK(21) : AC(6) , Zinc : CK(941) : AC(139)

Diseases : Aging Skin : CK(426) : AC(101) , Postmenopausal Disorders : CK(329) : AC(42)

Chinese Skullcap (AC 2) (CK 4)

Baicalin inhibits age-associated NF-kappaB activiation.

Pubmed Data : Mech Ageing Dev. 2006 Sep;127(9):719-25. Epub 2006 Jun 12. PMID: 16766019

Article Published Date : Sep 01, 2006

Authors : Dae Hyun Kim, Hyung Keun Kim, Seongjoon Park, Ji Young Kim, Yani Zou, Ki Ho Cho, Young Suk Kim, Dong Hyun Kim, Byung Pal Yu, Jae Sue Choi, Hae Young Chung

Study Type : Animal Study
Additional Links
Substances : Chinese Skullcap : CK(127) : AC(66)
Diseases : Aging : CK(1658) : AC(438)
Pharmacological Actions : NF-kappaB Inhibitor : CK(1114) : AC(694)

Scutellaria biacalensis reverses aging-related cognitive impairment and neuronal changes in aged rats.

Pubmed Data : Brain Inj. 2009 Feb;23(2):146-53. PMID: 19191093

Article Published Date : Feb 01, 2009

Authors : Hong Ru Song, Jian Jun Cheng, Hong Miao, Ya Zhen Shang

Study Type : Animal Study
Additional Links
Substances : Chinese Skullcap : CK(127) : AC(66)
Diseases : Aging: Brain : CK(248) : AC(85), Cognitive Decline/Dysfunction : CK(1151) : AC(215), Dementia : CK(571) : AC(79)
Pharmacological Actions : Neuroprotective Agents : CK(2268) : AC(1071)

Chlorella (Algae) (AC 1) (CK 1)

Chlorella exhibits bioprotective properties against experimentally induced DNA damage and telomerase inhibition.

Pubmed Data : Afr J Tradit Complement Altern Med. 2009;6(4):560-72. Epub 2009 Jul 3. PMID: 20606778

Article Published Date : Jan 01, 2009

Authors : Suzana Makpol, Nadia Yaacob, Azalina Zainuddin, Yasmin Anum Mohd Yusof, Wan Zurinah Wan Ngah

Study Type : In Vitro Study
Additional Links

Substances : Chlorella (Algae) : CK(228) : AC(49)
Diseases : Aging : CK(1658) : AC(438), DNA damage : CK(993) : AC(382), Oxidative Stress : CK(3871) : AC(1382)
Pharmacological Actions : Genoprotective : CK(270) : AC(97), Telomerase Upregulation : CK(102) : AC(28)

Chocolate (AC 2) (CK 12)

Moderate consumption of cocoa may increase life span; cocoa exhibits metal-chelating properties.

Pubmed Data : Nutr Res. 2008 Jun;28(6):377-82. PMID: 19083435

Article Published Date : Jun 01, 2008

Authors : Sepehr Bahadorani, Arthur J Hilliker

Study Type : Animal Study
Additional Links
Substances : Chocolate : CK(521) : AC(76), Cocoa : CK(522) : AC(77)
Diseases : Aging : CK(1658) : AC(438), Heavy Metal Toxicity : CK(903) : AC(285)
Pharmacological Actions : Chelating Agents : CK(12) : AC(1)

Regular consumption of a chocolate rich in flavanols confers significant photoprotection and can thus be effective at protecting human skin from harmful UV effects.

Pubmed Data : Lett Appl Microbiol. 2009 Sep;49(3):354-60. Epub 2009 Jul 14. PMID: 19735513

Article Published Date : Sep 01, 2009

Authors : Stefanie Williams, Slobodanka Tamburic, Carmel Lally

Study Type : Human Study
Additional Links
Substances : Chocolate : CK(521) : AC(76), Flavonoids : CK(1215) : AC(379)
Diseases : Skin Diseases: Photo-Aging : CK(132) : AC(51), Sunburn : CK(41) : AC(19)

Cholesterol (AC 1) (CK 10)

Low income is associated with accelerated telomere shortening. Higher cholesterol is positively associated with longer telomeres.

Pubmed Data : PLoS One. 2011 ;6(7):e22521. Epub 2011 Jul 27. PMID: 21818333

Article Published Date : Jan 01, 2011

Authors : Paul G Shiels, Liane M McGlynn, Alan Macintyre, Paul C D Johnson, G David Batty, Harry Burns, Jonathan Cavanagh, Kevin A Deans, Ian Ford, Alex McConnachie, Agnes McGinty, Jennifer S McLean, Keith Millar, Naveed Sattar, Carol Tannahill, Yoga N Velupillai, Chris J Packard

Study Type : Human Study
Additional Links
Substances : Cholesterol : CK(403) : AC(45)
Diseases : Aging : CK(1658) : AC(438)
Additional Keywords : Cholesterol Myth : CK(136) : AC(18) , Socioeconomic Status : CK(10) : AC(1)

Chuānxiōng (AC 1) (CK 2)

Chuanxiong extract exhibits anti-aging activity.

Pubmed Data : J Clin Epidemiol. 1995 Jul;48(7):927-40. PMID: 20815216

Article Published Date : Jul 01, 1995

Authors : Xiaoyan Wang, Xiangming Wang, Danqiao Wang, Lianda Li, Xiaohong Niu

Study Type : Animal Study
Additional Links
Substances : Chuānxiōng : CK(2) : AC(1)
Diseases : Aging : CK(1658) : AC(438)
Additional Keywords : Blood Activator : CK(2) : AC(1) , Qi Promotion : CK(2) : AC(1)

Cinnamaldehyde (AC 1) (CK 2)

Cinnamaldehyde suppresses age-related inflammatory NF-kappaB activation.

Pubmed Data : Biogerontology. 2007 Oct;8(5):545-54. Epub 2007 May 8. PMID: **17486422**

Article Published Date : Oct 01, 2007

Authors : Dae Hyun Kim, Chul Hong Kim, Min-Sun Kim, Ji Young Kim, Kyung Jin Jung, Jae Heun Chung, Won Gun An, Jae Won Lee, Byung Pal Yu, Hae Young Chung

Study Type : Animal Study
Additional Links
Substances : Cinnamaldehyde : CK(31) : AC(21) , Cinnamon : CK(245) : AC(89)
Diseases : Aging : CK(1658) : AC(438)
Pharmacological Actions : NF-kappaB Inhibitor : CK(1114) : AC(694)

Cinnamon (AC 1) (CK 2)

Cinnamaldehyde suppresses age-related inflammatory NF-kappaB activation.

Pubmed Data : Biogerontology. 2007 Oct;8(5):545-54. Epub 2007 May 8. PMID: **17486422**

Article Published Date : Oct 01, 2007

Authors : Dae Hyun Kim, Chul Hong Kim, Min-Sun Kim, Ji Young Kim, Kyung Jin Jung, Jae Heun Chung, Won Gun An, Jae Won Lee, Byung Pal Yu, Hae Young Chung

Study Type : Animal Study
Additional Links
Substances : Cinnamaldehyde : CK(31) : AC(21) , Cinnamon : CK(245) : AC(89)
Diseases : Aging : CK(1658) : AC(438)
Pharmacological Actions : NF-kappaB Inhibitor : CK(1114) : AC(694)

Cistanche deserticola (AC 1) (CK 2)

Cistanche deserticola exhibits anti-aging properties in mice.

Pubmed Data : Zhong Yao Cai. 2008 Sep;31(9):1385-8. PMID: 19180965

Article Published Date : Sep 01, 2008

Authors : Guo-Dong Xuan, Chun-Quan Liu

Study Type : Animal Study
Additional Links
Substances : Cistanche deserticola : CK(2) : AC(1)
Diseases : Aging : CK(1658) : AC(438) , Aging: Brain : CK(248) : AC(85), Learning disorders : CK(190) : AC(51), Memory Loss : CK(153) : AC(40) , Oxidative Stress : CK(3871) : AC(1382)
Pharmacological Actions : Malondialdehyde Down-regulation : CK(554) : AC(152) , Superoxide Dismutase Up-regulation : CK(508) : AC(171)

Cocoa (AC 3) (CK 5)

Cacao extract may offer a protective effects against photo-aging.

Pubmed Data : J Invest Dermatol. 2016 Feb 5. Epub 2016 Feb 5. PMID: 26854493

Article Published Date : Feb 04, 2016

Authors : Jong-Eun Kim, Dasom Song, Junil Kim, Jina Choi, Jong Rhan Kim, Hyun-Sun Yoon, Jung-Soo Bae, Mira Han, Sein Lee, Ji Sun Hong, Dayoung Song, Seong-Jin Kim, Myoung-Jin Son, Sang-Woon Choi, Jin Ho Chung, Tae-Aug Kim, Ki Won Lee

Study Type : Animal Study
Additional Links
Substances : Cocoa : CK(522) : AC(77)
Diseases : Aging Skin : CK(426) : AC(101) , Ultraviolet Radiation Induced Damage : CK(80) : AC(34) , Wrinkles : CK(10) : AC(1)
Pharmacological Actions : Photoprotective : CK(74) : AC(27)
Additional Keywords : Plant Extracts : CK(7484) : AC(2463)

Cocoa pod extract has high potential as a cosmetic

ingredient due to its anti-wrinkle, skin whitening, and sunscreen effects.

Pubmed Data : BMC Complement Altern Med. 2014 ;14:381. Epub 2014 Oct 7. PMID: 25292439

Article Published Date : Dec 31, 2013

Authors : Azila Abdul Karim, Azrina Azlan, Amin Ismail, Puziah Hashim, Siti Salwa Abd Gani, Badrul Hisyam Zainudin, Nur Azilah Abdullah

Study Type : In Vitro Study
Additional Links
Substances : Cocoa : CK(522) : AC(77)
Diseases : Aging Skin : CK(426) : AC(101) , Wrinkles : CK(10) : AC(1)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682) , Enzyme Inhibitors : CK(473) : AC(251), Photoprotective : CK(74) : AC(27) , Tyrosinase Inhibition : CK(1) : AC(1)
Additional Keywords : Plant Extracts : CK(7484) : AC(2463)

Moderate consumption of cocoa may increase life span; cocoa exhibits metal-chelating properties.

Pubmed Data : Nutr Res. 2008 Jun;28(6):377-82. PMID: 19083435

Article Published Date : Jun 01, 2008

Authors : Sepehr Bahadorani, Arthur J Hilliker

Study Type : Animal Study
Additional Links
Substances : Chocolate : CK(521) : AC(76) , Cocoa : CK(522) : AC(77)
Diseases : Aging : CK(1658) : AC(438) , Heavy Metal Toxicity : CK(903) : AC(285)
Pharmacological Actions : Chelating Agents : CK(12) : AC(1)

Coconut oil: topical (AC 1) (CK 1)

Herbs provide protection against harmful UV radiation due to their antioxidant activity.

Pubmed Data : Pharmacogn Rev. 2011 Jul ;5(10):164-73. PMID: 22279374

Article Published Date : Jul 01, 2011

Authors : Radava R Korać, Kapil M Khambholja

Study Type : Review
Additional Links
Substances : Coconut oil: topical : CK(1) : AC(1) , Flavonoids : CK(1215) : AC(379) , Krameria

lappacea: topical : CK(1) : AC(1), Olive oil: topical : CK(1) : AC(1) , Peanut oil: topical : CK(1) : AC(1) , Sesame oil: topical : CK(1) : AC(1) , Vitamin C : CK(1957) : AC(404) , Vitamin E : CK(1656) : AC(290)
Diseases : Skin Diseases: Photo-Aging : CK(132) : AC(51) , Sunburn : CK(41) : AC(19) , Ultraviolet Radiation Induced Damage : CK(80) : AC(34)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682) , Photoprotective : CK(74) : AC(27)

Coenzyme Q10 (AC 4) (CK 16)

Coenzyme Q(10) supplementation reverses age-related impairments in spatial learning and lowers protein oxidation.

Pubmed Data : Age (Dordr). 2012 Nov 10. Epub 2012 Nov 10. PMID: 23138632

Article Published Date : Nov 09, 2012

Authors : Ritu A Shetty, Michael J Forster, Nathalie Sumien

Study Type : Animal Study
Additional Links
Substances : Coenzyme Q10 : CK(941) : AC(140)
Diseases : Aging: Brain : CK(248) : AC(85), Cognitive Decline/Dysfunction : CK(1151) : AC(215)
Pharmacological Actions : Neuroprotective Agents : CK(2268) : AC(1071)

Supplementation with CoQ10 lowers age-related (ar) NOX levels in healthy subjects.

Pubmed Data : Biofactors. 2008;32(1-4):221-30. PMID: 19096119

Article Published Date : Jan 01, 2008

Authors : Dorothy M Morré, D James Morré, Wingfield Rehmus, Dale Kern

Study Type : Human Study
Additional Links
Substances : Coenzyme Q10 : CK(941) : AC(140)
Diseases : Aging : CK(1658) : AC(438)

The reduced form of coenzyme Q10 (ubiquinol) decreases aging in middle-aged mice.

Pubmed Data : Exp Gerontol. 2006 Feb;41(2):130-40. Epub 2006 Jan 4. PMID: 16387461

Article Published Date : Feb 01, 2006

Authors : Jingmin Yan, Kenji Fujii, Junjie Yao, Hideyuki Kishida, Kazunori Hosoe, Jinko Sawashita, Toshio Takeda, Masayuki Mori, Keiichi Higuchi

Study Type : Animal Study
Additional Links
Substances : Coenzyme Q10 : CK(941) : AC(140)
Diseases : Aging : CK(1658) : AC(438)

The reduced form of coenzyme Q10 (ubiquinol) is more effective at decelerating aging than the oxidized form (ubiquinone).

Pubmed Data : Mol Nutr Food Res. 2010 Jun;54(6):805-15. PMID: **19960455**

Article Published Date : Jun 01, 2010

Authors : Constance Schmelzer, Hiroshi Kubo, Masayuki Mori, Jinko Sawashita, Mitsuaki Kitano, Kazunori Hosoe, Inka Boomgaarden, Frank Döring, Keiichi Higuchi

Study Type : Animal Study
Additional Links
Substances : Coenzyme Q10 : CK(941) : AC(140) , Ubiquinol : CK(138) : AC(24)
Diseases : Aging : CK(1658) : AC(438)
Additional Keywords : Bioavailability : CK(182) : AC(34) , Nutrient Differences: Reduced/Oxidized Forms : CK(5) : AC(3)

Coffee (AC 1) (CK 10)

A higher coffee consumption was associated with longer telomeres among female nurses.

Pubmed Data : J Nutr. 2016 Jun 8. Epub 2016 Jun 8. PMID: **27281805**

Article Published Date : Jun 07, 2016

Authors : Jason J Liu, Marta Crous-Bou, Edward Giovannucci, Immaculata De Vivo

Study Type : Human Study
Additional Links
Substances : Coffee : CK(797) : AC(103)
Diseases : Aging : CK(1658) : AC(438)
Pharmacological Actions : Telomere Protective : CK(83) : AC(10)

Cordyceps Militaris (AC 1) (CK 1)

Cordyceps militaris contains polysaccharides which have a protective effect on mitochondria and anti-aging activity.

Pubmed Data : Am J Chin Med. 2010;38(6):1093-106. PMID: **21061463**

Article Published Date : Jan 01, 2010

Authors : Xing-Tai Li, Hong-Cheng Li, Chun-Bin Li, De-Qiang Dou, Ming-Bo Gao

Study Type : In Vitro Study
Additional Links
Substances : Cordyceps Militaris : CK(32) : AC(22)
Diseases : Aging : CK(1658) : AC(438)

Cordyceps sinensis (AC 1) (CK 2)

Cordyceps has anti-aging and aphrodisiac properties.

Pubmed Data : Phytother Res. 2009 Jan;23(1):1-5. PMID: **18803231**

Article Published Date : Jan 01, 2009

Authors : Deng-Bo Ji, Jia Ye, Chang-Ling Li, Yu-Hua Wang, Jiong Zhao, Shao-Qing Cai

Study Type : Animal Study
Additional Links
Substances : Cordyceps sinensis : CK(106) : AC(41)
Diseases : Aging : CK(1658) : AC(438) , Low Libido : CK(95) : AC(24) , Sexual Arousal Disorder : CK(12) : AC(2), Sexual Dysfunction : CK(74) : AC(13)
Pharmacological Actions : Aphrodisiac : CK(63) : AC(20)

Cork Extract (AC 1) (CK 1)

A number of botanical extracts reduce skin wrinkling.

Pubmed Data : Drugs Aging. 2010 Dec 1;27(12):973-85. PMID: **21087067**

Article Published Date : Dec 01, 2010

Authors : Katherine J Hunt, Shao Kang Hung, Edzard Ernst

Study Type : Review
Additional Links
Substances : Cork Extract : CK(11) : AC(2) , Date Kernel Extract : CK(11) : AC(2) , Peony : CK(50) : AC(14), Rose : CK(167) : AC(46), Soy : CK(1787) : AC(399)
Diseases : Aging Skin : CK(426) : AC(101)

Corni Fructus (AC 1) (CK 10)

Red ginseng root extract mixed with Torilus fructus and Corni fructus improves facial wrinkles and increases type I procollagen synthesis in human skin.

Pubmed Data : J Med Food. 2009 Dec;12(6):1252-9. PMID: **20041778**

Article Published Date : Dec 01, 2009

Authors : Soyun Cho, Chong-Hyun Won, Dong Hun Lee, Min-Jung Lee, Serah Lee, Seung-Ho So, Seong-Kye Lee, Bon-Suk Koo, Na-Mi Kim, Jin Ho Chung

Study Type : Human Study
Additional Links
Substances : Corni Fructus : CK(10) : AC(1) , Ginseng : CK(473) : AC(133) , Torilus Fructus : CK(10) : AC(1), Unspecified Species : CK(11) : AC(2)
Diseases : Aging Skin : CK(426) : AC(101)
Pharmacological Actions : Matrix metalloproteinase-2 (MMP-2) inhibitor : CK(285) : AC(147)
Additional Keywords : Plant Extracts : CK(7484) : AC(2463)

Cranberry (AC 1) (CK 2)

Oregano and cranberry extracts have a prolongevity

effect in the Mexican fruit fly.

Pubmed Data : J Gerontol A Biol Sci Med Sci. 2010 Jan;65(1):41-50. Epub 2009 Nov 11. PMID: 19906819

Article Published Date : Jan 01, 2010

Authors : Sige Zou, James R Carey, Pablo Liedo, Donald K Ingram, Binbing Yu, Reza Ghaedian

Study Type : Animal Study
Additional Links
Substances : Cranberry : CK(302) : AC(56) , Oregano : CK(78) : AC(38)
Diseases : Aging : CK(1658) : AC(438)
Additional Keywords : Plant Extracts : CK(7484) : AC(2463)

Creatine (AC 2) (CK 4)

Creatine in mouse models of neurodegeneration and aging.

Pubmed Data : Amino Acids. 2011 May ;40(5):1297-303. Epub 2011 Mar 10. PMID: 21390530

Article Published Date : Apr 30, 2011

Authors : T Klopstock, M Elstner, A Bender

Study Type : Animal Study
Additional Links
Substances : Creatine : CK(137) : AC(25)
Diseases : Aging : CK(1658) : AC(438) , Amyotrophic lateral sclerosis (ALS) : CK(566) : AC(140) , Neurodegenerative Diseases : CK(3376) : AC(850)

Folic acid and creatine significantly accelerates epidermal skin regeneration in vitro and in vivo.

Pubmed Data : J Neuroimmunol. 2009 Dec 10;217(1-2):28-37. Epub 2009 Sep 30. PMID: 18254806

Article Published Date : Dec 10, 2009

Authors : Anja Knott, Urte Koop, Heiko Mielke, Katja Reuschlein, Nils Peters, Gesa-Meike Muhr, Holger Lenz, Ursula Wensorra, Sören Jaspers, Ludger Kolbe, Thomas Raschke, Franz Stäb, Horst Wenck, Stefan Gallinat

Study Type : Animal Study
Additional Links
Substances : Creatine : CK(137) : AC(25)
Diseases : Aging Skin : CK(426) : AC(101) , DNA damage : CK(993) : AC(382) , Skin Diseases: Photo-Aging : CK(132) : AC(51), Wound Healing : CK(539) : AC(161)

Pharmacological Actions : Dermatologic Agents : CK(240) : AC(28)

Cruciferous Vegetables (AC 1) (CK 10)

Women consuming the most green leafy vegetables experienced slower decline than women consuming the least amount

Pubmed Data : Ann Neurol. 2005 May ;57(5):713-20. PMID: **15852398**

Article Published Date : Apr 30, 2005

Authors : Jae H Kang, Alberto Ascherio, Francine Grodstein

Study Type : Human Study
Additional Links
Substances : Cruciferous Vegetables : CK(1131) : AC(358) , Green Leafy Vegetables : CK(341) : AC(67), Vegetables: All : CK(1092) : AC(118)
Diseases : Aging : CK(1633) : AC(434) , Cognitive Decline/Dysfunction : CK(1151) : AC(215)
Additional Keywords : Risk Reduction : CK(6417) : AC(686)

Cryptoxanthin (AC 1) (CK 2)

Beta-cryptoxanthin, plentiful in Japanese mandarin orange, prevents age-related cognitive dysfunction and oxidative damage in senescence-accelerated mouse brain.

Pubmed Data : Biol Pharm Bull. 2011;34(3):311-7. PMID: **21372377**

Article Published Date : Jan 01, 2011

Authors : Keiko Unno, Minoru Sugiura, Kazunori Ogawa, Fumiyo Takabayashi, Masateru Toda, Midori Sakuma, Ken-ichi Maeda, Keisuke Fujitani, Hideaki Miyazaki, Hiroyuki Yamamoto, Minoru Hoshino

Study Type : Animal Study
Additional Links
Substances : Cryptoxanthin : CK(70) : AC(13) , Orange: Mandarin : CK(6) : AC(2)
Diseases : Aging: Brain : CK(248) : AC(85), Cognitive Decline/Dysfunction : CK(1151) : AC(215)

Pharmacological Actions : Neuroprotective Agents : CK(2268) : AC(1071)

Curcumin (AC 14) (CK 25)

Curcumin can stimulate developmental and adult hippocampal neurogenesis, and a biological activity that may enhance neural plasticity and repair.

Pubmed Data : J Clin Psychopharmacol. 2000 Dec;20(6):680-4. PMID: **18362141**

Article Published Date : Dec 01, 2000

Authors : So Jung Kim, Tae Gen Son, Hee Ra Park, Mikyung Park, Min-Sun Kim, Hyung Sik Kim, Hae Young Chung, Mark P Mattson, Jaewon Lee

Study Type : Animal Study
Additional Links
Substances : Curcumin : CK(4135) : AC(2175)
Diseases : Aging : CK(1658) : AC(438), Brain Injury: Hippocampal Damage : CK(39) : AC(18)
Pharmacological Actions : Antiproliferative : CK(2479) : AC(1685), Neuritogenic : CK(133) : AC(59), Neurogenesis : CK(59) : AC(30)

Curcumin counteracts the aluminium-induced ageing-related alterations in the rat brain.

Pubmed Data : Biogerontology. 2009 Aug;10(4):489-502. Epub 2008 Nov 20. PMID: **19020987**

Article Published Date : Aug 01, 2009

Authors : Deepak Sharma, Pallavi Sethi, Ezaj Hussain, Rameshwar Singh

Study Type : Animal Study
Additional Links
Substances : Curcumin : CK(4135) : AC(2175)
Diseases : Aging : CK(1633) : AC(434), Aging: Brain : CK(248) : AC(85), Aluminum Toxicity : CK(195) : AC(75), Oxidative Stress : CK(3871) : AC(1382)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682), Neuroprotective Agents : CK(2268) : AC(1071)

Curcumin enhances neurogenesis and cognition in aged rats.

Pubmed Data : PLoS One. 2012 ;7(2):e31211. Epub 2012 Feb 16. PMID: **22359574**

Article Published Date : Jan 01, 2012

Authors : Suzhen Dong, Qingwen Zeng, E Siobhan Mitchell, Jin Xiu, Yale Duan, Chunxia Li, Jyoti K Tiwari, Yinghe Hu, Xiaohua Cao, Zheng Zhao

Study Type : Animal Study
Additional Links
Substances : Curcumin : CK(4135) : AC(2175)
Diseases : Aging: Brain : CK(248) : AC(85), Cognitive Decline/Dysfunction : CK(1151) : AC(215)
Pharmacological Actions : Neuritogenic : CK(133) : AC(59)

Curcumin extends life span, improves health span, and modulates the expression of age-associated aging genes in Drosophila melanogaster.

Pubmed Data : Planta Med. 1997 Oct;63(5):465-6. PMID: **20645870**

Article Published Date : Oct 01, 1997

Authors : Kyu-Sun Lee, Byung-Sup Lee, Sahar Semnani, Agnesa Avanesian, Chae-Yoon Um, Hyun-Jin Jeon, Ki-Moon Seong, Kweon Yu, Kyung-Jin Min, Mahtab Jafari

Study Type : Animal Study
Additional Links
Substances : Curcumin : CK(4135) : AC(2175)
Diseases : Aging : CK(1658) : AC(438)

Curcumin extends lifespan in Caenorhabditis elegans.

Pubmed Data : Mech Ageing Dev. 2011 Aug 9. Epub 2011 Aug 9. PMID: **21855561**

Article Published Date : Aug 09, 2011

Authors : Vivian Hsiu-Chuan Liao, Chan-Wei Yu, Yu-Ju Chu, Wen-Hsuan Li, Yi-Chen Hsieh, Teng-Ting Wang

Study Type : Animal Study
Additional Links
Substances : Curcumin : CK(4135) : AC(2175)
Diseases : Aging : CK(1658) : AC(438)

Curcumin has anti-aging and neuroprotective effects in aged rat brain regions.

Pubmed Data : Biogerontology. 2006 Apr;7(2):81-9. PMID: **16802111**

Article Published Date : Apr 01, 2006

Authors : Kiran Bala, B C Tripathy, Deepak Sharma

Study Type : Animal Study
Additional Links
Substances : Curcumin : CK(4135) : AC(2175)
Diseases : Aging : CK(1658) : AC(438), Aging: Brain : CK(248) : AC(85), Neurodegenerative Diseases :

CK(3376) : AC(850), Oxidative Stress : CK(3871) : AC(1382)
Pharmacological Actions : Enzyme Inhibitors : CK(473) : AC(251) , Neuroprotective Agents : CK(2268) : AC(1071)

Curcumin inhibits UV radiation mutagenesis and SOS gene induction.

Pubmed Data : Ann Oncol. 2000 Dec;11(12):1537-43. PMID: **7477054**

Article Published Date : Dec 01, 2000

Authors : Y Oda

Study Type : In Vitro Study
Additional Links
Substances : Curcumin : CK(4135) : AC(2175)
Diseases : Skin Diseases: Photo-Aging : CK(132) : AC(51)
Pharmacological Actions : Antimutagenic Agents : CK(126) : AC(72)

Curcumin may have anti-aging properties.

Pubmed Data : Mol Nutr Food Res. 2010 Oct 11. Epub 2010 Oct 11. PMID: **20938987**

Article Published Date : Oct 11, 2010

Authors : Cristovao F Lima, Cristina Pereira-Wilson, Suresh I S Rattan

Study Type : In Vitro Study
Additional Links
Substances : Curcumin : CK(4135) : AC(2175)
Diseases : Aging : CK(1658) : AC(438)

Curcumin may protect the aging brain from oxidative stress.

Pubmed Data : Int J Dev Neurosci. 2010 Aug;28(5):351-7. Epub 2010 Apr 18. PMID: **20403421**

Article Published Date : Aug 01, 2010

Authors : Preeticia Dkhar, Ramesh Sharma

Study Type : Animal Study
Additional Links
Substances : Curcumin : CK(4135) : AC(2175)
Diseases : Aging : CK(1633) : AC(434) , Aging: Brain : CK(248) : AC(85), Oxidative Stress : CK(3871) : AC(1382)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682) , Neuroprotective Agents : CK(2268) : AC(1071)
Additional Keywords : Drug Synergy : CK(351) : AC(156)

Curcumin may slow aging.

Pubmed Data : Curr Pharm Des. 2010;16(7):884-92. PMID: **20388102**

Article Published Date : Jan 01, 2010

Authors : E Sikora, A Bielak-Zmijewska, G Mosieniak, K Piwocka

Study Type : Review
Additional Links
Substances : Curcumin : CK(4135) : AC(2175)
Diseases : Aging : CK(1658) : AC(438)

Curcumin prevents radiation-induced thymic lymphoma in mice.

Pubmed Data : J Environ Pathol Toxicol Oncol. 2007;26(4):273-9. PMID: **18197825**

Article Published Date : Jan 01, 2007

Authors : P Dange, H Sarma, Badri Narain Pandey, Kaushala Prasad Mishra

Study Type : Animal Study
Additional Links
Substances : Curcumin : CK(4135) : AC(2175), Vitamin C : CK(1957) : AC(404)
Diseases : Aging : CK(1633) : AC(434), Lymphoma : CK(253) : AC(83), Radiation Induced Illness : CK(1046) : AC(264)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682), Chemopreventive : CK(2835) : AC(787)

Curcumin protects against d-galactose-induced senescence in mice.

Pubmed Data : J Asian Nat Prod Res. 2011 Jan;13(1):42-55. PMID: **21253949**

Article Published Date : Jan 01, 2011

Authors : Anil Kumar, Atish Prakash, Samrita Dogra

Study Type : Animal Study
Additional Links
Substances : Curcumin : CK(4135) : AC(2175)
Diseases : Aging : CK(1658) : AC(438)
Pharmacological Actions : Neuroprotective Agents : CK(2268) : AC(1071)

Curcumin was shown to have positive effects on lifespan extension in animal studies.

Pubmed Data : Biofactors. 2013 Jan-Feb;39(1):133-40. Epub 2013 Jan 17. PMID: **23325575**

Article Published Date : Dec 31, 2012

Authors : Li-Rong Shen, Laurence D Parnell, Jose M Ordovas, Chao-Qiang Lai

Study Type : Animal Study, Insect Study
Additional Links
Substances : Curcumin : CK(4135) : AC(2175), Tetrahydrocurcumin : CK(66) : AC(30)

Diseases : Aging : CK(1633) : AC(434) , Oxidative Stress : CK(3871) : AC(1382)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682) , Superoxide Dismutase Up-regulation : CK(508) : AC(171)
Additional Keywords : Gene Expression Regulation : CK(427) : AC(212) , Longevity : CK(2) : AC(1)

Topical curcumin attenuates photoaging in mice.

Pubmed Data : Rejuvenation Res. 2010 Apr 28. Epub 2010 Apr 28. PMID: **20426620**

Article Published Date : Apr 28, 2010

Authors : Rumjhum Agrawal, Indu Pal Kaur

Study Type : Animal Study
Additional Links
Substances : Curcumin : CK(4135) : AC(2175)
Diseases : Aging Skin : CK(426) : AC(101) , Skin Diseases: Photo-Aging : CK(132) : AC(51) , Sunburn : CK(41) : AC(19)

Cyanidin (AC 1) (CK 1)

Cyanidin has anti-aging properties under a stress-induced premature senescence cellular system.

Pubmed Data : Biol Pharm Bull. 2010;33(3):421-6. PMID: **20190403**

Article Published Date : Jan 01, 2010

Authors : Mi Jin Choi, Boh Kyung Kim, Kun Young Park, Takako Yokozawa, Young Ok Song, Eun Ju Cho

Study Type : In Vitro Study
Additional Links
Substances : Cyanidin : CK(1) : AC(1)
Diseases : Aging : CK(1658) : AC(438) , Lipid Peroxidation : CK(695) : AC(255) , Oxidative Stress : CK(3871) : AC(1382)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682) , Cyclooxygenase 2 Inhibitors : CK(464) : AC(272), NF-kappaB Inhibitor : CK(1114) : AC(694)
Additional Keywords : Plant Extracts : CK(7484) : AC(2463)

Cynanchum Auriculatum (AC 1) (CK

20)

Cynanchum auriculatum in combination with vitamin E exhibits anti-aging properties.

Pubmed Data : Zhongguo Zhong Yao Za Zhi. 2007 Dec;32(23):2511-4. PMID: 18330246

Article Published Date : Dec 01, 2007

Authors : Shi-Xia Zhang, Xin Li, Jia-Le Yin, Li-Li Chen, Hong-Quan Zhang

Study Type : Meta Analysis
Additional Links
Substances : Cynanchum Auriculatum : CK(20) : AC(1) , Vitamin E : CK(1656) : AC(290)
Diseases : Aging : CK(1658) : AC(438)
Pharmacological Actions : Malondialdehyde Down-regulation : CK(554) : AC(152) , Superoxide Dismutase Up-regulation : CK(508) : AC(171), Telomerase Upregulation : CK(102) : AC(28)

Cynomorium songaricum (AC 1) (CK 2)

Cynomorium songaricum polysaccharide may exert an anti-aging effect by increase telomere length of aged mice.

Pubmed Data : Zhongguo Zhong Yao Za Zhi. 2009 May;34(10):1257-60. PMID: 19673390

Article Published Date : May 01, 2009

Authors : Lijie Ma, Guilin Chen, Lisha Nie, Min Ai

Study Type : Animal Study
Additional Links
Substances : Cynomorium songaricum : CK(5) : AC(3)
Diseases : Aging : CK(1658) : AC(438)
Pharmacological Actions : Telomerase Upregulation : CK(102) : AC(28)

Cysteine (see N-Acetylcysteine) (AC 1)

(CK 0)

N-acetyl cysteine may inhibit aging.

Pubmed Data : Mech Ageing Dev. 2008 May;129(5):261-70. Epub 2008 Jan 20. PMID: 18302967

Article Published Date : May 01, 2008

Authors : Guillaume Voghel, Nathalie Thorin-Trescases, Nada Farhat, Aida M Mamarbachi, Louis Villeneuve, Annik Fortier, Louis P Perrault, Michel Carrier, Eric Thorin

Additional Links
Substances : Cysteine (see N-Acetylcysteine) : CK(60) : AC(13)
Diseases : Aging : CK(1658) : AC(438)

DHA (Docosahexaenoic Acid) (AC 1) (CK 2)

A high consumption of unsaturated fatty acids is associated with better memory and greater longevity

Pubmed Data : J Nutr Sci Vitaminol (Tokyo). 2011;57(1):36-41. PMID: 21512289

Article Published Date : Jan 01, 2011

Authors : Yukiko Ueda, Ming-Fu Wang, Amalia Veronica Irei, Nobuko Sarukura, Tohru Sakai, Tzu-Fang Hsu

Study Type : Animal Study
Additional Links
Substances : DHA (Docosahexaenoic Acid) : CK(813) : AC(134) , Polyunsaturated Fatty Acids (PUFAs) : CK(194) : AC(33), Soybean Oil : CK(3) : AC(2)
Diseases : Aging : CK(1658) : AC(438) , Aging: Brain : CK(248) : AC(85), Memory Disorders : CK(342) : AC(104)

DHEA (Dehydroepiandrosterone) (AC 2) (CK 11)

DHEA levels decline with age and low levels are associated with a variety of adverse health consequences.

Pubmed Data : Pol Merkur Lekarski. 2008 Jul;25(145):77-82. PMID: **18839621**

Article Published Date : Jul 01, 2008

Authors : Witold Szkróbka, Robert Krysiak, Bogusław Okopień

Study Type : Review
Additional Links
Substances : DHEA (Dehydroepiandrosterone) : CK(229) : AC(36)
Diseases : Adrenopause : CK(1) : AC(1), Aging : CK(1658) : AC(438), Low DHEA : CK(38) : AC(7)

DHEA, in appropriate dosages, may have significant anti-aging and anti-cancer activity.

Pubmed Data : Acupunct Electrother Res. 2005;30(3-4):219-61. PMID: **16617690**

Article Published Date : Jan 01, 2005

Authors : Yoshiaki Omura

Study Type : Human Study
Additional Links
Substances : DHEA (Dehydroepiandrosterone) : CK(229) : AC(36)
Diseases : Aging : CK(1658) : AC(438), Cancers: All : CK(14547) : AC(4596)

Date Kernel Extract (AC 1) (CK 1)

A number of botanical extracts reduce skin wrinkling.

Pubmed Data : Drugs Aging. 2010 Dec 1;27(12):973-85. PMID: **21087067**

Article Published Date : Dec 01, 2010

Authors : Katherine J Hunt, Shao Kang Hung, Edzard Ernst

Study Type : Review
Additional Links
Substances : Cork Extract : CK(11) : AC(2), Date Kernel Extract : CK(11) : AC(2), Peony : CK(50) : AC(14), Rose : CK(167) : AC(46), Soy : CK(1787) : AC(399)
Diseases : Aging Skin : CK(426) : AC(101)

Dill (AC 1) (CK 1)

Dill extract may have application in promoting elastogenesis in aging skin.

Pubmed Data : Exp Dermatol. 2006 Aug;15(8):574-81. PMID: **16842595**

Article Published Date : Aug 01, 2006

Authors : Valérie Cenizo, Valérie André, Corinne Reymermier, Pascal Sommer, Odile Damour, Eric Perrier

Study Type : In Vitro Study
Additional Links
Substances : Dill : CK(85) : AC(26)
Diseases : Aging Skin : CK(426) : AC(101)
Additional Keywords : Plant Extracts : CK(7484) : AC(2463)

EGCG (Epigallocatechin gallate) (AC 2) (CK 3)

EGCG, a green tea polyphenol, prevents photocarcinogenesis in mice by enhancing DNA repair.

Pubmed Data : Cancer Res. 2006 May 15;66(10):5512-20. PMID: **16707481**

Article Published Date : May 15, 2006

Authors : Syed M Meeran, Sudheer K Mantena, Craig A Elmets, Santosh K Katiyar

Study Type : Animal Study
Additional Links
Substances : EGCG (Epigallocatechin gallate) : CK(1951) : AC(314)
Diseases : Skin Diseases: Photo-Aging : CK(132) : AC(51) , Xeroderma Pigmentosum : CK(3) : AC(3)

Synergistic effect of L-Carnosine and EGCG in prevention of physiological brain aging.

Pubmed Data : Curr Pharm Des. 2012 Oct 18. Epub 2012 Oct 18. PMID: **23092324**

Article Published Date : Oct 17, 2012

Authors : Sergio Davinelli, Roberto Di Marco, Renata Bracale, Alessandro Quattrone, Davide Zella, Giovanni Scapagnini

Study Type : In Vitro Study
Additional Links
Substances : Carnosine : CK(9) : AC(5) , EGCG (Epigallocatechin gallate) : CK(1951) : AC(314)
Diseases : Aging: Brain : CK(248) : AC(85)
Additional Keywords : Natural Substance Synergy : CK(537) : AC(247)

Echinacea (AC 5) (CK 16)

Daily feeding of echinacea root enhances natural killer cells and increased survival of aging mice.

Pubmed Data : Biogerontology. 2005;6(3):157-63. PMID: **16041619**

Article Published Date : Jan 01, 2005

Authors : Mélnie Brousseau, Sandra C Miller

Study Type : Animal Study
Additional Links
Substances : Echinacea : CK(531) : AC(100)
Diseases : Aging : CK(1658) : AC(438) , Low Immune Function: Natural Killer Cells : CK(121) : AC(24)
Pharmacological Actions : Immunomodulatory : CK(1287) : AC(358) , Immunostimulatory : CK(265) : AC(60)
Additional Keywords : Plant Extracts : CK(7484) : AC(2463)

Echinacea appears to be a prophylactic, extends life span of aging mice and significantly abates leukemia and extends the life span of leukemic mice.

Pubmed Data : Evid Based Complement Alternat Med. 2005 Sep;2(3):309-14. PMID: **16136209**

Article Published Date : Sep 01, 2005

Authors : Sandra C Miller

Study Type : Review
Additional Links
Substances : Echinacea : CK(531) : AC(100)
Diseases : Aging : CK(1658) : AC(438) , Leukemia : CK(965) : AC(385)

Echinacea improves skin in a dermatologial application.

Pubmed Data : Int J Cosmet Sci. 2010 Apr 1. Epub 2010 Apr 1. PMID: **20384903**

Article Published Date : Apr 01, 2010

Authors : S Yotsawimonwat, J Rattanadechsakul, P Rattanadechsakul, S Okonogi

Study Type : Human Study
Additional Links
Substances : Echinacea : CK(531) : AC(100)
Diseases : Aging Skin : CK(426) : AC(101), Dehydration : CK(43) : AC(7), Dry Skin : CK(104) : AC(17)

Echinacea may prevent and treat photodamage of the skin by UVA/UVB radiation.

Pubmed Data : Planta Med. 1995 Dec;61(6):510-4. PMID: **8824943**

Article Published Date : Dec 01, 1995

Authors : R M Facino, M Carini, G Aldini, L Saibene, P Pietta, P Mauri

Study Type : In Vitro Study
Additional Links
Substances : Echinacea : CK(531) : AC(100)
Diseases : Skin Diseases: Photo-Aging : CK(132) : AC(51), Sunburn : CK(41) : AC(19)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682)

Natural killer cells from aging mice treated with extracts from Echinacea purpurea are quantitatively and functionally rejuvenated.

Pubmed Data : Exp Gerontol. 2000 Aug;35(5):627-39. PMID: **10978684**

Article Published Date : Aug 01, 2000

Authors : N L Currier, S C Miller

Study Type : Animal Study
Additional Links
Substances : Echinacea : CK(531) : AC(100)
Diseases : Aging : CK(1658) : AC(438), Immune Disorders: Low Immune Function : CK(489) : AC(118), Low Immune Function: Natural Killer Cells : CK(121) : AC(24)
Additional Keywords : Plant Extracts : CK(7484) : AC(2463)

Ellagic Acid (AC 1) (CK 1)

Ellagic acid-rich pomegranate extract has an inhibitory

effect on tyrosinase activity and ultraviolet-induced pigmentation.

Pubmed Data : Biosci Biotechnol Biochem. 2005 Dec;69(12):2368-73. PMID: 16377895

Article Published Date : Dec 01, 2005

Authors : Mineka Yoshimura, Yuko Watanabe, Kouichi Kasai, Jun Yamakoshi, Takuro Koga

Study Type : In Vitro Study
Additional Links
Substances : Ellagic Acid : CK(104) : AC(55) , Pomegranate : CK(499) : AC(168)
Diseases : Hyperpigmentation : CK(19) : AC(11) , Skin Diseases: Photo-Aging : CK(132) : AC(51)
Pharmacological Actions : Enzyme Inhibitors : CK(473) : AC(251) , Tyrosinase inhibitors : CK(4) : AC(4)
Additional Keywords : Plant Extracts : CK(7484) : AC(2463)

Epimedium (AC 2) (CK 3)

Epimedium flavonoids protect telomere length of senescence cells.

Pubmed Data : Zhongguo Zhong Xi Yi Jie He Za Zhi. 2004 Dec;24(12):1094-7. PMID: 15658653

Article Published Date : Dec 01, 2004

Authors : Zuo-Wei Hu, Zi-Yin Shen, Jian-Hua Huang

Study Type : In Vitro Study
Additional Links
Substances : Epimedium : CK(37) : AC(12) , Flavonoids : CK(1215) : AC(379)
Diseases : Aging : CK(1658) : AC(438)
Pharmacological Actions : Telomere Protective : CK(83) : AC(10)

Epimedium flavonoids slow immunosenescence via NF-kappaB down-regulation.

Pubmed Data : Zhongguo Zhong Xi Yi Jie He Za Zhi. 2006 Jul;26(7):620-4. PMID: 16983917

Article Published Date : Jul 01, 2006

Authors : Xiao-yu Liu, Zi-yin Shen, Jian-hua Huang

Study Type : Animal Study
Additional Links
Substances : Epimedium : CK(37) : AC(12) , Flavonoids : CK(1215) : AC(379)
Diseases : Aging: Immunosenecence : CK(52) : AC(13)

Pharmacological Actions : NF-kappaB Inhibitor : CK(1114) : AC(694)

Estradiol (E(2)) (AC 3) (CK 3)

Estrogen reduces endothelial progenitor cell senescence through augmentation of telomerase activity.

Pubmed Data : J Hypertens. 2005 Sep;23(9):1699-706. PMID: **16093915**

Article Published Date : Sep 01, 2005

Authors : Toshio Imanishi, Takuzo Hano, Ichiro Nishio

Study Type : In Vitro Study
Additional Links
Substances : Estradiol (E(2)) : CK(22) : AC(15)
Diseases : Aging : CK(1658) : AC(438), Endothelial Dysfunction : CK(1176) : AC(232)
Pharmacological Actions : Antiproliferative : CK(2479) : AC(1685), Enzyme Inhibitors : CK(473) : AC(251), Telomerase Upregulation : CK(102) : AC(28), Vascular Endothelial Growth Factor A Inhibitor : CK(132) : AC(71)

Proper estradiol levels may contribute to preventing accelerating aging.

Pubmed Data : Hepatology. 1997 Jun;25(6):1351-60. PMID: **21377519**

Article Published Date : Jun 01, 1997

Authors : Pardeep Kumar, Asia Taha, R K Kale, S M Cowsik, Najma Zaheer Baquer

Study Type : Review
Additional Links
Substances : Estradiol (E(2)) : CK(22) : AC(15)
Diseases : Aging : CK(1658) : AC(438)

Fennel (AC 1) (CK 2)

Fennel supresses the ovariectomy-induced increase in

bone turnover, indicating it may prevent postmenopausal osteoporosis.

Pubmed Data : Int J Mol Med. 2012 Jun ;29(6):1053-9. Epub 2012 Mar 23. PMID: 22447109

Article Published Date : Jun 01, 2012

Authors : Tae-Ho Kim, Hyun-Ju Kim, Sang-Han Lee, Shin-Yoon Kim

Study Type : Animal Study
Additional Links
Substances : Fennel : CK(150) : AC(23)
Diseases : Aging : CK(1658) : AC(438), Osteoporosis : CK(1283) : AC(245), Ovariectomy Associated Adverse Changes : CK(18) : AC(7), Postmenopausal Disorders : CK(329) : AC(42)
Additional Keywords : Ovariectomy-Induced Changes : CK(84) : AC(39)

Fermented Foods and Beverages (AC 2) (CK 11)

A fermented soybean (natto) and astragalus combination stimulates hyaluronic acid synthesis in human skin cells.

Pubmed Data : J Ethnopharmacol. 2009 Jul 17. PMID: 19619633

Article Published Date : Jul 17, 2009

Authors : Mei-Fang Hsu, Been-Huang Chiang

Study Type : In Vitro Study
Additional Links
Substances : Astragalus : CK(260) : AC(60), Fermented Foods and Beverages : CK(864) : AC(194), Natto : CK(105) : AC(17), Soy : CK(1787) : AC(399)
Diseases : Aging Skin : CK(426) : AC(101)

Probiotic administration in the elderly normalises the response to endotoxin, and modulates activation markers in blood phagocytes, and therefore may help reduce low-grade chronic inflammation.

Pubmed Data : Nutr Cancer. 2009;61(5):680-6. PMID: 19353762

Article Published Date : Jan 01, 2009

Authors : Eduardo J Schiffrin, Alexandr Parlesak, Christiane Bode, J Christian Bode, Martin A van't

Hof, Dominik Grathwohl, Yves Guigoz

Study Type : Human Study
Additional Links
Substances : Fermented Foods and Beverages : CK(864) : AC(194) , Probiotics : CK(2868) : AC(364) , Yoghurt : CK(154) : AC(23)
Diseases : Aging : CK(1658) : AC(438) , Endotoxemia : CK(83) : AC(43) , Immune Disorders: Low Immune Function : CK(489) : AC(118), Lipopolysaccharide-Induced Toxicity : CK(359) : AC(218)
Pharmacological Actions : Immunomodulatory : CK(1287) : AC(358)

Fiber (AC 1) (CK 10)

Increasing intake of fiber-rich foods could be a successful strategy in reaching old age disease free and fully functional.

Pubmed Data : J Gerontol A Biol Sci Med Sci. 2016 Jun 1. Epub 2016 Jun 1. PMID: 27252308

Article Published Date : May 31, 2016

Authors : Bamini Gopinath, Victoria M Flood, Annette Kifley, Jimmy C Y Louie, Paul Mitchell

Study Type : Human Study
Additional Links
Substances : Fiber : CK(808) : AC(103)
Diseases : Aging : CK(1658) : AC(438)
Additional Keywords : Risk Reduction : CK(6417) : AC(686)

Fig (AC 1) (CK 10)

The combined formulation of fruit extracts showed excellent antioxidative and anti-collagenase activity as well as a significant effect on anti-wrinkle activity on human skin.

Pubmed Data : Clin Cosmet Investig Dermatol. 2015 ;8:389-96. Epub 2015 Jul 16. PMID: 26203268

Article Published Date : Dec 31, 2014

Authors : Amal Kumar Ghimeray, Un Sun Jung, Ha Youn Lee, Young Hoon Kim, Eun Kyung Ryu, Moon Sik Chang

Study Type : Human Study, In Vitro Study
Additional Links
Substances : Fig : CK(45) : AC(17), Ginkgo biloba : CK(798) : AC(162), Pomegranate : CK(499) : AC(168), White Mulberry : CK(11) : AC(1)
Diseases : Aging Skin : CK(426) : AC(101), Wrinkles : CK(10) : AC(1)
Pharmacological Actions : Anti-collagenase : CK(13) : AC(2), Antioxidants : CK(7331) : AC(2682)
Additional Keywords : Dose Response : CK(1056) : AC(408), Natural Substances Versus Drugs : CK(1696) : AC(301), Plant Extracts : CK(7484) : AC(2463)

Fish Oil (AC 1) (CK 10)

There is an inverse relationship between baseline blood levels of marine omega-3 fatty acids and the rate of telomere shortening (an indication of aging) over 5 years.

Pubmed Data : JAMA. 2010 Jan 20;303(3):250-7. PMID: **20085953**

Article Published Date : Jan 20, 2010

Authors : Ramin Farzaneh-Far, Jue Lin, Elissa S Epel, William S Harris, Elizabeth H Blackburn, Mary A Whooley

Study Type : Human Study
Additional Links
Substances : Fish Oil : CK(701) : AC(111), Omega-3 Fatty Acids : CK(3268) : AC(387)
Diseases : Aging : CK(1658) : AC(438)

Fish extract (AC 2) (CK 20)

A multi-nutrient mixture of marine proteins, alpha-lipoic acid, pine bark extract, vitamins and minerals is safe and efficacious in the treatment of aging symptoms of the

skin in women.

Pubmed Data : J Int Med Res. 2005 May-Jun;33(3):267-72. PMID: 15938587

Article Published Date : May 01, 2005

Authors : E Thom

Study Type : Human Study
Additional Links
Substances : Alpha-Lipoic Acid : CK(476) : AC(116) , Fish extract : CK(32) : AC(4), Multivitamin : CK(257) : AC(25), Pine Bark Extract : CK(567) : AC(96)
Diseases : Aging Skin : CK(426) : AC(101)

A multi-nutrient mixture of soy extract, fish protein polysaccharides, extracts from white tea, grape seed and tomato, vitamins C and E as well as zinc and chamomile extract improves signs of skin aging in post-menopausal women.

Pubmed Data : Eur J Clin Nutr. 2006 Oct;60(10):1201-6. Epub 2006 May 3. PMID: 16670692

Article Published Date : Oct 01, 2006

Authors : G R Lange Skovgaard, A S Jensen, M L Sigler

Study Type : Human Study
Additional Links
Substances : Chamomile : CK(182) : AC(30) , Fish extract : CK(32) : AC(4), Grape Seed Extract : CK(316) : AC(88), Soy : CK(1787) : AC(399) , Tomato : CK(557) : AC(109) , Vitamin C : CK(1957) : AC(404), Vitamin E : CK(1656) : AC(290) , White Tea : CK(21) : AC(6) , Zinc : CK(941) : AC(139)
Diseases : Aging Skin : CK(426) : AC(101) , Postmenopausal Disorders : CK(329) : AC(42)

Flavonoids (AC 16) (CK 60)

Black tea polyphenols may positively modulate a longevity factor (FOXO1).

Pubmed Data : Aging Cell. 2008 Jan;7(1):69-77. Epub 2007 Dec 19. PMID: 18005251

Article Published Date : Jan 01, 2008

Authors : Amy R Cameron, Siobhan Anton, Laura Melville, Nicola P Houston, Saurabh Dayal, Gordon J McDougall, Derek Stewart, Graham Rena

Study Type : In Vitro Study

Additional Links
Substances : Black Tea : CK(360) : AC(80) , Black Tea Theaflavins : CK(1) : AC(1) , Catechin : CK(512) : AC(169), Flavonoids : CK(1215) : AC(379) , Polyphenols : CK(931) : AC(335) , Tea : CK(1840) : AC(385)
Diseases : Aging : CK(1658) : AC(438)
Pharmacological Actions : Forkhead Transcription Factor Family O (FOXO) Modulator : CK(3) : AC(2)

Blackberries improve motor and cognitive performance in aged rats.

Pubmed Data : Nutr Neurosci. 2009 Jun;12(3):135-40. PMID: **19356316**

Article Published Date : Jun 01, 2009

Authors : Barbara Shukitt-Hale, Vivian Cheng, James A Joseph

Study Type : Animal Study
Additional Links
Substances : Blackberry : CK(33) : AC(22) , Flavonoids : CK(1215) : AC(379) , Polyphenols : CK(931) : AC(335)
Diseases : Aging: Brain : CK(248) : AC(85), Cognitive Decline/Dysfunction : CK(1151) : AC(215)
Pharmacological Actions : Anti-Inflammatory Agents : CK(4688) : AC(1630) , Antioxidants : CK(7331) : AC(2682), Neuroprotective Agents : CK(2268) : AC(1071)

Epimedium flavonoids protect telomere length of senescence cells.

Pubmed Data : Zhongguo Zhong Xi Yi Jie He Za Zhi. 2004 Dec;24(12):1094-7. PMID: **15658653**

Article Published Date : Dec 01, 2004

Authors : Zuo-Wei Hu, Zi-Yin Shen, Jian-Hua Huang

Study Type : In Vitro Study
Additional Links
Substances : Epimedium : CK(37) : AC(12) , Flavonoids : CK(1215) : AC(379)
Diseases : Aging : CK(1658) : AC(438)
Pharmacological Actions : Telomere Protective : CK(83) : AC(10)

Epimedium flavonoids slow immunosenescence via NF-kappaB down-regulation.

Pubmed Data : Zhongguo Zhong Xi Yi Jie He Za Zhi. 2006 Jul;26(7):620-4. PMID: **16983917**

Article Published Date : Jul 01, 2006

Authors : Xiao-yu Liu, Zi-yin Shen, Jian-hua Huang

Study Type : Animal Study
Additional Links
Substances : Epimedium : CK(37) : AC(12) , Flavonoids : CK(1215) : AC(379)
Diseases : Aging: Immunosenecence : CK(52) : AC(13)

Pharmacological Actions : NF-kappaB Inhibitor : CK(1114) : AC(694)

Grape seed extract has inhibiting effect on the accumulation of age-related oxidative DNA damages in the central nervous system of rats.

Pubmed Data : Brain Res Bull. 2006 Feb 15;68(6):469-73. Epub 2005 Nov 2. PMID: 16459205

Article Published Date : Feb 15, 2006

Authors : Muthaiya Balu, Purushotham Sangeetha, Ganesan Murali, Chinnakannu Panneerselvam

Study Type : Animal Study
Additional Links
Substances : Flavonoids : CK(1215) : AC(379) , Polyphenols : CK(931) : AC(335)
Diseases : Aging: Brain : CK(248) : AC(85), DNA damage : CK(993) : AC(382) , Neurodegenerative Diseases : CK(3376) : AC(850)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682) , Neuroprotective Agents : CK(2268) : AC(1071)
Additional Keywords : Plant Extracts : CK(7484) : AC(2463) , Proanthocyanidins : CK(203) : AC(54)

Herbs provide protection against harmful UV radiation due to their antioxidant activity.

Pubmed Data : Pharmacogn Rev. 2011 Jul ;5(10):164-73. PMID: 22279374

Article Published Date : Jul 01, 2011

Authors : Radava R Korać, Kapil M Khambholja

Study Type : Review
Additional Links
Substances : Coconut oil: topical : CK(1) : AC(1) , Flavonoids : CK(1215) : AC(379) , Krameria lappacea: topical : CK(1) : AC(1), Olive oil: topical : CK(1) : AC(1) , Peanut oil: topical : CK(1) : AC(1) , Sesame oil: topical : CK(1) : AC(1) , Vitamin C : CK(1957) : AC(404) , Vitamin E : CK(1656) : AC(290)
Diseases : Skin Diseases: Photo-Aging : CK(132) : AC(51) , Sunburn : CK(41) : AC(19) , Ultraviolet Radiation Induced Damage : CK(80) : AC(34)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682) , Photoprotective : CK(74) : AC(27)

Higher intake of flavonoids, particularly from berries, appears to reduce rates of cognitive decline in older adults.

Pubmed Data : Ann Neurol. 2012 Jul ;72(1):135-43. Epub 2012 Apr 26. PMID: 22535616

Article Published Date : Jun 30, 2012

Authors : Elizabeth E Devore, Jae Hee Kang, Monique M B Breteler, Francine Grodstein

Study Type : Human Study
Additional Links

Substances : Berries: All : CK(1443) : AC(356) , Blueberry : CK(260) : AC(90) , Flavonoids : CK(1215) : AC(379), Strawberry : CK(145) : AC(37)
Diseases : Aging : CK(1633) : AC(434) , Cognitive Decline/Dysfunction : CK(1151) : AC(215)
Pharmacological Actions : Neuroprotective Agents : CK(2268) : AC(1071)
Additional Keywords : Risk Reduction : CK(6417) : AC(686)

Icariin has a neuroprotective effect on memory impairment and neurochemical deficits in age-acceleration prone mice.

Pubmed Data : Brain Res. 2010 Jun 2;1334:73-83. Epub 2010 Apr 7. PMID: **20380820**

Article Published Date : Jun 02, 2010

Authors : Xiao-Li He, Wei-Qin Zhou, Ming-Gang Bi, Guan-Hua Du

Study Type : Animal Study
Additional Links
Substances : Flavonoids : CK(1215) : AC(379) , Icariin : CK(10) : AC(7)
Diseases : Aging : CK(1633) : AC(434) , Aging: Brain : CK(248) : AC(85), Cognitive Decline/Dysfunction : CK(1151) : AC(215), Memory Disorders : CK(342) : AC(104) , Oxidative Stress : CK(3871) : AC(1382)
Pharmacological Actions : Neuroprotective Agents : CK(2268) : AC(1071)

Intake of flavonoid-rich wine, tea, and chocolate by elderly men and women is associated with better cognitive test performance.

Pubmed Data : J Nutr. 2009 Jan;139(1):120-7. Epub 2008 Dec 3. PMID: **19056649**

Article Published Date : Jan 01, 2009

Authors : Eha Nurk, Helga Refsum, Christian A Drevon, Grethe S Tell, Harald A Nygaard, Knut Engedal, A David Smith

Study Type : Human Study
Additional Links
Substances : Black Tea : CK(360) : AC(80) , Flavonoids : CK(1215) : AC(379) , Green Tea : CK(1971) : AC(562), Wine : CK(197) : AC(44)
Diseases : Aging: Brain : CK(248) : AC(85), Cognitive Decline/Dysfunction : CK(1151) : AC(215)

Nutritional antioxidants such as green tea polyphenols and tetrahydrocurcumin may beneficially modify the life span of animals.

Pubmed Data : Biogerontology. 2007 Oct;8(5):567-73. Epub 2007 May 22. PMID: **17516143**

Article Published Date : Oct 01, 2007

Authors : Kenichi Kitani, Toshihiko Osawa, Takako Yokozawa

Study Type : Animal Study

Additional Links
Substances : Flavonoids : CK(1215) : AC(379) , Green Tea : CK(1971) : AC(562) , Polyphenols : CK(931) : AC(335), Tetrahydrocurcumin : CK(66) : AC(30)
Diseases : Aging : CK(1658) : AC(438)
Additional Keywords : Plant Extracts : CK(7484) : AC(2463)

Onion flesh and onion peel enhance antioxidant status in aged rats.

Pubmed Data : J Nutr Sci Vitaminol (Tokyo). 2007 Feb;53(1):21-9. PMID: **17484375**

Article Published Date : Feb 01, 2007

Authors : Juyeon Park, Joohee Kim, Mi Kyung Kim

Study Type : Animal Study
Additional Links
Substances : Flavonoids : CK(1215) : AC(379) , Onion : CK(235) : AC(57) , Polyphenols : CK(931) : AC(335), Quercetin : CK(564) : AC(250)
Diseases : Aging : CK(1658) : AC(438) , DNA damage : CK(993) : AC(382)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682)
Additional Keywords : Plant Extracts : CK(7484) : AC(2463)

Pycnogenol supplementation benefits human skin by increasing skin hydration and skin elasticity.

Pubmed Data : Skin Pharmacol Physiol. 2012 ;25(2):86-92. Epub 2012 Jan 21. PMID: **22270036**

Article Published Date : Dec 31, 2011

Authors : A Marini, S Grether-Beck, T Jaenicke, M Weber, C Burki, P Formann, H Brenden, F Schönlau, J Krutmann

Study Type : Human Study
Additional Links
Substances : Flavonoids : CK(1215) : AC(379)
Diseases : Aging Skin : CK(426) : AC(101) , Wrinkles : CK(10) : AC(1)

Regular consumption of a chocolate rich in flavanols confers significant photoprotection and can thus be effective at protecting human skin from harmful UV effects.

Pubmed Data : Lett Appl Microbiol. 2009 Sep;49(3):354-60. Epub 2009 Jul 14. PMID: **19735513**

Article Published Date : Sep 01, 2009

Authors : Stefanie Williams, Slobodanka Tamburic, Carmel Lally

Study Type : Human Study
Additional Links

Substances : Chocolate : CK(521) : AC(76) , Flavonoids : CK(1215) : AC(379)
Diseases : Skin Diseases: Photo-Aging : CK(132) : AC(51) , Sunburn : CK(41) : AC(19)

Resveratrol, by acting on specific polyphenol binding sites in epidermis, may be useful to prevent skin disorders associated with aging.

Pubmed Data : PLoS One. 2010;5(9):e12935. Epub 2010 Sep 23. PMID: **20886076**

Article Published Date : Jan 01, 2010

Authors : Stéphane Bastianetto, Yvan Dumont, Albert Duranton, Freya Vercauteren, Lionel Breton, Rémi Quirion

Study Type : In Vitro Study
Additional Links
Substances : Flavonoids : CK(1215) : AC(379) , Polyphenols : CK(931) : AC(335) , Resveratrol : CK(1245) : AC(746)
Diseases : Aging Skin : CK(426) : AC(101)
Pharmacological Actions : Apoptotic : CK(2958) : AC(2075)
Additional Keywords : Stilbenes : CK(402) : AC(242)

Soybean and green tea polyphenols improve immune function and redox status in very old ovariectomized mice.

Pubmed Data : Rejuvenation Res. 2010 Dec;13(6):665-74. Epub 2010 Sep 6. PMID: **20818935**

Article Published Date : Dec 01, 2010

Authors : Isabel Baeza, Nuria M De Castro, Lorena Arranz, Mónica De la Fuente

Study Type : Animal Study
Additional Links
Substances : Flavonoids : CK(1215) : AC(379) , Green Tea : CK(1971) : AC(562) , Polyphenols : CK(931) : AC(335), Soy : CK(1787) : AC(399) , Tea : CK(1840) : AC(385)
Diseases : Aging : CK(1658) : AC(438) , Aging: Immunosenecence : CK(52) : AC(13) , Lipid Peroxidation : CK(695) : AC(255), Ovariectomy Associated Adverse Changes : CK(18) : AC(7)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682) , Interleukin-10 downregulation : CK(128) : AC(45), Interleukin-6 Downregulation : CK(1095) : AC(342)

The plant polyphenols genistein and resveratrol preserve ovarian follicular function in aging rats.

Pubmed Data : Biochem Cell Biol. 2010 Aug;88(4):737-45. PMID: **20651847**

Article Published Date : Aug 01, 2010

Authors : Zhen-Guo Chen, Li-Li Luo, Jin-Jie Xu, Xiao-Lan Zhuang, Xiao-Xia Kong, Yu-Cai Fu

Study Type : Animal Study

Additional Links
Substances : Flavonoids : CK(1215) : AC(379) , Genistein : CK(515) : AC(228) , Polyphenols : CK(931) : AC(335), Resveratrol : CK(1245) : AC(746)
Diseases : Aging : CK(1658) : AC(438) , Infertility: Aging Associated : CK(2) : AC(1) , Infertility: Female : CK(280) : AC(50)
Additional Keywords : Plant Extracts : CK(7484) : AC(2463) , Stilbenes : CK(402) : AC(242)

Flaxseed (AC 2) (CK 12)

A traditional Indian medical formula containing clarified butter (ghee), flax seed oil, amla (P. emblica fruits), Shorea robusta resin and zinc (Yashada bhasma) stimulates wound healing and tissue regeneration.

Pubmed Data : Evid Based Complement Alternat Med. 2009 Feb 27. PMID: 19252191

Article Published Date : Feb 27, 2009

Authors : Hema Sharma Datta, Shankar Kumar Mitra, Bhushan Patwardhan

Study Type : Animal Study
Additional Links
Substances : Amla Fruit : CK(80) : AC(33) , Flaxseed : CK(453) : AC(90) , Ghee : CK(24) : AC(4) , Shorea robusta : CK(2) : AC(1), Zinc : CK(941) : AC(139)
Diseases : Aging Skin : CK(426) : AC(101) , Wound Healing: Delayed : CK(74) : AC(29)
Additional Keywords : Ayurvedic Formulas : CK(2) : AC(1) , Regenerative Substances : CK(42) : AC(19)

Flaxseed oil diminishes skin sensitivity and improves skin barrier function and condition.

Pubmed Data : Skin Pharmacol Physiol. 2010 Nov 18;24(2):67-74. Epub 2010 Nov 18. PMID: 21088453

Article Published Date : Nov 18, 2010

Authors : K Neukam, S De Spirt, W Stahl, M Bejot, J-M Maurette, H Tronnier, U Heinrich

Study Type : Human Study
Additional Links
Substances : Flaxseed : CK(453) : AC(90)
Diseases : Aging Skin : CK(426) : AC(101) , Dry Skin : CK(104) : AC(17), Skin Diseases : CK(67) : AC(12)

Folic Acid (AC 2) (CK 3)

Folic acid helps in improving the memory status by reducing oxidative stress and maintaining the integrity of neurons during aging.

Pubmed Data : Cell Mol Neurobiol. 2011 Jan;31(1):83-91. Epub 2010 Dec 18. PMID: 21170581

Article Published Date : Jan 01, 2011

Authors : Rashmi Singh, Shalinder S Kanwar, Pooja K Sood, Bimla Nehru

Study Type : Animal Study
Additional Links
Substances : Folic Acid : CK(645) : AC(94)
Diseases : Aging: Brain : CK(248) : AC(85)
Pharmacological Actions : Neuroprotective Agents : CK(2268) : AC(1071)

Folic acid status is correlated with telomere length and therefore may affect the rate of aging, and age-associated diseases.

Pubmed Data : J Nutr. 2009 Jul;139(7):1273-8. Epub 2009 May 20. PMID: 19458030

Article Published Date : Jul 01, 2009

Authors : Ligi Paul, Marco Cattaneo, Armando D'Angelo, Francesca Sampietro, Isabella Fermo, Cristina Razzari, Gessica Fontana, Nindra Eugene, Paul F Jacques, Jacob Selhub

Study Type : In Vitro Study
Additional Links
Substances : Folic Acid : CK(645) : AC(94)
Diseases : Aging : CK(1658) : AC(438), Aging: Brain : CK(248) : AC(85)
Additional Keywords : Epigenetic Modification : CK(220) : AC(90), Telomere Length : CK(18) : AC(5)

Frankincense (AC 1) (CK 10)

Topical application of boswellic acids may represent a suitable treatment option for selected features of skin

photoaging.

Pubmed Data : Dermatol Ther. 2010 Jan-Feb;23 Suppl 1:S28-32. PMID: 20136919

Article Published Date : Dec 31, 2009

Authors : Piergiacomo Calzavara-Pinton, Cristina Zane, Elena Facchinetti, Rossana Capezzera, Alessandra Pedretti

Study Type : Human Study
Additional Links
Substances : Frankincense : CK(180) : AC(30)
Diseases : Aging Skin : CK(426) : AC(101)
Pharmacological Actions : Photoprotective : CK(74) : AC(27)
Additional Keywords : Plant Extracts : CK(7484) : AC(2463)

Fruit: All (AC 1) (CK 1)

Review: natural approaches to reduce skin aging.

Pubmed Data : Acta Dermatovenerol Alp Panonica Adriat. 2008 Jun;17(2):47-54. PMID: 18709289

Article Published Date : Jun 01, 2008

Authors : Neira Puizina-Ivić

Study Type : Review
Additional Links
Substances : Antioxidant formulas : CK(492) : AC(76) , Fruit: All : CK(3727) : AC(793) , Vegetables: All : CK(1092) : AC(118)
Diseases : Aging Skin : CK(426) : AC(101)

Genistein (AC 5) (CK 17)

Genistein aglycone might be an effective alternative therapy for the management of age-related skin changes in postmenopausal women.

Pubmed Data : Br J Pharmacol. 2012 Feb ;165(4):994-1005. PMID: 21827449

Article Published Date : Jan 31, 2012

Authors : Francesca Polito, Herbert Marini, Alessandra Bitto, Natasha Irrera, Mario Vaccaro, Elena Bianca Adamo, Antonio Micali, Francesco Squadrito, Letteria Minutoli, Domenica Altavilla

Study Type : Animal Study
Additional Links
Substances : Genistein : CK(515) : AC(228) , Soy : CK(1787) : AC(399)
Diseases : Aging Skin : CK(426) : AC(101)
Pharmacological Actions : Matrix metalloproteinase-2 (MMP-2) inhibitor : CK(285) : AC(147) , Vascular Endothelial Growth Factor A Inhibitor : CK(132) : AC(71)
Additional Keywords : Drug: Raloxifene : CK(2) : AC(1) , Ovariectomy-Induced Changes : CK(84) : AC(39)

Genistein has photoprotective and anti-cancer activity in the skin.

Pubmed Data : J Nutr. 2003 Nov;133(11 Suppl 1):3811S-3819S. PMID: **14608119**

Article Published Date : Nov 01, 2003

Authors : Huachen Wei, Rao Saladi, Yuhun Lu, Yan Wang, Sapna R Palep, Julian Moore, Robert Phelps, Eileen Shyong, Mark G Lebwohl

Study Type : Commentary
Additional Links
Substances : Genistein : CK(515) : AC(228)
Diseases : Aging Skin : CK(426) : AC(101) , Skin Cancer : CK(652) : AC(264) , Skin Diseases: Photo-Aging : CK(132) : AC(51)
Pharmacological Actions : Anticarcinogenic Agents : CK(1099) : AC(519)

Menaquinone-7, a form of vitamin K2, has a stimulatory effect on bone formation in the femoral tissues of elderly female rats in vitro.

Pubmed Data : Int J Mol Med. 2002 Dec;10(6):729-33. PMID: **12429999**

Article Published Date : Dec 01, 2002

Authors : Masayoshi Yamaguchi, Satoshi Uchiyama, Yoshinori Tsukamoto

Study Type : Animal Study
Additional Links
Substances : Genistein : CK(515) : AC(228) , Vitamin K : CK(645) : AC(85) , Vitamin K2: Menaquinone-7 : CK(108) : AC(16)
Diseases : Aging : CK(1658) : AC(438) , Osteopenia : CK(229) : AC(41) , Osteoporosis : CK(1283) : AC(245)

Soy extract appears to rejuvenate the structure of mature skin.

Pubmed Data : J Pediatr Gastroenterol Nutr. 2004 Nov;39(5):487-92. PMID: **15623355**

Article Published Date : Nov 01, 2004

Authors : Kirstin M Südel, Kirsten Venzke, Heiko Mielke, Ute Breitenbach, Claudia Mundt, Sören Jaspers, Urte Koop, Kirsten Sauermann, Elke Knussman-Hartig, Ingrid Moll, Günther Gercken, Anthony R Young, Franz Stäb, Horst Wenck, Stefan Gallinat

Study Type : Human Study
Additional Links
Substances : Genistein : CK(515) : AC(228) , Soy : CK(1787) : AC(399)
Diseases : Aging Skin : CK(426) : AC(101)
Additional Keywords : Plant Extracts : CK(7484) : AC(2463)

The plant polyphenols genistein and resveratrol preserve ovarian follicular function in aging rats.

Pubmed Data : Biochem Cell Biol. 2010 Aug;88(4):737-45. PMID: **20651847**

Article Published Date : Aug 01, 2010

Authors : Zhen-Guo Chen, Li-Li Luo, Jin-Jie Xu, Xiao-Lan Zhuang, Xiao-Xia Kong, Yu-Cai Fu

Study Type : Animal Study
Additional Links
Substances : Flavonoids : CK(1215) : AC(379) , Genistein : CK(515) : AC(228) , Polyphenols : CK(931) : AC(335), Resveratrol : CK(1245) : AC(746)
Diseases : Aging : CK(1658) : AC(438) , Infertility: Aging Associated : CK(2) : AC(1) , Infertility: Female : CK(280) : AC(50)
Additional Keywords : Plant Extracts : CK(7484) : AC(2463) , Stilbenes : CK(402) : AC(242)

Ghee (AC 1) (CK 2)

A traditional Indian medical formula containing clarified butter (ghee), flax seed oil, amla (P. emblica fruits), Shorea robusta resin and zinc (Yashada bhasma) stimulates wound healing and tissue regeneration.

Pubmed Data : Evid Based Complement Alternat Med. 2009 Feb 27. PMID: **19252191**

Article Published Date : Feb 27, 2009

Authors : Hema Sharma Datta, Shankar Kumar Mitra, Bhushan Patwardhan

Study Type : Animal Study
Additional Links
Substances : Amla Fruit : CK(80) : AC(33) , Flaxseed : CK(453) : AC(90) , Ghee : CK(24) : AC(4) , Shorea

robusta : CK(2) : AC(1), Zinc : CK(941) : AC(139)
Diseases : Aging Skin : CK(426) : AC(101) , Wound Healing: Delayed : CK(74) : AC(29)
Additional Keywords : Ayurvedic Formulas : CK(2) : AC(1) , Regenerative Substances : CK(42) : AC(19)

Ginkgo biloba (AC 13) (CK 45)

A combination of green tea and ginkgo biloba extracts effectively improved skin conditions and the improvement of skin elasticity.

Pubmed Data : J Drugs Dermatol. 2014 Sep ;13(9):1092-7. PMID: **25226010**

Article Published Date : Aug 31, 2014

Authors : Patricia M B G Maia Campos, Mirela D Gianeti, Daiane G Mercurio, Lorena R Gaspar

Study Type : Human Study
Additional Links
Substances : Ginkgo biloba : CK(798) : AC(162) , Green Tea : CK(1971) : AC(562)
Diseases : Aging Skin : CK(426) : AC(101)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682) , Dermatologic Agents : CK(240) : AC(28)
Additional Keywords : Natural Substance Synergy : CK(537) : AC(247) , Plant Extracts : CK(7484) : AC(2463)

A combination of phosphatidylserine, Ginkgo biloba, vitamin E, and pyridoxine improves short term memory in aging beagles.

Pubmed Data : Can Vet J. 2008 Apr;49(4):379-85. PMID: **18481547**

Article Published Date : Apr 01, 2008

Authors : Joseph A Araujo, Gary M Landsberg, Norton W Milgram, Alda Miolo

Study Type : Animal Study
Additional Links
Substances : Ginkgo biloba : CK(798) : AC(162) , Phosphatidylserine : CK(134) : AC(20) , Vitamin B-6 : CK(435) : AC(54), Vitamin E : CK(1656) : AC(290)
Diseases : Aging: Brain : CK(248) : AC(85), Memory Disorders : CK(342) : AC(104)
Additional Keywords : Plant Extracts : CK(7484) : AC(2463)

GBE supplementation improved cognitive functions by decreasing oxidative damage and increasing the BDNF level in aged female rats.

Pubmed Data : Behav Brain Res. 2015 Feb 1 ;278:453-61. Epub 2014 Oct 30. PMID: **25446810**

Article Published Date : Jan 31, 2015

Authors : Muaz Belviranlı, Nilsel Okudan

Study Type : Animal Study
Additional Links
Substances : Ginkgo biloba : CK(798) : AC(162)
Diseases : Aging: Brain : CK(248) : AC(85), Cognitive Decline/Dysfunction : CK(1151) : AC(215), Oxidative Stress : CK(3871) : AC(1382)
Pharmacological Actions : Antioxidant Effects : CK(15) : AC(4) , Brain-derived neurotrophic factor modulator : CK(18) : AC(5)

Ginkgo biloba extract has a protective effects on aging liver.

Pubmed Data : World J Gastroenterol. 2005 Jan 7 ;11(1):132-5. PMID: **15609412**

Article Published Date : Jan 06, 2005

Authors : Shang-Zhen Huang, Yan-Jun Luo, Li Wang, Ke-Yin Cai

Study Type : Animal Study
Additional Links
Substances : Ginkgo biloba : CK(798) : AC(162)
Diseases : Aging : CK(1658) : AC(438) , Aging: Liver : CK(2) : AC(1) , Oxidative Stress : CK(3871) : AC(1382)
Pharmacological Actions : Malondialdehyde Down-regulation : CK(554) : AC(152) , Superoxide Dismutase Up-regulation : CK(508) : AC(171)
Additional Keywords : Plant Extracts : CK(7484) : AC(2463)

Ginkgo biloba extract improves neuroplasticity.

Pubmed Data : Int Psychogeriatr. 2012 Aug ;24 Suppl 1:S21-4. PMID: **22784424**

Article Published Date : Jul 31, 2012

Authors : Walter E Müller, Jeanine Heiser, Kristina Leuner

Study Type : Review
Additional Links
Substances : Ginkgo biloba : CK(798) : AC(162)
Diseases : Aging: Brain : CK(248) : AC(85)
Pharmacological Actions : Neuroplasticity enhancement : CK(44) : AC(12)
Additional Keywords : Plant Extracts : CK(7484) : AC(2463)

Ginkgo biloba extract protects against aging-associated mitochondrial dysfunction in platelets and hippocampi of mice.

Pubmed Data : Platelets. 2010;21(5):373-9. PMID: **20459350**

Article Published Date : Jan 01, 2010

Authors : Chun Shi, Songhua Xiao, Jun Liu, Kaihua Guo, Fengming Wu, David T Yew, Jie Xu

Study Type : Animal Study
Additional Links
Substances : Ginkgo biloba : CK(798) : AC(162)
Diseases : Aging : CK(1658) : AC(438) , Aging: Brain : CK(248) : AC(85), Mitochondrial Dysfunction : CK(225) : AC(91)
Pharmacological Actions : Cyclooxygenase 2 Inhibitors : CK(464) : AC(272) , Neuroprotective Agents : CK(2268) : AC(1071)
Additional Keywords : Plant Extracts : CK(7484) : AC(2463)

Ginkgo biloba extract protects against mitochondrial aging in the brain and in the liver.

Pubmed Data : Cell Mol Biol (Noisy-le-grand). 2002 Sep;48(6):685-92. PMID: **12396080**

Article Published Date : Sep 01, 2002

Authors : Juan Sastre, Ana Lloret, Consuelo Borrás, Javier Pereda, David García-Sala, Marie-Thérèse Droy-Lefaix, Federico V Pallardó, José Viña

Study Type : Commentary
Additional Links
Substances : Ginkgo biloba : CK(798) : AC(162)
Diseases : Aging : CK(1658) : AC(438) , Aging: Brain : CK(248) : AC(85), Mitochondrial Dysfunction : CK(225) : AC(91)

Ginkgo biloba extract reduces endothelial progenitor-cell aging through augmentation of telomerase activity.

Pubmed Data : J Cardiovasc Pharmacol. 2007 Feb;49(2):111-5. PMID: **17312453**

Article Published Date : Feb 01, 2007

Authors : Xie Xu Dong, Zhu Jun Hui, Wang Xing Xiang, Zhang Fu Rong, Sun Jian, Chen Jun Zhu

Study Type : In Vitro Study
Additional Links
Substances : Ginkgo biloba : CK(798) : AC(162)
Diseases : Aging : CK(1658) : AC(438) , Endothelial Dysfunction : CK(1176) : AC(232)
Pharmacological Actions : Telomerase Upregulation : CK(102) : AC(28)
Additional Keywords : Plant Extracts : CK(7484) : AC(2463)

Ginkgo biloba improves cognitive functioning and behavioral symptoms in patients with age-associated cognitive impairment or dementia.

Pubmed Data : Arzneimittelforschung. 2007;57(1):4-11. PMID: **17341003**

Article Published Date : Jan 01, 2007

Authors : Oleksandr Napryeyenko, Irina Borzenko,

Study Type : Human Study
Additional Links
Substances : Ginkgo biloba : CK(798) : AC(162)
Diseases : Aging: Brain : CK(248) : AC(85), Cognitive Decline/Dysfunction : CK(1151) : AC(215), Dementia : CK(571) : AC(79)

Mitochondrial effects of Ginkgo biloba extract.

Pubmed Data : Int Psychogeriatr. 2012 Aug ;24 Suppl 1:S18-20. PMID: **22784423**

Article Published Date : Jul 31, 2012

Authors : Anne Eckert

Study Type : Review
Additional Links
Substances : Ginkgo biloba : CK(798) : AC(162)
Diseases : Aging: Brain : CK(248) : AC(85), Mitochondrial Dysfunction : CK(225) : AC(91), Oxidative Stress : CK(3871) : AC(1382)
Pharmacological Actions : Neuroprotective Agents : CK(2268) : AC(1071)
Additional Keywords : Plant Extracts : CK(7484) : AC(2463)

The combined formulation of fruit extracts showed excellent antioxidative and anti-collagenase activity as well as a significant effect on anti-wrinkle activity on human skin.

Pubmed Data : Clin Cosmet Investig Dermatol. 2015 ;8:389-96. Epub 2015 Jul 16. PMID: **26203268**

Article Published Date : Dec 31, 2014

Authors : Amal Kumar Ghimeray, Un Sun Jung, Ha Youn Lee, Young Hoon Kim, Eun Kyung Ryu, Moon Sik Chang

Study Type : Human Study, In Vitro Study
Additional Links
Substances : Fig : CK(45) : AC(17), Ginkgo biloba : CK(798) : AC(162), Pomegranate : CK(499) : AC(168), White Mulberry : CK(11) : AC(1)
Diseases : Aging Skin : CK(426) : AC(101), Wrinkles : CK(10) : AC(1)
Pharmacological Actions : Anti-collagenase : CK(13) : AC(2), Antioxidants : CK(7331) : AC(2682)
Additional Keywords : Dose Response : CK(1056) : AC(408), Natural Substances Versus Drugs :

CK(1696) : AC(301), Plant Extracts : CK(7484) : AC(2463)

The results support a beneficial role of Ginkgo biloba on hippocampal neurogenesis in the context of brain aging.

Pubmed Data : Anat Sci Int. 2015 Aug 22. Epub 2015 Aug 22. PMID: **26297531**

Article Published Date : Aug 21, 2015

Authors : Noura M S Osman, Ayman S Amer, Soha Abdelwahab

Study Type : Animal Study
Additional Links
Substances : Ginkgo biloba : CK(798) : AC(162)
Diseases : Aging: Brain : CK(248) : AC(85)
Pharmacological Actions : Neurogenesis : CK(59) : AC(30)

Total flavone of Ginkgo biloba delays cell aging by inhibiting the P16 gene expression.

Pubmed Data : Zhong Yao Cai. 2009 Jan;32(1):100-2. PMID: **19445133**

Article Published Date : Jan 01, 2009

Authors : Xiao-ping Song, Zhi-wu Chen, An-ning Fang, Pei-fei Fang

Study Type : In Vitro Study
Additional Links
Substances : Ginkgo biloba : CK(798) : AC(162)
Diseases : Aging : CK(1658) : AC(438)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682) , Cell cycle arrest : CK(810) : AC(612) , Cyclin-Dependent Kinase Inhibitor : CK(3) : AC(3), Cyclin-Dependent Kinase Inhibitor: P16 : CK(2) : AC(2)

Ginseng (AC 1) (CK 10)

Red ginseng root extract mixed with Torilus fructus and Corni fructus improves facial wrinkles and increases type I procollagen synthesis in human skin.

Pubmed Data : J Med Food. 2009 Dec;12(6):1252-9. PMID: **20041778**

Article Published Date : Dec 01, 2009

Authors : Soyun Cho, Chong-Hyun Won, Dong Hun Lee, Min-Jung Lee, Serah Lee, Seung-Ho So,

Seong-Kye Lee, Bon-Suk Koo, Na-Mi Kim, Jin Ho Chung

Study Type : Human Study
Additional Links
Substances : Corni Fructus : CK(10) : AC(1) , Ginseng : CK(473) : AC(133) , Torilus Fructus : CK(10) : AC(1), Unspecified Species : CK(11) : AC(2)
Diseases : Aging Skin : CK(426) : AC(101)
Pharmacological Actions : Matrix metalloproteinase-2 (MMP-2) inhibitor : CK(285) : AC(147)
Additional Keywords : Plant Extracts : CK(7484) : AC(2463)

Ginseng (Korean) (AC 1) (CK 2)

Korean ginseng extract inhibits UVB irradiation-induced skin aging in hairless mice.

Pubmed Data : J Ethnopharmacol. 2009 Jun 25;123(3):446-51. Epub 2009 Mar 26. PMID: 19501277

Article Published Date : Jun 25, 2009

Authors : Tong Ho Kang, Hye Min Park, Yoon-Bum Kim, Hyunae Kim, Nami Kim, Jae-Ho Do, Chulhun Kang, Yunhi Cho, Sun Yeou Kim

Study Type : Animal Study
Additional Links
Substances : Ginseng (Korean) : CK(107) : AC(24)
Diseases : Skin Diseases: Photo-Aging : CK(132) : AC(51)

Ginseng (Siberian) (AC 3) (CK 11)

Eleutherococcus improves the quality of life in the elderly.

Pubmed Data : Arch Gerontol Geriatr Suppl. 2004;(9):69-73. PMID: 15207399

Article Published Date : Jan 01, 2004

Authors : A F G Cicero, G Derosa, R Brillante, R Bernardi, S Nascetti, A Gaddi

Study Type : Human Study
Additional Links
Substances : Ginseng (Siberian) : CK(88) : AC(20)

Diseases : Aging : CK(1633) : AC(434) , Elderly: Age Specific Diseases : CK(442) : AC(38) , Fatigue : CK(301) : AC(47)

Eleutherococcus senticosus and Rhodiola rosea induce increased stress response and a longer lifespan.

Pubmed Data : Biogerontology. 2008 Jun 7. PMID: **18536978**

Article Published Date : Jun 07, 2008

Authors : F A C Wiegant, S Surinova, E Ytsma, M Langelaar-Makkinje, G Wikman, J A Post

Additional Links
Substances : Ginseng (Siberian) : CK(88) : AC(20) , Rhodiola (Tibetan Ginseng) : CK(156) : AC(35)
Diseases : Aging : CK(1658) : AC(438)

Schisandra and Eluetherococcus improve the cellular response to stress, thereby attenuating fatigue, enhancing metnal and physical performance and possibly increasing longevity.

Pubmed Data : Curr Clin Pharmacol. 2009 Sep 1. PMID: **19500070**

Article Published Date : Sep 01, 2009

Authors : Alexander Panossian, Georg Wikman

Study Type : Review
Additional Links
Substances : Ginseng (Siberian) : CK(88) : AC(20) , Schisandra : CK(129) : AC(45)
Diseases : Aging : CK(1633) : AC(434) , Athletic Performance : CK(583) : AC(73) , Fatigue : CK(301) : AC(47)

Glucomannan (AC 1) (CK 2)

Glucomannan (Konjac) meal appears to inhibit aging of the brain, liver and cardiovascular tissue cells in rats.

Pubmed Data : Biomed Environ Sci. 1995 Mar;8(1):80-7. PMID: **7605604**

Article Published Date : Mar 01, 1995

Authors : S S Peng, M Y Zhang, Y Z Zhang, Z H Wu

Study Type : Animal Study

Additional Links
Substances : Glucomannan : CK(62) : AC(6)
Diseases : Aging : CK(1658) : AC(438)

Glucose (AC 1) (CK 10)

"High serum glucose levels are associated with a higher perceived age."

Pubmed Data : Age (Dordr). 2011 Nov 20. Epub 2011 Nov 20. PMID: 22102339

Article Published Date : Nov 20, 2011

Authors : Raymond Noordam, David A Gunn, Cyrena C Tomlin, Andrea B Maier, Simon P Mooijaart, P Eline Slagboom, Rudi G J Westendorp, Anton J M de Craen, Diana van Heemst,

Study Type : Human Study
Additional Links
Substances : Glucose : CK(12) : AC(2)
Diseases : Aging : CK(1658) : AC(438), Hyperglycemia : CK(539) : AC(130)
Additional Keywords : Diseases that are Linked : CK(2325) : AC(303)

GlyceroPhosphoCholine (alpha-GPC) (AC 1) (CK 2)

Alpha-GPC may be effective in slowing down the expression of structural changes occuring in aging brain.

Pubmed Data : Prog Neuropsychopharmacol Biol Psychiatry. 1994 Sep;18(5):915-24. PMID: 7972861

Article Published Date : Sep 01, 1994

Authors : F Amenta, F Ferrante, J A Vega, D Zaccheo

Study Type : Animal Study
Additional Links
Substances : GlyceroPhosphoCholine (alpha-GPC) : CK(12) : AC(7)
Diseases : Aging: Brain : CK(248) : AC(85)

Glycosaminoglycans (AC 1) (CK 10)

A multi-nutrient mixture of vitamin C, vitamin E, carotenoids, selenium, zinc, amino acids and glycosaminoglycans, blueberry extract and pycnogenol improves visible signs of ageing in women 45-73 years of age.

Pubmed Data : J Dermatolog Treat. 2004 Jul;15(4):222-6. PMID: 15764035

Article Published Date : Jul 01, 2004

Authors : D Segger, F Schönlau

Study Type : Human Study

Additional Links

Substances : Amino Acids : CK(100) : AC(16) , Blueberry : CK(260) : AC(90) , Glycosaminoglycans : CK(12) : AC(2), Pycnogenol (Pine Bark) : CK(556) : AC(94) , Selenium : CK(784) : AC(139) , Vitamin C : CK(1957) : AC(404), Vitamin E : CK(1656) : AC(290) , Zinc : CK(941) : AC(139)

Diseases : Aging Skin : CK(426) : AC(101) , Skin Diseases : CK(67) : AC(12)

Glycyrrhizin (AC 1) (CK 1)

"Glycyrrhizic acid (GA), a triterpenoid saponin glycoside alleviates ultraviolet-B irradiation-induced photoaging in human dermal fibroblasts."

Pubmed Data : Phytomedicine. 2012 May 15 ;19(7):658-64. Epub 2012 Apr 18. PMID: 22516896

Article Published Date : May 14, 2012

Authors : Quadri Afnan, Mushtaq Dar Adil, Ashraf Nissar-Ul, Ahmad Rather Rafiq, Hussian Faridi Amir, Peerzada Kaiser, Vijay Kumar Gupta, Ram Vishwakarma, Sheikh Abdullah Tasduq

Study Type : In Vitro Study

Additional Links

Substances : Glycyrrhizin : CK(55) : AC(15)

Diseases : Skin Diseases: Photo-Aging : CK(132) : AC(51)
Therapeutic Actions : Sunlight exposure : CK(455) : AC(49)
Pharmacological Actions : NF-kappaB Inhibitor : CK(1114) : AC(694)
Additional Keywords : Plant Extracts : CK(7484) : AC(2463)

Goji (AC 1) (CK 1)

Goji (lycopom barbarum) has various anti-aging properties.

Pubmed Data : Cell Mol Neurobiol. 2008 Aug;28(5):643-52. Epub 2007 Aug 21. PMID: 17710531

Article Published Date : Aug 01, 2008

Authors : Raymond Chuen-Chung Chang, Kwok-Fai So

Study Type : Commentary
Additional Links
Substances : Goji : CK(71) : AC(28)
Diseases : Aging : CK(1658) : AC(438)

Grape (AC 1) (CK 1)

Grape juice, berries, and walnuts may decelerate brain aging.

Pubmed Data : J Ethnopharmacol. 2008 Aug 13;118(3):396-404. Epub 2008 May 20. PMID: 19640963

Article Published Date : Aug 13, 2008

Authors : James A Joseph, Barbara Shukitt-Hale, Lauren M Willis

Study Type : Commentary
Additional Links
Substances : Berries: All : CK(1443) : AC(356) , Grape : CK(1720) : AC(430) , Walnut : CK(187) : AC(43)
Diseases : Aging: Brain : CK(248) : AC(85)
Pharmacological Actions : Neuroprotective Agents : CK(2268) : AC(1071)

Grape Seed Extract (AC 4) (CK 15)

A multi-nutrient mixture of soy extract, fish protein polysaccharides, extracts from white tea, grape seed and tomato, vitamins C and E as well as zinc and chamomile extract improves signs of skin aging in post-menopausal women.

Pubmed Data : Eur J Clin Nutr. 2006 Oct;60(10):1201-6. Epub 2006 May 3. PMID: 16670692

Article Published Date : Oct 01, 2006

Authors : G R Lange Skovgaard, A S Jensen, M L Sigler

Study Type : Human Study
Additional Links
Substances : Chamomile : CK(182) : AC(30) , Fish extract : CK(32) : AC(4), Grape Seed Extract : CK(316) : AC(88), Soy : CK(1787) : AC(399) , Tomato : CK(557) : AC(109) , Vitamin C : CK(1957) : AC(404), Vitamin E : CK(1656) : AC(290) , White Tea : CK(21) : AC(6) , Zinc : CK(941) : AC(139)
Diseases : Aging Skin : CK(426) : AC(101) , Postmenopausal Disorders : CK(329) : AC(42)

Grape seed extract has a rejuvenating effect in the central nervous system of aged rats.

Pubmed Data : Neurosci Lett. 2005 Aug 5;383(3):295-300. PMID: 15955424

Article Published Date : Aug 05, 2005

Authors : Muthaiya Balu, Purushotham Sangeetha, Dayalan Haripriya, Chinnakannu Panneerselvam

Study Type : Animal Study
Additional Links
Substances : Grape Seed Extract : CK(316) : AC(88)
Diseases : Aging: Brain : CK(248) : AC(85), Neurodegenerative Diseases : CK(3376) : AC(850)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682) , Neuroprotective Agents : CK(2268) : AC(1071)
Additional Keywords : Plant Extracts : CK(7484) : AC(2463)

Grape seed extract prevents age-related oxidative protein damages in the central system of rats.

Pubmed Data : Int J Dev Neurosci. 2005 Oct;23(6):501-7. PMID: 16009524

Article Published Date : Oct 01, 2005

Authors : Muthaiya Balu, Purushotham Sangeetha, Ganesan Murali, Chinnakannu Panneerselvam

Study Type : Animal Study
Additional Links
Substances : Grape Seed Extract : CK(316) : AC(88)
Diseases : Aging : CK(1658) : AC(438), Aging: Brain : CK(248) : AC(85), Memory Disorders : CK(342) : AC(104), Oxidative Stress : CK(3871) : AC(1382)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682)
Additional Keywords : Plant Extracts : CK(7484) : AC(2463)

Skin aging can be decelerated with a nutrient complex containing soy, tomato, grape seed, and white tea extracts, and sodium ascorbate (vitamin C), tocopherol acetate (vitamin E), zinc, and Biomarine complex.

Pubmed Data : Gastroenterol Hepatol. 1997 Apr;20(4):172-4. PMID: **17028931**

Article Published Date : Apr 01, 1997

Authors : Sophie Lacroix, Charbel Bouez, Sandrine Vidal, Valérie Cenizo, Corinne Reymermier, Virginie Justin, Jana Vicanová, Odile Damour

Study Type : In Vitro Study
Additional Links
Substances : Grape Seed Extract : CK(316) : AC(88), Soy : CK(1787) : AC(399), Tomato : CK(557) : AC(109), Vitamin C : CK(1957) : AC(404), Vitamin E : CK(1656) : AC(290), White Tea : CK(21) : AC(6), Zinc : CK(941) : AC(139)
Diseases : Aging : CK(1658) : AC(438), Aging Skin : CK(426) : AC(101)

Green Leafy Vegetables (AC 1) (CK 10)

Women consuming the most green leafy vegetables experienced slower decline than women consuming the least amount

Pubmed Data : Ann Neurol. 2005 May ;57(5):713-20. PMID: **15852398**

Article Published Date : Apr 30, 2005

Authors : Jae H Kang, Alberto Ascherio, Francine Grodstein

Study Type : Human Study
Additional Links
Substances : Cruciferous Vegetables : CK(1131) : AC(358), Green Leafy Vegetables : CK(341) : AC(67), Vegetables: All : CK(1092) : AC(118)
Diseases : Aging : CK(1633) : AC(434), Cognitive Decline/Dysfunction : CK(1151) : AC(215)

Additional Keywords : Risk Reduction : CK(6417) : AC(686)

Green Tea (AC 15) (CK 53)

A combination of green tea and ginkgo biloba extracts effectively improved skin conditions and the improvement of skin elasticity.

Pubmed Data : J Drugs Dermatol. 2014 Sep ;13(9):1092-7. PMID: **25226010**

Article Published Date : Aug 31, 2014

Authors : Patricia M B G Maia Campos, Mirela D Gianeti, Daiane G Mercurio, Lorena R Gaspar

Study Type : Human Study
Additional Links
Substances : Ginkgo biloba : CK(798) : AC(162) , Green Tea : CK(1971) : AC(562)
Diseases : Aging Skin : CK(426) : AC(101)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682) , Dermatologic Agents : CK(240) : AC(28)
Additional Keywords : Natural Substance Synergy : CK(537) : AC(247) , Plant Extracts : CK(7484) : AC(2463)

Daily consumption of green tea catechin delays memory regression in aged mice.

Pubmed Data : Biogerontology. 2007 Apr;8(2):89-95. Epub 2006 Sep 7. PMID: **16957869**

Article Published Date : Apr 01, 2007

Authors : Keiko Unno, Fumiyo Takabayashi, Hirotoshi Yoshida, Daisuke Choba, Rie Fukutomi, Naomi Kikunaga, Takahiro Kishido, Naoto Oku, Minoru Hoshino

Study Type : Animal Study
Additional Links
Substances : Catechin : CK(512) : AC(169), Green Tea : CK(1971) : AC(562)
Diseases : Aging : CK(1658) : AC(438) , DNA damage : CK(993) : AC(382) , Learning disorders : CK(190) : AC(51), Memory Disorders : CK(342) : AC(104) , Oxidative Stress : CK(3871) : AC(1382)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682) , Genoprotective : CK(270) : AC(97) , Neuroprotective Agents : CK(2268) : AC(1071)
Additional Keywords : Plant Extracts : CK(7484) : AC(2463)

Daily ingestion of green tea catechins from adulthood

suppressed brain dysfunction in aged mice.

Pubmed Data : Biofactors. 2008;34(4):263-71. PMID: 19850981

Article Published Date : Jan 01, 2008

Authors : Keiko Unno, Yuichi Ishikawa, Fumiyo Takabayashi, Toru Sasaki, Nina Takamori, Kazuaki Iguchi, Minoru Hoshino

Study Type : Animal Study
Additional Links
Substances : Catechin : CK(512) : AC(169), Green Tea : CK(1971) : AC(562) , Tea : CK(1840) : AC(385)
Diseases : Aging : CK(1658) : AC(438) , Aging: Brain : CK(248) : AC(85), Learning disorders : CK(190) : AC(51)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682) , Neuroprotective Agents : CK(2268) : AC(1071)

Green tea and red light contribute to skin rejuvenation.

Pubmed Data : Photomed Laser Surg. 2009 Dec;27(6):969-71. PMID: 19817517

Article Published Date : Dec 01, 2009

Authors : Andrei P Sommer, Dan Zhu

Study Type : In Vitro Study
Additional Links
Substances : Green Tea : CK(1971) : AC(562) , Tea : CK(1840) : AC(385)
Diseases : Aging Skin : CK(426) : AC(101)
Therapeutic Actions : Light Therapy : CK(154) : AC(31) , Light Therapy: Colored : CK(21) : AC(3), Light Therapy: Red Colored : CK(1) : AC(1)

Green tea averts age-dependent decline of hippocampal signaling systems related to antioxidant defenses and survival.

Pubmed Data : Free Radic Biol Med. 2010 Mar 15;48(6):831-838. Epub 2010 Jan 11. PMID: 20064606

Article Published Date : Mar 15, 2010

Authors : Marco Assunção, Maria J Santos-Marques, Félix Carvalho, José P Andrade

Study Type : Animal Study
Additional Links
Substances : Green Tea : CK(1971) : AC(562)
Diseases : Aging : CK(1658) : AC(438)

Green tea catechin prevents the decline of glutathione peroxidase activity and protein oxidative damage in aging mouse brain.

Pubmed Data : Biogerontology. 2007 Aug;8(4):423-30. Epub 2007 Feb 20. PMID: **17310319**

Article Published Date : Aug 01, 2007

Authors : Takahiro Kishido, Keiko Unno, Hirotoshi Yoshida, Daisuke Choba, Rie Fukutomi, Shunsuke Asahina, Kazuaki Iguchi, Naoto Oku, Minoru Hoshino

Study Type : Animal Study
Additional Links
Substances : Catechin : CK(512) : AC(169), Green Tea : CK(1971) : AC(562)
Diseases : Aging : CK(1658) : AC(438) , Aging: Brain : CK(248) : AC(85), Oxidative Stress : CK(3871) : AC(1382)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682) , Glutathione Upregulation : CK(152) : AC(53), Neuroprotective Agents : CK(2268) : AC(1071)

Green tea has a protective effect on aging rats.

Pubmed Data : J Pharm Biomed Anal. 2011 Mar 26. Epub 2011 Mar 26. PMID: **21444175**

Article Published Date : Mar 26, 2011

Authors : Chunwang Fu, Tiejie Wang, Yang Wang, Xiaohui Chen, Jian Jiao, Feng Ma, Min Zhong, Kaishun Bi

Study Type : Animal Study
Additional Links
Substances : Green Tea : CK(1971) : AC(562)
Diseases : Aging : CK(1658) : AC(438)
Additional Keywords : Metabolome : CK(6) : AC(3)

Green tea supplementation results in histological improvement in elastic tissue content in photo-aged skin.

Pubmed Data : Dermatol Surg. 2005 Jul;31(7 Pt 2):855-60; discussion 860. PMID: **16029678**

Article Published Date : Jul 01, 2005

Authors : Annie E Chiu, Joanna L Chan, Dale G Kern, Sabine Kohler, Wingfield E Rehmus, Alexa B Kimball

Study Type : Human Study
Additional Links
Substances : Green Tea : CK(1971) : AC(562)
Diseases : Aging Skin : CK(426) : AC(101)
Pharmacological Actions : Dermatologic Agents : CK(240) : AC(28)
Additional Keywords : Plant Extracts : CK(7484) : AC(2463)

Intake of flavonoid-rich wine, tea, and chocolate by elderly men and women is associated with better cognitive test performance.

Pubmed Data : J Nutr. 2009 Jan;139(1):120-7. Epub 2008 Dec 3. PMID: **19056649**

Article Published Date : Jan 01, 2009

Authors : Eha Nurk, Helga Refsum, Christian A Drevon, Grethe S Tell, Harald A Nygaard, Knut Engedal, A David Smith

Study Type : Human Study
Additional Links
Substances : Black Tea : CK(360) : AC(80) , Flavonoids : CK(1215) : AC(379) , Green Tea : CK(1971) : AC(562), Wine : CK(197) : AC(44)
Diseases : Aging: Brain : CK(248) : AC(85), Cognitive Decline/Dysfunction : CK(1151) : AC(215)

Long-term administration of green tea catechins prevents age-related spatial learning and memory decline in mice.

Pubmed Data : Neuroscience. 2009 Apr 10;159(4):1208-15. Epub 2009 Feb 11. PMID: **19409206**

Article Published Date : Apr 10, 2009

Authors : Q Li, H F Zhao, Z F Zhang, Z G Liu, X R Pei, J B Wang, M Y Cai, Y Li

Study Type : Animal Study
Additional Links
Substances : Catechin : CK(512) : AC(169), Green Tea : CK(1971) : AC(562)
Diseases : Aging : CK(1633) : AC(434) , Aging: Brain : CK(248) : AC(85), Cognitive Decline/Dysfunction : CK(1151) : AC(215), Learning disorders : CK(190) : AC(51) , Memory Disorders : CK(342) : AC(104)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682)

Nutritional antioxidants such as green tea polyphenols and tetrahydrocurcumin may beneficially modify the life span of animals.

Pubmed Data : Biogerontology. 2007 Oct;8(5):567-73. Epub 2007 May 22. PMID: **17516143**

Article Published Date : Oct 01, 2007

Authors : Kenichi Kitani, Toshihiko Osawa, Takako Yokozawa

Study Type : Animal Study
Additional Links
Substances : Flavonoids : CK(1215) : AC(379) , Green Tea : CK(1971) : AC(562) , Polyphenols : CK(931) : AC(335), Tetrahydrocurcumin : CK(66) : AC(30)
Diseases : Aging : CK(1658) : AC(438)
Additional Keywords : Plant Extracts : CK(7484) : AC(2463)

Polyphenols potentiate dietary restriction-induced lifespan extension.

Pubmed Data : Biochim Biophys Acta. 2012 Jan 11 ;1822(4):522-526. Epub 2012 Jan 11. PMID: **22265987**

Article Published Date : Jan 11, 2012

Authors : Daniel J Aires, Graham Rockwell, Ting Wang, Jennifer Frontera, Jo Wick, Wenfang Wang, Marija Tonkovic-Capin, Jianghua Lu, Lezi E, Hao Zhu, Russell H Swerdlow

Study Type : Animal Study
Additional Links
Substances : Blueberry : CK(260) : AC(90) , Green Tea : CK(1971) : AC(562) , Polyphenols : CK(931) : AC(335), Pomegranate : CK(499) : AC(168)
Diseases : Aging : CK(1658) : AC(438)
Therapeutic Actions : Fasting/Caloric Restriction : CK(297) : AC(63)
Pharmacological Actions : Anti-Inflammatory Agents : CK(4688) : AC(1630)

Soybean and green tea polyphenols improve immune function and redox status in very old ovariectomized mice.

Pubmed Data : Rejuvenation Res. 2010 Dec;13(6):665-74. Epub 2010 Sep 6. PMID: **20818935**

Article Published Date : Dec 01, 2010

Authors : Isabel Baeza, Nuria M De Castro, Lorena Arranz, Mónica De la Fuente

Study Type : Animal Study
Additional Links
Substances : Flavonoids : CK(1215) : AC(379) , Green Tea : CK(1971) : AC(562) , Polyphenols : CK(931) : AC(335), Soy : CK(1787) : AC(399) , Tea : CK(1840) : AC(385)
Diseases : Aging : CK(1658) : AC(438) , Aging: Immunosenecence : CK(52) : AC(13) , Lipid Peroxidation : CK(695) : AC(255), Ovariectomy Associated Adverse Changes : CK(18) : AC(7)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682) , Interleukin-10 downregulation : CK(128) : AC(45), Interleukin-6 Downregulation : CK(1095) : AC(342)

Soybean isoflavones and green tea improve immune cell functions in aged mice treated for five weeks.

Pubmed Data : Ann N Y Acad Sci. 2007 Apr;1100:497-504. PMID: **17460214**

Article Published Date : Apr 01, 2007

Authors : Isabel Baeza, Nuria M de Castro, Carmen Alvarado, Pedro Alvarez, Lorena Arranz, Julián Bayón, Mónica de la Fuente

Study Type : Animal Study
Additional Links
Substances : Green Tea : CK(1971) : AC(562) , Isoflavones : CK(631) : AC(129) , Soy : CK(1787) : AC(399)
Diseases : Aging : CK(1658) : AC(438) , Aging: Immunosenecence : CK(52) : AC(13) , Lipopolysaccharide-Induced Toxicity : CK(359) : AC(218)
Pharmacological Actions : Antiproliferative : CK(2479) : AC(1685)

Tea catechin ingestion combined with habitual exercise suppresses the aging-associated decline in physical

performance in senescence-accelerated mice.

Pubmed Data : Am J Physiol Regul Integr Comp Physiol. 2008 Jul;295(1):R281-9. Epub 2008 May 14. PMID: 18480242

Article Published Date : Jul 01, 2008

Authors : Takatoshi Murase, Satoshi Haramizu, Noriyasu Ota, Tadashi Hase

Study Type : Animal Study
Additional Links
Substances : Catechin : CK(512) : AC(169), Green Tea : CK(1971) : AC(562)
Diseases : Aging : CK(1658) : AC(438)
Therapeutic Actions : Exercise : CK(1256) : AC(196)

Green Tea (topical) (AC 1) (CK 10)

Green tea extracts have a protective effect on photoaging and photoimmunosuppression.

Pubmed Data : Skin Res Technol. 2009 Aug;15(3):338-45. PMID: 19624431

Article Published Date : Aug 01, 2009

Authors : Yuan-Hong Li, Yan Wu, Hua-Chen Wei, Yuan-Yuan Xu, Li-Li Jia, Jing Chen, Xue-Song Yang, Guang-Hui Dong, Xing-Hua Gao, Hong-Duo Chen

Study Type : Human Study
Additional Links
Substances : Green Tea (topical) : CK(10) : AC(1)
Diseases : Skin Diseases: Photo-Aging : CK(132) : AC(51)

HDTIC-1 (AC 2) (CK 2)

Astragalus contains compounds which slow cell aging through reduced telomere shortening rate, oxidative stress and increasing DNA repair ability.

Pubmed Data : DNA Cell Biol. 2010 Jan;29(1):33-9. PMID: 19839736

Article Published Date : Jan 01, 2010

Authors : Peichang Wang, Zongyu Zhang, Ying Sun, Xinwen Liu, Tanjun Tong

Study Type : In Vitro Study
Additional Links
Substances : Astragalus : CK(260) : AC(60) , HDTIC-1 : CK(3) : AC(3), HDTIC-2 : CK(3) : AC(3)
Diseases : Aging : CK(1658) : AC(438) , DNA damage : CK(993) : AC(382) , Oxidative Stress : CK(3871) : AC(1382)
Pharmacological Actions : Telomerase Upregulation : CK(102) : AC(28)

Two compounds extracted from Astragalus delay replicative senescence (aging) in human cells.

Pubmed Data : Mech Ageing Dev. 2003 Dec;124(10-12):1025-34. PMID: **14659591**

Article Published Date : Dec 01, 2003

Authors : Peichang Wang, Zongyu Zhang, Xiaofeng Ma, Yu Huang, Xinwen Liu, Pengfei Tu, Tanjun Tong

Study Type : In Vitro Study
Additional Links
Substances : Astragalus : CK(260) : AC(60) , HDTIC-1 : CK(3) : AC(3), HDTIC-2 : CK(3) : AC(3)
Diseases : Advanced Glycation End products (AGE) : CK(231) : AC(73) , Aging : CK(1658) : AC(438)
Pharmacological Actions : Cell cycle arrest : CK(810) : AC(612)

HDTIC-2 (AC 2) (CK 2)

Astragalus contains compounds which slow cell aging through reduced telomere shortening rate, oxidative stress and increasing DNA repair ability.

Pubmed Data : DNA Cell Biol. 2010 Jan;29(1):33-9. PMID: **19839736**

Article Published Date : Jan 01, 2010

Authors : Peichang Wang, Zongyu Zhang, Ying Sun, Xinwen Liu, Tanjun Tong

Study Type : In Vitro Study
Additional Links
Substances : Astragalus : CK(260) : AC(60) , HDTIC-1 : CK(3) : AC(3), HDTIC-2 : CK(3) : AC(3)
Diseases : Aging : CK(1658) : AC(438) , DNA damage : CK(993) : AC(382) , Oxidative Stress : CK(3871) : AC(1382)
Pharmacological Actions : Telomerase Upregulation : CK(102) : AC(28)

Two compounds extracted from Astragalus delay replicative senescence (aging) in human cells.

Pubmed Data : Mech Ageing Dev. 2003 Dec;124(10-12):1025-34. PMID: **14659591**

Article Published Date : Dec 01, 2003

Authors : Peichang Wang, Zongyu Zhang, Xiaofeng Ma, Yu Huang, Xinwen Liu, Pengfei Tu, Tanjun Tong

Study Type : In Vitro Study
Additional Links
Substances : Astragalus : CK(260) : AC(60) , HDTIC-1 : CK(3) : AC(3), HDTIC-2 : CK(3) : AC(3)
Diseases : Advanced Glycation End products (AGE) : CK(231) : AC(73) , Aging : CK(1658) : AC(438)
Pharmacological Actions : Cell cycle arrest : CK(810) : AC(612)

Hesperidin (AC 1) (CK 1)

Hesperidin may have anti-aging properties via NF-kappaB modulation.

Pubmed Data : Aging Cell. 2006 Oct;5(5):401-11. Epub 2006 Aug 25. PMID: **16939486**

Article Published Date : Oct 01, 2006

Authors : Ji Young Kim, Kyung Jin Jung, Jae Sue Choi, Hae Young Chung

Study Type : In Vitro Study
Additional Links
Substances : Hesperidin : CK(196) : AC(53)
Diseases : Aging : CK(1658) : AC(438)
Pharmacological Actions : C-Jun N-Terminal Kinases (JNK) Modulator : CK(2) : AC(2) , Extracellular Signal-Regulated Kinases Modulator : CK(5) : AC(4), Inhibitor of Nuclear Factor Kappa-B Kinase (IKK) : CK(2) : AC(2), NF-kappa-B-inducing kinase (NIK) modulator : CK(3) : AC(2) , NF-kappaB Inhibitor : CK(1114) : AC(694), P38 Mitogen-Activated Protein Kinase Modulator : CK(6) : AC(5)

Horse Chestnut (AC 1) (CK 10)

Horse chestnut extract exhibits potent anti-aging

properties in human skin.

Pubmed Data : J Cosmet Sci. 2006 Sep-Oct;57(5):369-76. PMID: 17111071

Article Published Date : Sep 01, 2006

Authors : Tsutomu Fujimura, Kazue Tsukahara, Shigeru Moriwaki, Mitsuyuki Hotta, Takashi Kitahara, Yoshinori Takema

Study Type : Human Study
Additional Links
Substances : Horse Chestnut : CK(21) : AC(3)
Diseases : Aging : CK(1658) : AC(438) , Aging Skin : CK(426) : AC(101)
Additional Keywords : Plant Extracts : CK(7484) : AC(2463)

Huperzine (AC 1) (CK 2)

Huperzine A improves abnormal free radicals in aged rats.

Pubmed Data : Zhongguo Yao Li Xue Bao. 1999 Sep;20(9):824-8. PMID: 11245091

Article Published Date : Sep 01, 1999

Authors : Y Z Shang, J W Ye, X C Tang

Study Type : Animal Study
Additional Links
Substances : Huperzine : CK(44) : AC(24)
Diseases : Aging : CK(1658) : AC(438) , Aging: Brain : CK(248) : AC(85), Oxidative Stress : CK(3871) : AC(1382)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682) , Neuroprotective Agents : CK(2268) : AC(1071)

Icariin (AC 1) (CK 2)

Icariin has a neuroprotective effect on memory impairment and neurochemical deficits in age-acceleration prone mice.

Pubmed Data : Brain Res. 2010 Jun 2;1334:73-83. Epub 2010 Apr 7. PMID: 20380820

Article Published Date : Jun 02, 2010

Authors : Xiao-Li He, Wei-Qin Zhou, Ming-Gang Bi, Guan-Hua Du

Study Type : Animal Study
Additional Links
Substances : Flavonoids : CK(1215) : AC(379) , Icariin : CK(10) : AC(7)
Diseases : Aging : CK(1633) : AC(434) , Aging: Brain : CK(248) : AC(85), Cognitive Decline/Dysfunction : CK(1151) : AC(215), Memory Disorders : CK(342) : AC(104) , Oxidative Stress : CK(3871) : AC(1382)
Pharmacological Actions : Neuroprotective Agents : CK(2268) : AC(1071)

Isoflavones (AC 2) (CK 12)

Oral intake of soy isoflavone aglycone improves the aged skin of adult women.

Pubmed Data : J Nutr Sci Vitaminol (Tokyo). 2007 Feb;53(1):57-62. PMID: 17484381

Article Published Date : Feb 01, 2007

Authors : Toru Izumi, Makoto Saito, Akio Obata, Masayuki Arii, Hideyo Yamaguchi, Asahi Matsuyama

Study Type : Human Study
Additional Links
Substances : Beta-glucan : CK(249) : AC(44) , Isoflavones : CK(631) : AC(129) , Soy : CK(1787) : AC(399)
Diseases : Aging Skin : CK(426) : AC(101)

Soybean isoflavones and green tea improve immune cell functions in aged mice treated for five weeks.

Pubmed Data : Ann N Y Acad Sci. 2007 Apr;1100:497-504. PMID: 17460214

Article Published Date : Apr 01, 2007

Authors : Isabel Baeza, Nuria M de Castro, Carmen Alvarado, Pedro Alvarez, Lorena Arranz, Julián Bayón, Mónica de la Fuente

Study Type : Animal Study
Additional Links
Substances : Green Tea : CK(1971) : AC(562) , Isoflavones : CK(631) : AC(129) , Soy : CK(1787) : AC(399)
Diseases : Aging : CK(1658) : AC(438) , Aging: Immunosenecence : CK(52) : AC(13) , Lipopolysaccharide-Induced Toxicity : CK(359) : AC(218)
Pharmacological Actions : Antiproliferative : CK(2479) : AC(1685)

Kaempferia parviflora (AC 2) (CK 12)

K. parviflora is a potential food supplement to enhance muscle strength and aerobic endurance in the elderly.

Pubmed Data : Evid Based Complement Alternat Med. 2012 ;2012:732816. Epub 2012 Jul 31. PMID: **22899957**

Article Published Date : Dec 31, 2011

Authors : Jintanaporn Wattanathorn, Supaporn Muchimapura, Terdthai Tong-Un, Narisara Saenghong, Wipawee Thukhum-Mee, Bungorn Sripanidkulchai

Study Type : Human Study
Additional Links
Substances : Kaempferia parviflora : CK(48) : AC(14)
Diseases : Aging : CK(1658) : AC(438), Oxidative Stress : CK(3871) : AC(1382)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682), Malondialdehyde Down-regulation : CK(554) : AC(152)
Additional Keywords : Plant Extracts : CK(7484) : AC(2463)

Oral administration of black ginger extract significantly prevents UVB-induced photoaging in hairless mice.

Pubmed Data : Photodermatol Photoimmunol Photomed. 2014 Oct ;30(5):237-45. Epub 2014 Jan 9. PMID: **24313661**

Article Published Date : Sep 30, 2014

Authors : Ji-Eun Park, Hee-Bong Pyun, Seon Wook Woo, Jae-Hong Jeong, Jae-Kwan Hwang

Study Type : Animal Study
Additional Links
Substances : Kaempferia parviflora : CK(48) : AC(14)
Diseases : Aging Skin : CK(426) : AC(101), Ultraviolet Radiation Induced Damage : CK(80) : AC(34)
Pharmacological Actions : Anti-Inflammatory Agents : CK(4688) : AC(1630), Antioxidants : CK(7331) : AC(2682), Catalase Up-Regulation : CK(118) : AC(42), Cyclooxygenase 2 Inhibitors : CK(464) : AC(272), Interleukin-1 beta downregulation : CK(463) : AC(205), Matrix Metalloproteinase-13 (MMP-13) Inhibitor : CK(23) : AC(11), Matrix metalloproteinase-2 (MMP-2) inhibitor : CK(285) : AC(147), Matrix metalloproteinase-3 (MMP-3) inhibitor : CK(61) : AC(18), Matrix metalloproteinase-9 (MMP-9) inhibitor : CK(209) : AC(128), NF-kappaB Inhibitor : CK(1114) : AC(694), Photoprotective : CK(74) : AC(27)
Additional Keywords : Plant Extracts : CK(7484) : AC(2463)

Krameria lappacea: topical (AC 1) (CK 1)

Herbs provide protection against harmful UV radiation due to their antioxidant activity.

Pubmed Data : Pharmacogn Rev. 2011 Jul ;5(10):164-73. PMID: 22279374

Article Published Date : Jul 01, 2011

Authors : Radava R Korać, Kapil M Khambholja

Study Type : Review
Additional Links
Substances : Coconut oil: topical : CK(1) : AC(1), Flavonoids : CK(1215) : AC(379), Krameria lappacea: topical : CK(1) : AC(1), Olive oil: topical : CK(1) : AC(1), Peanut oil: topical : CK(1) : AC(1), Sesame oil: topical : CK(1) : AC(1), Vitamin C : CK(1957) : AC(404), Vitamin E : CK(1656) : AC(290)
Diseases : Skin Diseases: Photo-Aging : CK(132) : AC(51), Sunburn : CK(41) : AC(19), Ultraviolet Radiation Induced Damage : CK(80) : AC(34)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682), Photoprotective : CK(74) : AC(27)

Krill (AC 1) (CK 2)

Krill phosphatidylserine improves learning and memory in aged rats.

Pubmed Data : Prog Neuropsychopharmacol Biol Psychiatry. 2010 Jun 2. Epub 2010 Jun 2. PMID: 20685374

Article Published Date : Jun 02, 2010

Authors : Bombi Lee, Bong-Jun Sur, Jeong-Jun Han, Insop Shim, Song Her, Hye-Jung Lee, Dae-Hyun Hahm

Study Type : Animal Study
Additional Links
Substances : Krill : CK(141) : AC(33), Phosphatidylserine : CK(134) : AC(20)
Diseases : Aging: Brain : CK(248) : AC(85), Cognitive Decline/Dysfunction : CK(1151) : AC(215), Learning disorders : CK(190) : AC(51), Memory Loss : CK(153) : AC(40)

Kudzu (AC 1) (CK 1)

Kudzu (P. Radix) stimulates hyaluronic acid production in normal human epidermal keratinocytes, indicating its potential value as cosmetic ingredient in moisturizers and as an anti-aging agent.

Pubmed Data : Am J Chin Med. 2010;38(1):143-55. PMID: 20128051

Article Published Date : Jan 01, 2010

Authors : Kuo-Ching Wen, Shiuan-Pey Lin, Chung-Ping Yu, Hsiu-Mei Chiang

Study Type : In Vitro Study
Additional Links
Substances : Kudzu : CK(41) : AC(11)
Diseases : Aging Skin : CK(426) : AC(101) , Dry Skin : CK(104) : AC(17)

Lactobacillus probiotics (AC 1) (CK 2)

Lactobacillus pentosus var. plantarum may ameliorate memory impairment and M1 macrophage-polarized inflammation caused by aging.

Pubmed Data : Anaerobe. 2014 Jun ;27:22-6. Epub 2014 Mar 19. PMID: 24657159

Article Published Date : May 31, 2014

Authors : Jae-Yeon Woo, Wan Gu, Kyung-Ah Kim, Se-Eun Jang, Myung Joo Han, Dong-Hyun Kim

Study Type : Animal Study
Additional Links
Substances : Lactobacillus probiotics : CK(1481) : AC(210) , Probiotics : CK(2868) : AC(364)
Diseases : Aging : CK(1633) : AC(434) , Inflammation : CK(3003) : AC(872) , Memory Disorders : CK(342) : AC(104), Memory Disorders: Drug-Induced : CK(99) : AC(25) , Oxidative Stress : CK(3871) : AC(1382)
Pharmacological Actions : Anti-Inflammatory Agents : CK(4688) : AC(1630) , Neuroprotective Agents : CK(2268) : AC(1071)

Lactobacillus rhamnosus GG (AC 1) (CK 2)

Lactobacillus rhamnosus strain GG appears to reduce immunlogic indicators of atopic dermatitis in dogs.

Pubmed Data : Proc Natl Acad Sci U S A. 2009 Jun 30;106(26):10859-64. Epub 2009 Jun 18. PMID: 19496662

Article Published Date : Jun 30, 2009

Authors : Rosanna Marsella

Study Type : Animal Study
Additional Links
Substances : Lactobacillus rhamnosus GG : CK(212) : AC(29)
Diseases : Aging : CK(1658) : AC(438), Atopic Dermatitis : CK(1134) : AC(117)
Pharmacological Actions : Immunomodulatory : CK(1287) : AC(358)

Loquat Seeds (AC 1) (CK 1)

Loquat seed slows cellular aging in rat fibroblasts.

Pubmed Data : J Nat Med. 2011 Apr;65(2):254-61. Epub 2010 Dec 25. PMID: 21188645

Article Published Date : Apr 01, 2011

Authors : Kazuyo Muramoto, Rong-Dan Quan, Toshiharu Namba, Shojiro Kyotani, Mitsuhiko Miyamura, Yutaka Nishioka, Keiichi Tonosaki, Yoshinori L Doi, Hideto Kaba

Study Type : In Vitro Study
Additional Links
Substances : Loquat Seeds : CK(11) : AC(6)
Diseases : Aging : CK(1658) : AC(438)

Lotus (AC 3) (CK 6)

Lotus procyanidins reverse memory impairments in cognitivitely impaired aged rats.

Pubmed Data : J Gerontol A Biol Sci Med Sci. 2010 Sep;65(9):933-40. Epub 2010 Jun 7. PMID: 20530246

Article Published Date : Sep 01, 2010

Authors : Jiqu Xu, Shuang Rong, Bijun Xie, Zhida Sun, Qianchun Deng, Hailei Wu, Wei Bao, Di Wang, Ping Yao, Fenghong Huang, Liegang Liu

Study Type : Animal Study
Additional Links
Substances : Lotus : CK(73) : AC(46)
Diseases : Aging : CK(1633) : AC(434), Aging: Brain : CK(248) : AC(85), Cognitive Decline/Dysfunction : CK(1151) : AC(215), Memory Disorders : CK(342) : AC(104)
Pharmacological Actions : Neuroprotective Agents : CK(2268) : AC(1071)
Additional Keywords : Plant Extracts : CK(7484) : AC(2463) , Proanthocyanidins : CK(203) : AC(54)

Lotus seed extract improves memory in cognitively impaired aged rats.

Pubmed Data : Eur Neuropsychopharmacol. 2009 Dec;19(12):851-60. Epub 2009 Aug 27. PMID: 19716273

Article Published Date : Dec 01, 2009

Authors : Jiqu Xu, Shuang Rong, Bijun Xie, Zhida Sun, Li Zhang, Hailei Wu, Ping Yao, Xiping Zhang, Yunjian Zhang, Liegang Liu

Study Type : Animal Study
Additional Links
Substances : Lotus : CK(73) : AC(46)
Diseases : Aging: Brain : CK(248) : AC(85), Cognitive Decline/Dysfunction : CK(1151) : AC(215), Memory Disorders : CK(342) : AC(104)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682)
Additional Keywords : Plant Extracts : CK(7484) : AC(2463) , Proanthocyanidins : CK(203) : AC(54)

Lotus seedpod proanthyocyanins have an ameliorative effect on cognitive deficits and oxidative damage in senescence-accelerated mice.

Pubmed Data : Behav Brain Res. 2008 Dec 1;194(1):100-7. Epub 2008 Jul 4. PMID: 18652848

Article Published Date : Dec 01, 2008

Authors : Yushi Gong, Liegang Liu, Bijun Xie, Yongcheng Liao, Erling Yang, Zhida Sun

Study Type : Animal Study
Additional Links
Substances : Anthocyanins : CK(342) : AC(115) , Lotus : CK(73) : AC(46)

Diseases : Aging : CK(1658) : AC(438), Aging: Brain : CK(248) : AC(85), Oxidative Stress : CK(3871) : AC(1382)
Pharmacological Actions : Neuroprotective Agents : CK(2268) : AC(1071)
Additional Keywords : Proanthocyanidins : CK(203) : AC(54)

Magnesium (AC 4) (CK 22)

Correcting magnesium deficiencies may prolong life.

Pubmed Data : Clin Interv Aging. 2012 ;7:51-4. Epub 2012 Feb 16. PMID: 22379366

Article Published Date : Jan 01, 2012

Authors : William J Rowe

Study Type : Review
Additional Links
Substances : Magnesium : CK(1516) : AC(193)
Diseases : Aging : CK(1658) : AC(438)

Magnesium deficiency may accelerate aging.

Pubmed Data : Magnes Res. 2008 Jun;21(2):77-82. PMID: 18705534

Article Published Date : Jun 01, 2008

Authors : David W Killilea, Jeanette A M Maier

Study Type : Commentary
Additional Links
Substances : Magnesium : CK(1516) : AC(193)
Diseases : Aging : CK(1658) : AC(438)

Magnesium intake is inversely associated with prevalence of the metabolic syndrome in older adults.

Pubmed Data : Eur J Nutr. 2008 Jun;47(4):210-6. Epub 2008 Jun 16. PMID: 18560789

Article Published Date : Jun 01, 2008

Authors : Nicola M McKeown, Paul F Jacques, Xinli L Zhang, Wenyen Juan, Nadine R Sahyoun

Study Type : Human Study
Additional Links
Substances : Magnesium : CK(1516) : AC(193)
Diseases : Aging : CK(1658) : AC(438), Metabolic Syndrome X : CK(916) : AC(158)

Magnesium supplementation reverses age-related neuroendocrine and sleep EEG changes in humans.

Pubmed Data : Pharmacopsychiatry. 2002 Jul;35(4):135-43. PMID: 12163983

Article Published Date : Jul 01, 2002

Authors : Katja Held, I A Antonijevic, H Künzel, M Uhr, T C Wetter, I C Golly, A Steiger, H Murck

Study Type : Human Study
Additional Links
Substances : Magnesium : CK(1516) : AC(193)
Diseases : Aging : CK(1658) : AC(438)

Malic Acid (AC 1) (CK 2)

L-malate supplementation reverses oxidative stress associated with the aging process in the liver and heart of rats.

Pubmed Data : Physiol Res. 2008;57(2):261-8. Epub 2007 Feb 8. PMID: 17298203

Article Published Date : Jan 01, 2008

Authors : J-L Wu, Q-P Wu, X-F Yang, M-K Wei, J-M Zhang, Q Huang, X-Y Zhou

Study Type : Animal Study
Additional Links
Substances : Malic Acid : CK(12) : AC(2)
Diseases : Aging : CK(1658) : AC(438)

Melatonin (AC 14) (CK 36)

Application of melatonin cream 12.5% protects against natural sunlight induced erythema.

Pubmed Data : J Dermatol Sci. 2016 Aug 9. Epub 2016 Aug 9. PMID: 27543364

Article Published Date : Aug 08, 2016

Authors : Cecilie Scheuer, Hans-Christian Pommergaard, Jacob Rosenberg, Ismail Gögenur

Study Type : Human Study
Additional Links
Substances : Melatonin : CK(985) : AC(318)
Diseases : Erythema : CK(74) : AC(9) , Skin Diseases : CK(67) : AC(12) , Skin Diseases: Photo-Aging : CK(132) : AC(51)
Additional Keywords : Dose Response : CK(1056) : AC(408)

Melatonin can improve insulin resistance and aging-induced pancreas alterations in senescence-accelerated prone male mice.

Pubmed Data : Age (Dordr). 2012 Mar 13. Epub 2012 Mar 13. PMID: **22411259**

Article Published Date : Mar 12, 2012

Authors : Sara Cuesta, Roman Kireev, Cruz García, Lisa Rancan, Elena Vara, Jesús A F Tresguerres

Study Type : Animal Study
Additional Links
Substances : Melatonin : CK(985) : AC(318)
Diseases : Aging : CK(1658) : AC(438) , Insulin Resistance : CK(1683) : AC(346)
Pharmacological Actions : Insulin Sensitizers : CK(350) : AC(70)

Melatonin has a favorable effect on the level of oxidative damage and neurodegeneration in age-accelerated mice.

Pubmed Data : J Pineal Res. 2008 Oct;45(3):302-11. Epub 2008 Apr 13. PMID: **18410310**

Article Published Date : Oct 01, 2008

Authors : Beatriz Caballero, Ignacio Vega-Naredo, Verónica Sierra, Covadonga Huidobro-Fernández, Clara Soria-Valles, David De Gonzalo-Calvo, Delio Tolivia, Javier Gutierrez-Cuesta, Merce Pallas, Antonio Camins, María Josefa Rodríguez-Colunga, Ana Coto-Montes

Study Type : Animal Study
Additional Links
Substances : Melatonin : CK(985) : AC(318)
Diseases : Aging : CK(1658) : AC(438) , Aging: Brain : CK(248) : AC(85), Oxidative Stress : CK(3871) : AC(1382)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682) , Neuroprotective Agents : CK(2268) : AC(1071), Receptor-Related Orphan Receptor (ROR)-Alpha1 Inhibitor : CK(2) : AC(1)

Melatonin has been demonstrated to be a highly efficient anti-aging factor which may reduce age-related skin changes.

Pubmed Data : J Pineal Res. 2005 Oct;39(3):231-7. PMID: **16150102**

Article Published Date : Oct 01, 2005

Authors : Mukaddes Eşrefoğlu, Muammer Seyhan, Mehmet Gül, Hakan Parlakpinar, Kadir Batçioğlu, Burçin Uyumlu

Study Type : Animal Study
Additional Links
Substances : Melatonin : CK(985) : AC(318)
Diseases : Aging : CK(1658) : AC(438), Aging Skin : CK(426) : AC(101)

Melatonin has beneficial effects on cardiological alterations in a mouse model of accelerated aging.

Pubmed Data : J Pineal Res. 2010 Oct;49(3):312-20. Epub 2010 Aug 3. PMID: **20738757**

Article Published Date : Oct 01, 2010

Authors : Katherine Forman, Elena Vara, Cruz García, Roman Kireev, Sara Cuesta, Darío Acuña-Castroviejo, J A F Tresguerres

Study Type : Animal Study
Additional Links
Substances : Melatonin : CK(985) : AC(318)
Diseases : Aging : CK(1633) : AC(434), Inflammation : CK(3003) : AC(872), Oxidative Stress : CK(3871) : AC(1382)
Pharmacological Actions : Anti-Inflammatory Agents : CK(4688) : AC(1630), Antioxidants : CK(7331) : AC(2682), Cardioprotective : CK(1596) : AC(409), Tumor Necrosis Factor (TNF) Alpha Inhibitor : CK(1803) : AC(655)

Melatonin has neuroprotective properties in an animal model of accelerated aging.

Pubmed Data : Rev Neurol. 2011 May 16;52(10):618-622. PMID: **21488009**

Article Published Date : May 16, 2011

Authors : J Gutierrez-Cuesta, M Tajes, A Jimenez, A Camins, M Pallas

Study Type : Transgenic Animal Study
Additional Links
Substances : Melatonin : CK(985) : AC(318)
Diseases : Aging : CK(1658) : AC(438), Aging: Brain : CK(248) : AC(85)
Pharmacological Actions : Neuroprotective Agents : CK(2268) : AC(1071)

Melatonin improves inflammation processes in the liver of age-accelerated prone male mice.

Pubmed Data : Exp Gerontol. 2010 Dec;45(12):950-6. Epub 2010 Sep 9. PMID: **20817086**

Article Published Date : Dec 01, 2010

Authors : Sara Cuesta, Roman Kireev, Katherine Forman, Cruz García, Germaine Escames, Carmen Ariznavarreta, Elena Vara, Jesús A F Tresguerres

Study Type : Animal Study
Additional Links
Substances : Melatonin : CK(985) : AC(318)
Diseases : Aging : CK(1633) : AC(434) , Inflammation : CK(3003) : AC(872) , Oxidative Stress : CK(3871) : AC(1382)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682) , Hepatoprotective : CK(1387) : AC(594), Interleukin-10 downregulation : CK(128) : AC(45) , Interleukin-1 beta downregulation : CK(463) : AC(205), NF-kappaB Inhibitor : CK(1114) : AC(694) , Tumor Necrosis Factor (TNF) Alpha Inhibitor : CK(1803) : AC(655)

Melatonin improves pro-survival signals and reduces pro-death signals in age-related impairments of neural processes.

Pubmed Data : J Pineal Res. 2008 Nov;45(4):497-505. Epub 2008 Aug 13. PMID: **18705649**

Article Published Date : Nov 01, 2008

Authors : Javier Gutierrez-Cuesta, Marta Tajes, Andrés Jiménez, Ana Coto-Montes, Antoni Camins, Mercè Pallàs

Study Type : Animal Study
Additional Links
Substances : Melatonin : CK(985) : AC(318)
Diseases : Aging : CK(1658) : AC(438) , Aging: Brain : CK(248) : AC(85), Alzheimer's Disease : CK(1292) : AC(382)
Pharmacological Actions : Neuroprotective Agents : CK(2268) : AC(1071) , NF-kappaB Inhibitor : CK(1114) : AC(694), Tumor Suppressor Protein p53 Upregulation : CK(293) : AC(202)

Melatonin may delay aging in gastric mucosa tissue by decreasing caspase-3 activity.

Pubmed Data : Aging Clin Exp Res. 2011 Mar 14. Epub 2011 Mar 14. PMID: **21406955**

Article Published Date : Mar 14, 2011

Authors : K Gonca Akbulut, Hakan Akbulut, Nalan Akgun, Bilge Gonul

Study Type : Animal Study
Additional Links
Substances : Melatonin : CK(985) : AC(318)
Diseases : Aging : CK(1658) : AC(438)
Pharmacological Actions : Anti-Apoptotic : CK(384) : AC(212) , Caspase-3 Activation : CK(91) : AC(66)

Melatonin protects liver mitochondrial respiratory chain activity in aging-accelerated mice.

Pubmed Data : J Pineal Res. 2002 Apr;32(3):143-8. PMID: **12074097**

Article Published Date : Apr 01, 2002

Authors : Yuji Okatani, Akihiko Wakatsuki, Russel J Reiter

Study Type : Animal Study
Additional Links
Substances : Melatonin : CK(985) : AC(318)
Diseases : Aging : CK(1658) : AC(438) , Aging: Brain : CK(248) : AC(85), Lipid Peroxidation : CK(695) : AC(255), Mitochondrial Dysfunction : CK(225) : AC(91)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682) , Hepatoprotective : CK(1387) : AC(594)

Melatonin reduces age-related oxidaitve stress in the brain of age-accelerated mice.

Pubmed Data : J Pineal Res. 2009 Jan;46(1):106-14. PMID: **19090913**

Article Published Date : Jan 01, 2009

Authors : Beatriz Caballero, Ignacio Vega-Naredo, Verónica Sierra, Covadonga Huidobro-Fernández, Clara Soria-Valles, David De Gonzalo-Calvo, Delio Tolivia, Mercé Pallás, Antonio Camins, María Josefa Rodríguez-Colunga, Ana Coto-Montes

Study Type : Animal Study
Additional Links
Substances : Melatonin : CK(985) : AC(318)
Diseases : Aging: Brain : CK(248) : AC(85), Oxidative Stress : CK(3871) : AC(1382)
Pharmacological Actions : Apoptotic : CK(2958) : AC(2075) , Bcl-2 protein down-regulation : CK(198) : AC(131), Neuroprotective Agents : CK(2268) : AC(1071) , Superoxide Dismutase Up-regulation : CK(508) : AC(171)

Melatonin reduces oxidative damage of neural lipids and proteins in the age-accelerated mouse.

Pubmed Data : Neurobiol Aging. 2002 Jul-Aug;23(4):639-44. PMID: **12009513**

Article Published Date : Jul 01, 2002

Authors : Yuji Okatani, Akihiko Wakatsuki, Russel J Reiter, Yasuyo Miyahara

Study Type : Animal Study
Additional Links
Substances : Melatonin : CK(985) : AC(318)
Diseases : Aging : CK(1658) : AC(438) , Aging: Brain : CK(248) : AC(85), Lipid Peroxidation : CK(695) : AC(255), Oxidative Stress : CK(3871) : AC(1382)
Pharmacological Actions : Neuroprotective Agents : CK(2268) : AC(1071)

Melatonin restores liver mitochondrial physiology in old mice.

Pubmed Data : Int J Biochem Cell Biol. 2003 Mar;35(3):367-75. PMID: **12531250**

Article Published Date : Mar 01, 2003

Authors : Yuji Okatani, Akihiko Wakatsuki, Russel J Reiter, Yasuyo Miyahara

Study Type : Animal Study
Additional Links
Substances : Melatonin : CK(985) : AC(318)
Diseases : Aging : CK(1658) : AC(438), Liver Disease : CK(135) : AC(40)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682), Hepatoprotective : CK(1387) : AC(594), Regenerative : CK(52) : AC(28)

Melatonin treatment in old mice enables a more youthful response to an inflammation challenge in the brain.

Pubmed Data : J Neuroimmunol. 2007 Jan;182(1-2):22-31. Epub 2006 Oct 30. PMID: 17070935

Article Published Date : Jan 01, 2007

Authors : V M Perreau, S C Bondy, C W Cotman, K G Sharman, E H Sharman

Study Type : Animal Study
Additional Links
Substances : Melatonin : CK(985) : AC(318)
Diseases : Aging: Brain : CK(248) : AC(85)

Methionine (AC 1) (CK 5)

L-methionine may help prevent hair graying by preventing met oxidation.

Pubmed Data : FASEB J. 2009 Jul ;23(7):2065-75. Epub 2009 Feb 23. PMID: 19237503

Article Published Date : Jun 30, 2009

Authors : J M Wood, H Decker, H Hartmann, B Chavan, H Rokos, J D Spencer, S Hasse, M J Thornton, M Shalbaf, R Paus, K U Schallreuter

Study Type : Human In Vitro
Additional Links
Substances : Methionine : CK(57) : AC(13)
Diseases : Aging : CK(1658) : AC(438), Graying Hair : CK(6) : AC(3), Oxidative Stress : CK(3871) : AC(1382)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682)

Molasses (AC 1) (CK 2)

The topical application of the nonsugar fraction of brown sugar (molasses) prevents UVB-induced aging of the skin.

Pubmed Data : Nat Med (Tokyo). 2009 Apr;63(2):130-6. Epub 2008 Dec 3. PMID: 19050991

Article Published Date : Apr 01, 2009

Authors : Maho Sumiyoshi, Teruaki Hayashi, Yoshiyuki Kimura

Study Type : Animal Study
Additional Links
Substances : Molasses : CK(13) : AC(3)
Diseases : Skin Diseases: Photo-Aging : CK(132) : AC(51)

Multivitamin (AC 3) (CK 30)

A multi-nutrient mixture of marine proteins, alpha-lipoic acid, pine bark extract, vitamins and minerals is safe and efficacious in the treatment of aging symptoms of the skin in women.

Pubmed Data : J Int Med Res. 2005 May-Jun;33(3):267-72. PMID: 15938587

Article Published Date : May 01, 2005

Authors : E Thom

Study Type : Human Study
Additional Links
Substances : Alpha-Lipoic Acid : CK(476) : AC(116) , Fish extract : CK(32) : AC(4), Multivitamin : CK(257) : AC(25), Pine Bark Extract : CK(567) : AC(96)
Diseases : Aging Skin : CK(426) : AC(101)

Multivitamin use is associated with longer telomere length in women.

Pubmed Data : Hepatogastroenterology. 2002 Nov-Dec;49(48):1571-5. PMID: 19279081

Article Published Date : Nov 01, 2002

Authors : Qun Xu, Christine G Parks, Lisa A DeRoo, Richard M Cawthon, Dale P Sandler, Honglei

Chen

Study Type : Human Study
Additional Links
Substances : Multivitamin : CK(257) : AC(25) , Vitamin C : CK(1957) : AC(404) , Vitamin E : CK(1656) : AC(290)
Diseases : Aging : CK(1658) : AC(438)
Pharmacological Actions : Telomerase Upregulation : CK(102) : AC(28)

Supplementation with antioxidant vitamins and minerals slows cognitive decline in middle-aged adults.

Pubmed Data : Am J Clin Nutr. 2011 Jan;93(1):200-10. Epub 2010 Nov 24. PMID: **21106918**

Article Published Date : Jan 01, 2011

Authors : Emmanuelle Kesse-Guyot, Hélène Amieva, Katia Castetbon, Adina Henegar, Monique Ferry, Claude Jeandel, Serge Hercberg, Pilar Galan,

Study Type : Human Study
Additional Links
Substances : Antioxidant formulas : CK(492) : AC(76) , Multivitamin : CK(257) : AC(25)
Diseases : Aging: Brain : CK(248) : AC(85), Cognitive Decline/Dysfunction : CK(1151) : AC(215)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682) , Neuroprotective Agents : CK(2268) : AC(1071)

Myricetin (AC 2) (CK 3)

Myricetin protects against ultraviolet-B-induced damage in human skin cells.

Pubmed Data : Toxicol In Vitro. 2010 Feb;24(1):21-8. Epub 2009 Sep 22. PMID: **19778600**

Article Published Date : Feb 01, 2010

Authors : Jheng-Hua Huang, Chieh-Chen Huang, Jia-You Fang, Cheng Yang, Chi-Ming Chan, Nan-Lin Wu, Shung-Wen Kang, Chi-Feng Hung

Study Type : In Vitro Study
Additional Links
Substances : Myricetin : CK(19) : AC(13)
Diseases : Aging Skin : CK(426) : AC(101) , Skin Diseases: Photo-Aging : CK(132) : AC(51)

Myricetin suppresses UVB-induced wrinkle formation.

Pubmed Data : Phytother Res. 2008 Mar;22(3):323-9. PMID: **20093107**

Article Published Date : Mar 01, 2008

Authors : Sung Keun Jung, Ki Won Lee, Ho Young Kim, Mi Hyun Oh, Sanguine Byun, Sung Hwan Lim, Yong-Seok Heo, Nam Joo Kang, Ann M Bode, Zigang Dong, Hyong Joo Lee

Study Type : Animal Study
Additional Links
Substances : Myricetin : CK(19) : AC(13)
Diseases : Aging Skin : CK(426) : AC(101) , Skin Diseases: Photo-Aging : CK(132) : AC(51)

NAC (N-acetyl-L-cysteine) (AC 5) (CK 9)

A diet supplemented with thiolic anti-oxidants improves immune function in an animal model of premature aging.

Pubmed Data : Clin Exp Pharmacol Physiol. 2002 Nov;29(11):1009-14. PMID: **12366393**

Article Published Date : Nov 01, 2002

Authors : N Guayerbas, M Puerto, M D Ferrández, M De La Fuente

Study Type : Animal Study
Additional Links
Substances : NAC (N-acetyl-L-cysteine) : CK(295) : AC(72) , Thioproline : CK(6) : AC(3)
Diseases : Aging: Immunosenecence : CK(52) : AC(13)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682) , Immunomodulatory : CK(1287) : AC(358)

NAC and thioproline retard immune function in an animal model of aging.

Pubmed Data : Proc Nutr Soc. 2010 Nov;69(4):651-9. Epub 2010 Sep 28. PMID: **20875196**

Article Published Date : Nov 01, 2010

Authors : Mónica De la Fuente

Study Type : Animal Study
Additional Links
Substances : NAC (N-acetyl-L-cysteine) : CK(295) : AC(72) , Thioproline : CK(6) : AC(3)
Diseases : Aging : CK(1658) : AC(438) , Aging: Immunosenecence : CK(52) : AC(13)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682)

NAC slows hematopoietic stem cell aging in a mouse

model of dyskeratosis congenita.

Pubmed Data : Aging Cell. 2011 Apr;10(2):338-48. Epub 2011 Feb 21. PMID: **21241452**

Article Published Date : Apr 01, 2011

Authors : Bai-Wei Gu, Jian-Meng Fan, Monica Bessler, Philip J Mason

Study Type : Animal Study
Additional Links
Substances : NAC (N-acetyl-L-cysteine) : CK(295) : AC(72)
Diseases : Aging : CK(1658) : AC(438), Dyskeratosis Congenita : CK(2) : AC(1)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682)

Resveratrol and NAC may prevent age-associated decline in skin and/or connective tissue quality.

Pubmed Data : Minerva Ginecol. 2010 Jun;62(3):195-201. PMID: **20595944**

Article Published Date : Jun 01, 2010

Authors : S Giardina, A Michelotti, G Zavattini, S Finzi, C Ghisalberti, F Marzatico

Study Type : In Vitro Study
Additional Links
Substances : NAC (N-acetyl-L-cysteine) : CK(295) : AC(72), Resveratrol : CK(1245) : AC(746)
Diseases : Aging Skin : CK(426) : AC(101), Postmenopausal Disorders : CK(329) : AC(42)
Pharmacological Actions : Antiproliferative : CK(2479) : AC(1685), Enzyme Inhibitors : CK(473) : AC(251)
Additional Keywords : Stilbenes : CK(402) : AC(242)

Sulforaphane and NAC (N-acetyl-L-cysteine) upregulate T(H)1 immunity in aging.

Pubmed Data : J Allergy Clin Immunol. 2008 May;121(5):1255-1261.e7. Epub 2008 Mar 5. PMID: **18325578**

Article Published Date : May 01, 2008

Authors : Hyon-Jeen Kim, Berenice Barajas, Meiying Wang, Andre E Nel

Study Type : Animal Study
Additional Links
Substances : NAC (N-acetyl-L-cysteine) : CK(295) : AC(72), Sulforaphane : CK(533) : AC(262)
Diseases : Aging : CK(1658) : AC(438), Immune Disorders: Low Immune Function : CK(489) : AC(118), Immune Dysregulation: TH1/TH2 imbalance : CK(169) : AC(44), Low Disorders: Low TH1 : CK(6) : AC(4)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682), Immunomodulatory : CK(1287) : AC(358)

Natto (AC 1) (CK 1)

A fermented soybean (natto) and astragalus combination stimulates hyaluronic acid synthesis in human skin cells.

Pubmed Data : J Ethnopharmacol. 2009 Jul 17. PMID: 19619633

Article Published Date : Jul 17, 2009

Authors : Mei-Fang Hsu, Been-Huang Chiang

Study Type : In Vitro Study
Additional Links
Substances : Astragalus : CK(260) : AC(60) , Fermented Foods and Beverages : CK(864) : AC(194) , Natto : CK(105) : AC(17), Soy : CK(1787) : AC(399)
Diseases : Aging Skin : CK(426) : AC(101)

Nicotinamide adenine dinucleotide (NADH) (AC 1) (CK 2)

Strategies that conserve cellular NAD+ may reprogram dysfunctional stem cells and improve lifespan in mammals.

Pubmed Data : Science. 2016 Apr 28. Epub 2016 Apr 28. PMID: 27127236

Article Published Date : Apr 27, 2016

Authors : Hongbo Zhang, Dongryeol Ryu, Yibo Wu, Karim Gariani, Xu Wang, Peiling Luan, Davide D'Amico, Eduardo R Ropelle, Matthias P Lutolf, Ruedi Aebersold, Kristina Schoonjans, Keir J Menzies, Johan Auwerx

Study Type : Animal Study
Additional Links
Substances : Nicotinamide adenine dinucleotide (NADH) : CK(31) : AC(4)
Diseases : Aging : CK(1658) : AC(438) , Muscular Dystrophy : CK(12) : AC(2)
Pharmacological Actions : Regenerative : CK(52) : AC(28)
Additional Keywords : Adult Stem Cells : CK(2) : AC(1)

Nuts (AC 1) (CK 10)

Tree nut consumption is associated with a higher overall diet quality score and improved nutrient intakes.

Pubmed Data : Asia Pac J Clin Nutr. 2010;19(1):142-50. PMID: **20200000**

Article Published Date : Jan 01, 2010

Authors : Carol E O'Neil, Debra R Keast, Victor L Fulgoni, Theresa A Nicklas

Study Type : Human Study
Additional Links
Substances : Nuts : CK(848) : AC(116)
Diseases : Aging : CK(1658) : AC(438)

OPC (Oligomeric Proanthocyanidins) (AC 2) (CK 4)

Oligomeric proanthocyanidins improve memory in age-accelerated mice.

Pubmed Data : Br J Nutr. 2010 Feb;103(4):479-89. Epub 2009 Oct 13. PMID: **19822031**

Article Published Date : Feb 01, 2010

Authors : Young A Lee, Eun Ju Cho, Takako Yokozawa

Study Type : Animal Study
Additional Links
Substances : OPC (Oligomeric Proanthocyanidins) : CK(5) : AC(3)
Diseases : Aging : CK(1658) : AC(438), Aging: Brain : CK(248) : AC(85), Memory Disorders : CK(342) : AC(104)
Pharmacological Actions : Neuroprotective Agents : CK(2268) : AC(1071)
Additional Keywords : Plant Extracts : CK(7484) : AC(2463), Proanthocyanidins : CK(203) : AC(54)

Persimmon oligomeric proanthocyanidins extend life span of senescence-accelerated mice.

Pubmed Data : J Med Food. 2009 Dec;12(6):1199-205. PMID: **20041772**

Article Published Date : Dec 01, 2009

Authors : Takako Yokozawa, Young A Lee, Qi Zhao, Kinzo Matsumoto, Eun Ju Cho

Study Type : Animal Study
Additional Links
Substances : OPC (Oligomeric Proanthocyanidins) : CK(5) : AC(3) , Persimmon : CK(30) : AC(14)
Diseases : Aging : CK(1658) : AC(438) , Aging: Brain : CK(248) : AC(85)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682)

Oleuropein (AC 4) (CK 6)

Oleuropein has a protective effect against UVB irradiation.

Pubmed Data : Int J Cosmet Sci. 2008 Apr;30(2):113-20. PMID: **18377620**

Article Published Date : Apr 01, 2008

Authors : P Perugini, M Vettor, C Rona, L Troisi, L Villanova, I Genta, B Conti, F Pavanetto

Study Type : Animal Study
Additional Links
Substances : Oleuropein : CK(76) : AC(49)
Diseases : Erythema : CK(74) : AC(9) , Skin Diseases: Photo-Aging : CK(132) : AC(51) , Sunburn : CK(41) : AC(19)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682)

Olive leaf extract and its main component oleuroepin prevents acute ultraviolet B irradiation-induced skin changes.

Pubmed Data : Phytother Res. 2009 Dec 2. PMID: **19957248**

Article Published Date : Dec 02, 2009

Authors : Maho Sumiyoshi, Yoshiyuki Kimura

Study Type : In Vitro Study
Additional Links
Substances : Oleuropein : CK(76) : AC(49) , Olive leaf extract : CK(103) : AC(46)
Diseases : Skin Diseases: Photo-Aging : CK(132) : AC(51) , Ultraviolet Radiation Induced Damage : CK(80) : AC(34)

Olive leaf extract prevents chronic ultraviolet B radiation-induced skin damage and carcinogenesis in hairless mice.

Pubmed Data : J Nutr. 2009 Nov;139(11):2079-86. Epub 2009 Sep 23. PMID: 19776181

Article Published Date : Nov 01, 2009

Authors : Yoshiyuki Kimura, Maho Sumiyoshi

Study Type : Animal Study
Additional Links
Substances : Oleuropein : CK(76) : AC(49) , Olive leaf extract : CK(103) : AC(46)
Diseases : Skin Cancer : CK(652) : AC(264) , Skin Diseases: Photo-Aging : CK(132) : AC(51) , Ultraviolet Radiation Induced Damage : CK(80) : AC(34)

The olive constituent oleuropein confers life span extension of human embryonic fibroblasts.

Pubmed Data : Rejuvenation Res. 2007 Jun;10(2):157-72. PMID: 17518699

Article Published Date : Jun 01, 2007

Authors : Magda Katsiki, Niki Chondrogianni, Ioanna Chinou, A Jennifer Rivett, Efstathios S Gonos

Study Type : In Vitro Study
Additional Links
Substances : Oleuropein : CK(76) : AC(49) , Olive : CK(473) : AC(136)
Diseases : Aging : CK(1658) : AC(438)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682)
Additional Keywords : Plant Extracts : CK(7484) : AC(2463)

Olive (AC 1) (CK 1)

The olive constituent oleuropein confers life span extension of human embryonic fibroblasts.

Pubmed Data : Rejuvenation Res. 2007 Jun;10(2):157-72. PMID: 17518699

Article Published Date : Jun 01, 2007

Authors : Magda Katsiki, Niki Chondrogianni, Ioanna Chinou, A Jennifer Rivett, Efstathios S Gonos

Study Type : In Vitro Study
Additional Links
Substances : Oleuropein : CK(76) : AC(49) , Olive : CK(473) : AC(136)
Diseases : Aging : CK(1658) : AC(438)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682)
Additional Keywords : Plant Extracts : CK(7484) : AC(2463)

Olive leaf extract (AC 2) (CK 3)

Olive leaf extract and its main component oleuroepin prevents acute ultraviolet B irradiation-induced skin changes.

Pubmed Data : Phytother Res. 2009 Dec 2. PMID: 19957248

Article Published Date : Dec 02, 2009

Authors : Maho Sumiyoshi, Yoshiyuki Kimura

Study Type : In Vitro Study
Additional Links
Substances : Oleuropein : CK(76) : AC(49) , Olive leaf extract : CK(103) : AC(46)
Diseases : Skin Diseases: Photo-Aging : CK(132) : AC(51) , Ultraviolet Radiation Induced Damage : CK(80) : AC(34)

Olive leaf extract prevents chronic ultraviolet B radiation-induced skin damage and carcinogenesis in hairless mice.

Pubmed Data : J Nutr. 2009 Nov;139(11):2079-86. Epub 2009 Sep 23. PMID: 19776181

Article Published Date : Nov 01, 2009

Authors : Yoshiyuki Kimura, Maho Sumiyoshi

Study Type : Animal Study
Additional Links
Substances : Oleuropein : CK(76) : AC(49) , Olive leaf extract : CK(103) : AC(46)
Diseases : Skin Cancer : CK(652) : AC(264) , Skin Diseases: Photo-Aging : CK(132) : AC(51) , Ultraviolet Radiation Induced Damage : CK(80) : AC(34)

Olive oil: topical (AC 1) (CK 1)

Herbs provide protection against harmful UV radiation due to their antioxidant activity.

Pubmed Data : Pharmacogn Rev. 2011 Jul ;5(10):164-73. PMID: 22279374

Article Published Date : Jul 01, 2011

Authors : Radava R Korać, Kapil M Khambholja

Study Type : Review
Additional Links
Substances : Coconut oil: topical : CK(1) : AC(1), Flavonoids : CK(1215) : AC(379), Krameria lappacea: topical : CK(1) : AC(1), Olive oil: topical : CK(1) : AC(1), Peanut oil: topical : CK(1) : AC(1), Sesame oil: topical : CK(1) : AC(1), Vitamin C : CK(1957) : AC(404), Vitamin E : CK(1656) : AC(290)
Diseases : Skin Diseases: Photo-Aging : CK(132) : AC(51), Sunburn : CK(41) : AC(19), Ultraviolet Radiation Induced Damage : CK(80) : AC(34)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682), Photoprotective : CK(74) : AC(27)

Omega-3 Fatty Acids (AC 2) (CK 20)

Higher dietary intake of polyunsaturated fatty acids may be protective against progression to chronic kidney disease.

Pubmed Data : Complement Ther Med. 2010 Apr;18(2):67-77. Epub 2010 Feb 7. PMID: 20041816

Article Published Date : Apr 01, 2010

Authors : F Lauretani, M Maggio, F Pizzarelli, S Michelassi, C Ruggiero, G P Ceda, S Bandinelli, L Ferrucci

Study Type : Human Study
Additional Links
Substances : Omega-3 Fatty Acids : CK(3268) : AC(387)
Diseases : Aging : CK(1658) : AC(438), Kidney Failure: Chronic : CK(148) : AC(21), Obstructive uropathy : CK(19) : AC(5)
Additional Keywords : Risk Reduction : CK(6417) : AC(686)

There is an inverse relationship between baseline blood levels of marine omega-3 fatty acids and the rate of telomere shortening (an indication of aging) over 5 years.

Pubmed Data : JAMA. 2010 Jan 20;303(3):250-7. PMID: 20085953

Article Published Date : Jan 20, 2010

Authors : Ramin Farzaneh-Far, Jue Lin, Elissa S Epel, William S Harris, Elizabeth H Blackburn, Mary A Whooley

Study Type : Human Study
Additional Links
Substances : Fish Oil : CK(701) : AC(111), Omega-3 Fatty Acids : CK(3268) : AC(387)

Diseases : Aging : CK(1658) : AC(438)

Onion (AC 1) (CK 2)

Onion flesh and onion peel enhance antioxidant status in aged rats.

Pubmed Data : J Nutr Sci Vitaminol (Tokyo). 2007 Feb;53(1):21-9. PMID: 17484375

Article Published Date : Feb 01, 2007

Authors : Juyeon Park, Joohee Kim, Mi Kyung Kim

Study Type : Animal Study
Additional Links
Substances : Flavonoids : CK(1215) : AC(379), Onion : CK(235) : AC(57), Polyphenols : CK(931) : AC(335), Quercetin : CK(564) : AC(250)
Diseases : Aging : CK(1658) : AC(438), DNA damage : CK(993) : AC(382)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682)
Additional Keywords : Plant Extracts : CK(7484) : AC(2463)

Orange (AC 1) (CK 1)

Red orange extract protects against UVB-induced damage in human skin cells.

Pubmed Data : Biofactors. 2007;30(2):129-38. PMID: 18356584

Article Published Date : Jan 01, 2007

Authors : Francesco Cimino, Mariateresa Cristani, Antonina Saija, Franco Paolo Bonina, Fabio Virgili

Study Type : In Vitro Study
Additional Links
Substances : Orange : CK(170) : AC(35)
Diseases : Skin Diseases: Photo-Aging : CK(132) : AC(51), Sunburn : CK(41) : AC(19)
Pharmacological Actions : Apoptotic : CK(2958) : AC(2075)
Additional Keywords : Plant Extracts : CK(7484) : AC(2463)

Orange: Mandarin (AC 1) (CK 2)

Beta-cryptoxanthin, plentiful in Japanese mandarin orange, prevents age-related cognitive dysfunction and oxidative damage in senescence-accelerated mouse brain.

Pubmed Data : Biol Pharm Bull. 2011;34(3):311-7. PMID: 21372377

Article Published Date : Jan 01, 2011

Authors : Keiko Unno, Minoru Sugiura, Kazunori Ogawa, Fumiyo Takabayashi, Masateru Toda, Midori Sakuma, Ken-ichi Maeda, Keisuke Fujitani, Hideaki Miyazaki, Hiroyuki Yamamoto, Minoru Hoshino

Study Type : Animal Study
Additional Links
Substances : Cryptoxanthin : CK(70) : AC(13) , Orange: Mandarin : CK(6) : AC(2)
Diseases : Aging: Brain : CK(248) : AC(85), Cognitive Decline/Dysfunction : CK(1151) : AC(215)
Pharmacological Actions : Neuroprotective Agents : CK(2268) : AC(1071)

Oregano (AC 1) (CK 2)

Oregano and cranberry extracts have a prolongevity effect in the Mexican fruit fly.

Pubmed Data : J Gerontol A Biol Sci Med Sci. 2010 Jan;65(1):41-50. Epub 2009 Nov 11. PMID: 19906819

Article Published Date : Jan 01, 2010

Authors : Sige Zou, James R Carey, Pablo Liedo, Donald K Ingram, Binbing Yu, Reza Ghaedian

Study Type : Animal Study
Additional Links
Substances : Cranberry : CK(302) : AC(56) , Oregano : CK(78) : AC(38)
Diseases : Aging : CK(1658) : AC(438)
Additional Keywords : Plant Extracts : CK(7484) : AC(2463)

Oyster Mushroom (AC 1) (CK 2)

Oyster mushroom (Pleurotus ostreatus) alleviates oxidative damage associated with aging.

Pubmed Data : Exp Gerontol. 2007 Mar;42(3):183-91. Epub 2006 Nov 28. PMID: 17126515

Article Published Date : Mar 01, 2007

Authors : Thanasekaran Jayakumar, Philip Aloysius Thomas, Pitchairaj Geraldine

Study Type : Animal Study
Additional Links
Substances : Oyster Mushroom : CK(36) : AC(18)
Diseases : Aging : CK(1658) : AC(438)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682)

Peanut oil: topical (AC 1) (CK 1)

Herbs provide protection against harmful UV radiation due to their antioxidant activity.

Pubmed Data : Pharmacogn Rev. 2011 Jul ;5(10):164-73. PMID: 22279374

Article Published Date : Jul 01, 2011

Authors : Radava R Korać, Kapil M Khambholja

Study Type : Review
Additional Links
Substances : Coconut oil: topical : CK(1) : AC(1), Flavonoids : CK(1215) : AC(379), Krameria lappacea: topical : CK(1) : AC(1), Olive oil: topical : CK(1) : AC(1), Peanut oil: topical : CK(1) : AC(1), Sesame oil: topical : CK(1) : AC(1), Vitamin C : CK(1957) : AC(404), Vitamin E : CK(1656) : AC(290)
Diseases : Skin Diseases: Photo-Aging : CK(132) : AC(51), Sunburn : CK(41) : AC(19), Ultraviolet Radiation Induced Damage : CK(80) : AC(34)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682), Photoprotective : CK(74) : AC(27)

Peony (AC 1) (CK 1)

A number of botanical extracts reduce skin wrinkling.

Pubmed Data : Drugs Aging. 2010 Dec 1;27(12):973-85. PMID: 21087067

Article Published Date : Dec 01, 2010

Authors : Katherine J Hunt, Shao Kang Hung, Edzard Ernst

Study Type : Review

Additional Links

Substances : Cork Extract : CK(11) : AC(2) , Date Kernel Extract : CK(11) : AC(2) , Peony : CK(50) : AC(14), Rose : CK(167) : AC(46), Soy : CK(1787) : AC(399)

Diseases : Aging Skin : CK(426) : AC(101)

Persimmon (AC 2) (CK 12)

Persimmon oligomeric proanthocyanidins extend life span of senescence-accelerated mice.

Pubmed Data : J Med Food. 2009 Dec;12(6):1199-205. PMID: 20041772

Article Published Date : Dec 01, 2009

Authors : Takako Yokozawa, Young A Lee, Qi Zhao, Kinzo Matsumoto, Eun Ju Cho

Study Type : Animal Study

Additional Links

Substances : OPC (Oligomeric Proanthocyanidins) : CK(5) : AC(3) , Persimmon : CK(30) : AC(14)

Diseases : Aging : CK(1658) : AC(438) , Aging: Brain : CK(248) : AC(85)

Pharmacological Actions : Antioxidants : CK(7331) : AC(2682)

Persimmon peel extract has a protective effect against oxidative damage under H2O2-induced cellular senescence.

Pubmed Data : Biol Pharm Bull. 2008 Jun;31(6):1265-9. PMID: 18520066

Article Published Date : Jun 01, 2008

Authors : Young A Lee, Eun Ju Cho, Takako Yokozawa

Study Type : Human Study
Additional Links
Substances : Persimmon : CK(30) : AC(14)
Diseases : Aging : CK(1658) : AC(438) , DNA damage : CK(993) : AC(382)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682)
Additional Keywords : Proanthocyanidins : CK(203) : AC(54)

Phosphatidylserine (AC 3) (CK 6)

A combination of phosphatidylserine, Ginkgo biloba, vitamin E, and pyridoxine improves short term memory in aging beagles.

Pubmed Data : Can Vet J. 2008 Apr;49(4):379-85. PMID: 18481547

Article Published Date : Apr 01, 2008

Authors : Joseph A Araujo, Gary M Landsberg, Norton W Milgram, Alda Miolo

Study Type : Animal Study
Additional Links
Substances : Ginkgo biloba : CK(798) : AC(162) , Phosphatidylserine : CK(134) : AC(20) , Vitamin B-6 : CK(435) : AC(54), Vitamin E : CK(1656) : AC(290)
Diseases : Aging: Brain : CK(248) : AC(85), Memory Disorders : CK(342) : AC(104)
Additional Keywords : Plant Extracts : CK(7484) : AC(2463)

Krill phosphatidylserine improves learning and memory in aged rats.

Pubmed Data : Prog Neuropsychopharmacol Biol Psychiatry. 2010 Jun 2. Epub 2010 Jun 2. PMID: 20685374

Article Published Date : Jun 02, 2010

Authors : Bombi Lee, Bong-Jun Sur, Jeong-Jun Han, Insop Shim, Song Her, Hye-Jung Lee, Dae-Hyun Hahm

Study Type : Animal Study
Additional Links
Substances : Krill : CK(141) : AC(33) , Phosphatidylserine : CK(134) : AC(20)
Diseases : Aging: Brain : CK(248) : AC(85), Cognitive Decline/Dysfunction : CK(1151) : AC(215), Learning disorders : CK(190) : AC(51) , Memory Loss : CK(153) : AC(40)

Phosphatidylserine improves memory impairment in

aged rats.

Pubmed Data : J Nutr. 2001 Nov;131(11):2951-6. PMID: 11694624

Article Published Date : Nov 01, 2001

Authors : S Suzuki, H Yamatoya, M Sakai, A Kataoka, M Furushiro, S Kudo

Study Type : Animal Study
Additional Links
Substances : Phosphatidylserine : CK(134) : AC(20)
Diseases : Aging: Brain : CK(248) : AC(85), Memory Loss : CK(153) : AC(40)

Phyllanthus emblica (AC 1) (CK 2)

Phyllanthus emblica has collagen-promoting and anti-collagenase activity, indicating its potential utility as an anti-aging ingredient.

Pubmed Data : J Cosmet Sci. 2009 Jul-Aug;60(4):395-403. PMID: 19691935

Article Published Date : Jul 01, 2009

Authors : Pithi Chanvorachote, Varisa Pongrakhananon, Sudjit Luanpitpong, Boontarika Chanvorachote, Sumalee Wannachaiyasit, Ubonthip Nimmannit

Study Type : Animal Study
Additional Links
Substances : Phyllanthus emblica : CK(8) : AC(5)
Diseases : Aging Skin : CK(426) : AC(101)
Pharmacological Actions : Anti-collagenase : CK(13) : AC(2)
Additional Keywords : Plant Extracts : CK(7484) : AC(2463)

Pine Bark Extract (AC 2) (CK 12)

A multi-nutrient mixture of marine proteins, alpha-lipoic acid, pine bark extract, vitamins and minerals is safe and efficacious in the treatment of aging symptoms of the

skin in women.

Pubmed Data : J Int Med Res. 2005 May-Jun;33(3):267-72. PMID: **15938587**

Article Published Date : May 01, 2005

Authors : E Thom

Study Type : Human Study
Additional Links
Substances : Alpha-Lipoic Acid : CK(476) : AC(116) , Fish extract : CK(32) : AC(4), Multivitamin : CK(257) : AC(25), Pine Bark Extract : CK(567) : AC(96)
Diseases : Aging Skin : CK(426) : AC(101)

Pine bark may combat aging.

Pubmed Data : Cell Mol Life Sci. 1998 Oct;54(10):1168-72. PMID: **9817994**

Article Published Date : Oct 01, 1998

Authors : F J Liu, Y X Zhang, B H Lau

Study Type : Animal Study
Additional Links
Substances : Pine Bark Extract : CK(567) : AC(96) , Pycnogenol (Pine Bark) : CK(556) : AC(94)
Diseases : Aging : CK(1658) : AC(438)

Plum (AC 1) (CK 2)

Plum juice mitigates age-related deficits in cognitive function in aged rats.

Pubmed Data : Nutrition. 2009 May;25(5):567-73. Epub 2008 Dec 18. PMID: **19097856**

Article Published Date : May 01, 2009

Authors : Barbara Shukitt-Hale, Wilhelmina Kalt, Amanda N Carey, Melinda Vinqvist-Tymchuk, Jane McDonald, James A Joseph

Study Type : Animal Study
Additional Links
Substances : Plum : CK(33) : AC(9)
Diseases : Aging: Brain : CK(248) : AC(85), Cognitive Decline/Dysfunction : CK(1151) : AC(215)
Pharmacological Actions : Neuroprotective Agents : CK(2268) : AC(1071)

Polyphenols (AC 11) (CK 18)

Acerola fruit polyphenol has a skin-lightening effect on UV-induced pigmentation.

Pubmed Data : Biosci Biotechnol Biochem. 2008 Dec;72(12):3211-8. Epub 2008 Dec 7. PMID: 19060403

Article Published Date : Dec 01, 2008

Authors : Takayuki Hanamura, Eriko Uchida, Hitoshi Aoki

Study Type : In Vitro Study
Additional Links
Substances : Acerola : CK(10) : AC(7) , Polyphenols : CK(931) : AC(335)
Diseases : Hyperpigmentation : CK(19) : AC(11) , Skin Diseases: Photo-Aging : CK(132) : AC(51)
Pharmacological Actions : Tyrosinase inhibitors : CK(4) : AC(4)
Additional Keywords : Plant Extracts : CK(7484) : AC(2463)

Black tea polyphenols may positively modulate a longevity factor (FOXO1).

Pubmed Data : Aging Cell. 2008 Jan;7(1):69-77. Epub 2007 Dec 19. PMID: 18005251

Article Published Date : Jan 01, 2008

Authors : Amy R Cameron, Siobhan Anton, Laura Melville, Nicola P Houston, Saurabh Dayal, Gordon J McDougall, Derek Stewart, Graham Rena

Study Type : In Vitro Study
Additional Links
Substances : Black Tea : CK(360) : AC(80) , Black Tea Theaflavins : CK(1) : AC(1) , Catechin : CK(512) : AC(169), Flavonoids : CK(1215) : AC(379) , Polyphenols : CK(931) : AC(335) , Tea : CK(1840) : AC(385)
Diseases : Aging : CK(1658) : AC(438)
Pharmacological Actions : Forkhead Transcription Factor Family O (FOXO) Modulator : CK(3) : AC(2)

Blackberries improve motor and cognitive performance in aged rats.

Pubmed Data : Nutr Neurosci. 2009 Jun;12(3):135-40. PMID: 19356316

Article Published Date : Jun 01, 2009

Authors : Barbara Shukitt-Hale, Vivian Cheng, James A Joseph

Study Type : Animal Study
Additional Links
Substances : Blackberry : CK(33) : AC(22) , Flavonoids : CK(1215) : AC(379) , Polyphenols : CK(931) : AC(335)
Diseases : Aging: Brain : CK(248) : AC(85), Cognitive Decline/Dysfunction : CK(1151) : AC(215)

Pharmacological Actions : Anti-Inflammatory Agents : CK(4688) : AC(1630) , Antioxidants : CK(7331) : AC(2682), Neuroprotective Agents : CK(2268) : AC(1071)

Grape seed extract has inhibiting effect on the accumulation of age-related oxidative DNA damages in the central nervous system of rats.

Pubmed Data : Brain Res Bull. 2006 Feb 15;68(6):469-73. Epub 2005 Nov 2. PMID: **16459205**

Article Published Date : Feb 15, 2006

Authors : Muthaiya Balu, Purushotham Sangeetha, Ganesan Murali, Chinnakannu Panneerselvam

Study Type : Animal Study
Additional Links
Substances : Flavonoids : CK(1215) : AC(379) , Polyphenols : CK(931) : AC(335)
Diseases : Aging: Brain : CK(248) : AC(85), DNA damage : CK(993) : AC(382) , Neurodegenerative Diseases : CK(3376) : AC(850)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682) , Neuroprotective Agents : CK(2268) : AC(1071)
Additional Keywords : Plant Extracts : CK(7484) : AC(2463) , Proanthocyanidins : CK(203) : AC(54)

Nutritional antioxidants such as green tea polyphenols and tetrahydrocurcumin may beneficially modify the life span of animals.

Pubmed Data : Biogerontology. 2007 Oct;8(5):567-73. Epub 2007 May 22. PMID: **17516143**

Article Published Date : Oct 01, 2007

Authors : Kenichi Kitani, Toshihiko Osawa, Takako Yokozawa

Study Type : Animal Study
Additional Links
Substances : Flavonoids : CK(1215) : AC(379) , Green Tea : CK(1971) : AC(562) , Polyphenols : CK(931) : AC(335), Tetrahydrocurcumin : CK(66) : AC(30)
Diseases : Aging : CK(1658) : AC(438)
Additional Keywords : Plant Extracts : CK(7484) : AC(2463)

Onion flesh and onion peel enhance antioxidant status in aged rats.

Pubmed Data : J Nutr Sci Vitaminol (Tokyo). 2007 Feb;53(1):21-9. PMID: **17484375**

Article Published Date : Feb 01, 2007

Authors : Juyeon Park, Joohee Kim, Mi Kyung Kim

Study Type : Animal Study
Additional Links
Substances : Flavonoids : CK(1215) : AC(379) , Onion : CK(235) : AC(57) , Polyphenols : CK(931) :

AC(335), Quercetin : CK(564) : AC(250)
Diseases : Aging : CK(1658) : AC(438), DNA damage : CK(993) : AC(382)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682)
Additional Keywords : Plant Extracts : CK(7484) : AC(2463)

Plant polyphenols may be useful in skin diseases associated with solar UV radiation-induced inflammation, oxidative stress and DNA damage.

Pubmed Data : Arch Dermatol Res. 2009 Nov 7. PMID: **19898857**

Article Published Date : Nov 07, 2009

Authors : Joi A Nichols, Santosh K Katiyar

Study Type : Commentary
Additional Links
Substances : Polyphenols : CK(931) : AC(335)
Diseases : Aging Skin : CK(426) : AC(101), Skin Diseases: Photo-Aging : CK(132) : AC(51)

Polyphenols potentiate dietary restriction-induced lifespan extension.

Pubmed Data : Biochim Biophys Acta. 2012 Jan 11 ;1822(4):522-526. Epub 2012 Jan 11. PMID: **22265987**

Article Published Date : Jan 11, 2012

Authors : Daniel J Aires, Graham Rockwell, Ting Wang, Jennifer Frontera, Jo Wick, Wenfang Wang, Marija Tonkovic-Capin, Jianghua Lu, Lezi E, Hao Zhu, Russell H Swerdlow

Study Type : Animal Study
Additional Links
Substances : Blueberry : CK(260) : AC(90), Green Tea : CK(1971) : AC(562), Polyphenols : CK(931) : AC(335), Pomegranate : CK(499) : AC(168)
Diseases : Aging : CK(1658) : AC(438)
Therapeutic Actions : Fasting/Caloric Restriction : CK(297) : AC(63)
Pharmacological Actions : Anti-Inflammatory Agents : CK(4688) : AC(1630)

Resveratrol, by acting on specific polyphenol binding sites in epidermis, may be useful to prevent skin disorders associated with aging.

Pubmed Data : PLoS One. 2010;5(9):e12935. Epub 2010 Sep 23. PMID: **20886076**

Article Published Date : Jan 01, 2010

Authors : Stéphane Bastianetto, Yvan Dumont, Albert Duranton, Freya Vercauteren, Lionel Breton, Rémi Quirion

Study Type : In Vitro Study

Additional Links
Substances : Flavonoids : CK(1215) : AC(379) , Polyphenols : CK(931) : AC(335) , Resveratrol : CK(1245) : AC(746)
Diseases : Aging Skin : CK(426) : AC(101)
Pharmacological Actions : Apoptotic : CK(2958) : AC(2075)
Additional Keywords : Stilbenes : CK(402) : AC(242)

Soybean and green tea polyphenols improve immune function and redox status in very old ovariectomized mice.

Pubmed Data : Rejuvenation Res. 2010 Dec;13(6):665-74. Epub 2010 Sep 6. PMID: **20818935**

Article Published Date : Dec 01, 2010

Authors : Isabel Baeza, Nuria M De Castro, Lorena Arranz, Mónica De la Fuente

Study Type : Animal Study
Additional Links
Substances : Flavonoids : CK(1215) : AC(379) , Green Tea : CK(1971) : AC(562) , Polyphenols : CK(931) : AC(335), Soy : CK(1787) : AC(399) , Tea : CK(1840) : AC(385)
Diseases : Aging : CK(1658) : AC(438) , Aging: Immunosenecence : CK(52) : AC(13) , Lipid Peroxidation : CK(695) : AC(255), Ovariectomy Associated Adverse Changes : CK(18) : AC(7)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682) , Interleukin-10 downregulation : CK(128) : AC(45), Interleukin-6 Downregulation : CK(1095) : AC(342)

The plant polyphenols genistein and resveratrol preserve ovarian follicular function in aging rats.

Pubmed Data : Biochem Cell Biol. 2010 Aug;88(4):737-45. PMID: **20651847**

Article Published Date : Aug 01, 2010

Authors : Zhen-Guo Chen, Li-Li Luo, Jin-Jie Xu, Xiao-Lan Zhuang, Xiao-Xia Kong, Yu-Cai Fu

Study Type : Animal Study
Additional Links
Substances : Flavonoids : CK(1215) : AC(379) , Genistein : CK(515) : AC(228) , Polyphenols : CK(931) : AC(335), Resveratrol : CK(1245) : AC(746)
Diseases : Aging : CK(1658) : AC(438) , Infertility: Aging Associated : CK(2) : AC(1) , Infertility: Female : CK(280) : AC(50)
Additional Keywords : Plant Extracts : CK(7484) : AC(2463) , Stilbenes : CK(402) : AC(242)

Polyunsaturated Fatty Acids (PUFAs)

(AC 1) (CK 2)

A high consumption of unsaturated fatty acids is associated with better memory and greater longevity

Pubmed Data : J Nutr Sci Vitaminol (Tokyo). 2011;57(1):36-41. PMID: 21512289

Article Published Date : Jan 01, 2011

Authors : Yukiko Ueda, Ming-Fu Wang, Amalia Veronica Irei, Nobuko Sarukura, Tohru Sakai, Tzu-Fang Hsu

Study Type : Animal Study
Additional Links
Substances : DHA (Docosahexaenoic Acid) : CK(813) : AC(134) , Polyunsaturated Fatty Acids (PUFAs) : CK(194) : AC(33), Soybean Oil : CK(3) : AC(2)
Diseases : Aging : CK(1658) : AC(438) , Aging: Brain : CK(248) : AC(85), Memory Disorders : CK(342) : AC(104)

Pomegranate (AC 6) (CK 16)

Ellagic acid-rich pomegranate extract has an inhibitory effect on tyrosinase activity and ultraviolet-induced pigmentation.

Pubmed Data : Biosci Biotechnol Biochem. 2005 Dec;69(12):2368-73. PMID: 16377895

Article Published Date : Dec 01, 2005

Authors : Mineka Yoshimura, Yuko Watanabe, Kouichi Kasai, Jun Yamakoshi, Takuro Koga

Study Type : In Vitro Study
Additional Links
Substances : Ellagic Acid : CK(104) : AC(55) , Pomegranate : CK(499) : AC(168)
Diseases : Hyperpigmentation : CK(19) : AC(11) , Skin Diseases: Photo-Aging : CK(132) : AC(51)
Pharmacological Actions : Enzyme Inhibitors : CK(473) : AC(251) , Tyrosinase inhibitors : CK(4) : AC(4)
Additional Keywords : Plant Extracts : CK(7484) : AC(2463)

Polyphenols potentiate dietary restriction-induced lifespan extension.

Pubmed Data : Biochim Biophys Acta. 2012 Jan 11 ;1822(4):522-526. Epub 2012 Jan 11. PMID:

22265987

Article Published Date : Jan 11, 2012

Authors : Daniel J Aires, Graham Rockwell, Ting Wang, Jennifer Frontera, Jo Wick, Wenfang Wang, Marija Tonkovic-Capin, Jianghua Lu, Lezi E, Hao Zhu, Russell H Swerdlow

Study Type : Animal Study
Additional Links
Substances : Blueberry : CK(260) : AC(90) , Green Tea : CK(1971) : AC(562) , Polyphenols : CK(931) : AC(335), Pomegranate : CK(499) : AC(168)
Diseases : Aging : CK(1658) : AC(438)
Therapeutic Actions : Fasting/Caloric Restriction : CK(297) : AC(63)
Pharmacological Actions : Anti-Inflammatory Agents : CK(4688) : AC(1630)

Pomegranate fruit exhibits protective properties against the advesrse effects of UVB radiation.

Pubmed Data : Photochem Photobiol. 2011 Dec 19. Epub 2011 Dec 19. PMID: 22181855

Article Published Date : Dec 19, 2011

Authors : Naghma Khan, Deeba N Syed, Harish Chandra Pal, Hasan Mukhtar, Farrukh Afaq

Study Type : In Vitro Study
Additional Links
Substances : Pomegranate : CK(499) : AC(168)
Diseases : Skin Diseases: Photo-Aging : CK(132) : AC(51)

Pomegranate polyphenol inhibits UVB-mediated oxidative stress and photoaging in keratinocytes (skin cells).

Pubmed Data : Photochem Photobiol. 2007 Jul-Aug;83(4):882-8. PMID: 17645659

Article Published Date : Jul 01, 2007

Authors : Mohammad Abu Zaid, Farrukh Afaq, Deeba N Syed, Mark Dreher, Hasan Mukhtar

Study Type : In Vitro Study
Additional Links
Substances : Pomegranate : CK(499) : AC(168)
Diseases : Aging Skin : CK(426) : AC(101)

Pomegranate polyphenols have a protective effect against UVA- and UVB-induced cell damage.

Pubmed Data : J Agric Food Chem. 2008 Sep 24;56(18):8434-41. Epub 2008 Aug 22. PMID: 18717570

Article Published Date : Sep 24, 2008

Authors : Lisbeth A Pacheco-Palencia, Giuliana Noratto, Lal Hingorani, Stephen T Talcott, Susanne U Mertens-Talcott

Study Type : In Vitro Study

Additional Links
Substances : Pomegranate : CK(499) : AC(168)
Diseases : Skin Diseases: Photo-Aging : CK(132) : AC(51)

The combined formulation of fruit extracts showed excellent antioxidative and anti-collagenase activity as well as a significant effect on anti-wrinkle activity on human skin.

Pubmed Data : Clin Cosmet Investig Dermatol. 2015 ;8:389-96. Epub 2015 Jul 16. PMID: **26203268**

Article Published Date : Dec 31, 2014

Authors : Amal Kumar Ghimeray, Un Sun Jung, Ha Youn Lee, Young Hoon Kim, Eun Kyung Ryu, Moon Sik Chang

Study Type : Human Study, In Vitro Study
Additional Links
Substances : Fig : CK(45) : AC(17), Ginkgo biloba : CK(798) : AC(162), Pomegranate : CK(499) : AC(168), White Mulberry : CK(11) : AC(1)
Diseases : Aging Skin : CK(426) : AC(101), Wrinkles : CK(10) : AC(1)
Pharmacological Actions : Anti-collagenase : CK(13) : AC(2), Antioxidants : CK(7331) : AC(2682)
Additional Keywords : Dose Response : CK(1056) : AC(408), Natural Substances Versus Drugs : CK(1696) : AC(301), Plant Extracts : CK(7484) : AC(2463)

Prebiotics (AC 1) (CK 1)

Probiotic/prebiotics may have therapeutic value in supporting healthy aging.

Pubmed Data : Age (Dordr). 2011 Feb 24. Epub 2011 Feb 24. PMID: **21347607**

Article Published Date : Feb 24, 2011

Authors : Elena Biagi, Marco Candela, Susan Fairweather-Tait, Claudio Franceschi, Patrizia Brigidi

Study Type : Review
Additional Links
Substances : Prebiotics : CK(170) : AC(32), Probiotics : CK(2868) : AC(364)
Diseases : Aging : CK(1658) : AC(438)

Probiotics (AC 4) (CK 14)

Lactobacillus pentosus var. plantarum may ameliorate memory impairment and M1 macrophage-polarized inflammation caused by aging.

Pubmed Data : Anaerobe. 2014 Jun ;27:22-6. Epub 2014 Mar 19. PMID: 24657159

Article Published Date : May 31, 2014

Authors : Jae-Yeon Woo, Wan Gu, Kyung-Ah Kim, Se-Eun Jang, Myung Joo Han, Dong-Hyun Kim

Study Type : Animal Study

Additional Links

Substances : Lactobacillus probiotics : CK(1481) : AC(210) , Probiotics : CK(2868) : AC(364)

Diseases : Aging : CK(1633) : AC(434) , Inflammation : CK(3003) : AC(872) , Memory Disorders : CK(342) : AC(104), Memory Disorders: Drug-Induced : CK(99) : AC(25) , Oxidative Stress : CK(3871) : AC(1382)

Pharmacological Actions : Anti-Inflammatory Agents : CK(4688) : AC(1630) , Neuroprotective Agents : CK(2268) : AC(1071)

Probiotic administration in the elderly normalises the response to endotoxin, and modulates activation markers in blood phagocytes, and therefore may help reduce low-grade chronic inflammation.

Pubmed Data : Nutr Cancer. 2009;61(5):680-6. PMID: 19353762

Article Published Date : Jan 01, 2009

Authors : Eduardo J Schiffrin, Alexandr Parlesak, Christiane Bode, J Christian Bode, Martin A van't Hof, Dominik Grathwohl, Yves Guigoz

Study Type : Human Study

Additional Links

Substances : Fermented Foods and Beverages : CK(864) : AC(194) , Probiotics : CK(2868) : AC(364) , Yoghurt : CK(154) : AC(23)

Diseases : Aging : CK(1658) : AC(438) , Endotoxemia : CK(83) : AC(43) , Immune Disorders: Low Immune Function : CK(489) : AC(118), Lipopolysaccharide-Induced Toxicity : CK(359) : AC(218)

Pharmacological Actions : Immunomodulatory : CK(1287) : AC(358)

Probiotic/prebiotics may have therapeutic value in supporting healthy aging.

Pubmed Data : Age (Dordr). 2011 Feb 24. Epub 2011 Feb 24. PMID: 21347607

Article Published Date : Feb 24, 2011

Authors : Elena Biagi, Marco Candela, Susan Fairweather-Tait, Claudio Franceschi, Patrizia Brigidi

Study Type : Review
Additional Links
Substances : Prebiotics : CK(170) : AC(32), Probiotics : CK(2868) : AC(364)
Diseases : Aging : CK(1658) : AC(438)

Probiotics may have a role in slowing the aging process in the immune system.

Pubmed Data : Rejuvenation Res. 2008 Apr;11(2):425-32. PMID: 18442326

Article Published Date : Apr 01, 2008

Authors : Giuseppina Candore, Carmela Rita Balistreri, Giuseppina Colonna-Romano, Maria Paola Grimaldi, Domenico Lio, Florinda Listi', Letizia Scola, Sonya Vasto, Calogero Caruso

Study Type : Review
Additional Links
Substances : Probiotics : CK(2868) : AC(364)
Diseases : Aging: Immunosenecence : CK(52) : AC(13)
Pharmacological Actions : Immunomodulatory : CK(1287) : AC(358)

Progesterone (AC 1) (CK 2)

Progesterone is able to decrease anxiety behavior in younger and older mice.

Pubmed Data : Psychopharmacology (Berl). 2006 Jun;186(3):312-22. Epub 2006 Mar 15. PMID: 16538472

Article Published Date : Jun 01, 2006

Authors : C A Frye, K Sumida, B C Dudek, J P Harney, J P Lydon, B W O'Malley, D W Pfaff, M E Rhodes

Study Type : Animal Study
Additional Links
Substances : Progesterone : CK(70) : AC(26)
Diseases : Aging : CK(1658) : AC(438), Generalized Anxiety Disorder : CK(71) : AC(10)
Pharmacological Actions : Anxiolytic : CK(369) : AC(56)

Pterostilbene (AC 1) (CK 2)

Pterostilbene reduces the deleterious effects of aging in an animal model.

Pubmed Data : J Agric Food Chem. 2008 Nov 26;56(22):10544-51. PMID: 18954071

Article Published Date : Nov 26, 2008

Authors : James A Joseph, Derek R Fisher, Vivian Cheng, Agnes M Rimando, Barbara Shukitt-Hale

Study Type : Animal Study
Additional Links
Substances : Pterostilbene : CK(88) : AC(52) , Resveratrol : CK(1245) : AC(746)
Diseases : Aging : CK(1633) : AC(434) , Aging: Brain : CK(248) : AC(85), Cognitive Decline/Dysfunction : CK(1151) : AC(215), Oxidative Stress : CK(3871) : AC(1382)
Additional Keywords : Stilbenes : CK(402) : AC(242)

Purslane (AC 2) (CK 4)

An aqueous extract of purslane has anti-anging activity.

Pubmed Data : Phytother Res. 2009 Apr 15. PMID: 19367671

Article Published Date : Apr 15, 2009

Authors : Huang Hao, Yu Nancai, Fu Lei, Su Wen, Huang Guofu, Wu Yanxia, Huang Hanju, Liu Qian

Study Type : Animal Study
Additional Links
Substances : Purslane : CK(51) : AC(18)
Diseases : Aging : CK(1658) : AC(438)
Pharmacological Actions : Telomerase Upregulation : CK(102) : AC(28)
Additional Keywords : Upregulation of Telemere Length : CK(4) : AC(3)

Purslane prevents stress-induced aging in mice.

Pubmed Data : Zhong Xi Yi Jie He Xue Bao. 2004 Sep;2(5):361-3. PMID: 15383260

Article Published Date : Sep 01, 2004

Authors : Chen Ling

Study Type : Animal Study
Additional Links
Substances : Purslane : CK(51) : AC(18)

Diseases : Aging : CK(1658) : AC(438)

Pycnogenol (Pine Bark) (AC 3) (CK 22)

A multi-nutrient mixture of vitamin C, vitamin E, carotenoids, selenium, zinc, amino acids and glycosaminoglycans, blueberry extract and pycnogenol improves visible signs of ageing in women 45-73 years of age.

Pubmed Data : J Dermatolog Treat. 2004 Jul;15(4):222-6. PMID: **15764035**

Article Published Date : Jul 01, 2004

Authors : D Segger, F Schönlau

Study Type : Human Study

Additional Links

Substances : Amino Acids : CK(100) : AC(16) , Blueberry : CK(260) : AC(90) , Glycosaminoglycans : CK(12) : AC(2), Pycnogenol (Pine Bark) : CK(556) : AC(94) , Selenium : CK(784) : AC(139) , Vitamin C : CK(1957) : AC(404), Vitamin E : CK(1656) : AC(290) , Zinc : CK(941) : AC(139)

Diseases : Aging Skin : CK(426) : AC(101) , Skin Diseases : CK(67) : AC(12)

Oral administration of French maritime pine bark extract (Flavangenol(®)) improves clinical symptoms in photoaged facial skin.

Pubmed Data : Clin Interv Aging. 2012 ;7:275-86. Epub 2012 Jul 27. PMID: **22956863**

Article Published Date : Dec 31, 2011

Authors : Minao Furumura, Noriko Sato, Nobutaka Kusaba, Kinya Takagaki, Juichiro Nakayama

Study Type : Human Study

Additional Links

Substances : Pycnogenol (Pine Bark) : CK(556) : AC(94)

Diseases : Aging Skin : CK(426) : AC(101)

Additional Keywords : Phytotherapy : CK(1216) : AC(221) , Plant Extracts : CK(7484) : AC(2463) , Proanthocyanidins : CK(203) : AC(54)

Pine bark may combat aging.

Pubmed Data : Cell Mol Life Sci. 1998 Oct;54(10):1168-72. PMID: **9817994**

Article Published Date : Oct 01, 1998

Authors : F J Liu, Y X Zhang, B H Lau

Study Type : Animal Study
Additional Links
Substances : Pine Bark Extract : CK(567) : AC(96) , Pycnogenol (Pine Bark) : CK(556) : AC(94)
Diseases : Aging : CK(1658) : AC(438)

Quercetin (AC 2) (CK 4)

Onion flesh and onion peel enhance antioxidant status in aged rats.

Pubmed Data : J Nutr Sci Vitaminol (Tokyo). 2007 Feb;53(1):21-9. PMID: **17484375**

Article Published Date : Feb 01, 2007

Authors : Juyeon Park, Joohee Kim, Mi Kyung Kim

Study Type : Animal Study
Additional Links
Substances : Flavonoids : CK(1215) : AC(379) , Onion : CK(235) : AC(57) , Polyphenols : CK(931) : AC(335), Quercetin : CK(564) : AC(250)
Diseases : Aging : CK(1658) : AC(438) , DNA damage : CK(993) : AC(382)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682)
Additional Keywords : Plant Extracts : CK(7484) : AC(2463)

Quercetin reverses alcohol-induced cognitive dysfunction.

Pubmed Data : Free Radic Res. 2003 Nov;37(11):1245-52. PMID: **14703737**

Article Published Date : Nov 01, 2003

Authors : Amanpreet Singh, Pattipati S Naidu, Shrinivas K Kulkarni

Study Type : Animal Study
Additional Links
Substances : Quercetin : CK(564) : AC(250)
Diseases : Aging : CK(1633) : AC(434) , Alcohol Toxicity : CK(319) : AC(125), Cognitive Decline/Dysfunction : CK(1151) : AC(215)
Pharmacological Actions : Neuroprotective Agents : CK(2268) : AC(1071)

Rehmannia (AC 1) (CK 2)

Catalpol, a compound found within Rehmannia, may ameliorate age-related brain dsyfunction.

Pubmed Data : Brain Res. 2006 Dec 6;1123(1):68-79. Epub 2006 Oct 31. PMID: 17078935

Article Published Date : Dec 06, 2006

Authors : Jing Liu, Qiao-Jie He, Wei Zou, Hong-Xia Wang, Yong-Ming Bao, Yu-Xin Liu, Li-Jia An

Study Type : Animal Study
Additional Links
Substances : Rehmannia : CK(121) : AC(32)
Diseases : Aging: Brain : CK(248) : AC(85)
Pharmacological Actions : Neuroprotective Agents : CK(2268) : AC(1071)

Reishi Mushroom (AC 3) (CK 4)

Acetic acid and Reishi mushroom polysaccharide contain lifespan-promoting activity in the nematode.

Pubmed Data : Bioorg Med Chem.2009 Nov 15;17(22):7831-40. Epub 2009 Sep 6. PMID: 19837596

Article Published Date : Nov 15, 2009

Authors : Ming-Hong Chuang, Shyh-Horng Chiou, Chun-Hao Huang, Wen-Bin Yang, Chi-Huey Wong

Study Type : Animal Study
Additional Links
Substances : Acetic Acid : CK(15) : AC(2) , Reishi Mushroom : CK(167) : AC(76)
Diseases : Aging : CK(1658) : AC(438)

Reishi contains compounds which exhibit anti-aging activity in yeast.

Pubmed Data : Bioorg Med Chem. 2010 Feb 1;18(3):999-1002. Epub 2010 Jan 6. PMID: 20093034

Article Published Date : Feb 01, 2010

Authors : Yufang Weng, Lan Xiang, Akira Matsuura, Yang Zhang, Qianming Huang, Jianhua Qi

Study Type : In Vitro Study

Additional Links
Substances : Reishi Mushroom : CK(167) : AC(76)
Diseases : Aging : CK(1658) : AC(438)

Two compounds from Reishi exhibit anti-aging properties in a yeast model.

Pubmed Data : Biosci Biotechnol Biochem. 2011 Apr 22. Epub 2011 Apr 22. PMID: 21512225

Article Published Date : Apr 22, 2011

Authors : Yufang Weng, Jun Lu, Lan Xiang, Akira Matsuura, Yang Zhang, Qianming Huang, Jianhua Qi

Study Type : In Vitro Study
Additional Links
Substances : Reishi Mushroom : CK(167) : AC(76)
Diseases : Aging : CK(1658) : AC(438)

Resveratrol (AC 32) (CK 65)

Caloric restriction and resveratrol promote longevity.

Pubmed Data : Cell Death Dis. 2010 Jan;1(1):e10. PMID: 21364612

Article Published Date : Jan 01, 2010

Authors : E Morselli, M C Maiuri, M Markaki, E Megalou, A Pasparaki, K Palikaras, A Criollo, L Galluzzi, S A Malik, I Vitale, M Michaud, F Madeo, N Tavernarakis, G Kroemer

Study Type : Animal Study
Additional Links
Substances : Resveratrol : CK(1245) : AC(746)
Diseases : Aging : CK(1658) : AC(438)
Therapeutic Actions : Fasting/Caloric Restriction : CK(297) : AC(63)
Pharmacological Actions : Autophagy Up-regulation : CK(108) : AC(65) , SIRT1 Activator : CK(39) : AC(23)

Chronic resveratrol intake reverses pro-inflammatory cytokine profile and oxidative DNA damage in ageing hybrid mice.

Pubmed Data : Age (Dordr). 2010 Aug 21. Epub 2010 Aug 21. PMID: 20730501

Article Published Date : Aug 21, 2010

Authors : Yee Ting Wong, Jan Gruber, Andrew M Jenner, Francis Eng Hock Tay, Runsheng Ruan

Study Type : Animal Study
Additional Links
Substances : Resveratrol : CK(1245) : AC(746)
Diseases : Aging : CK(1658) : AC(438), DNA damage : CK(993) : AC(382)
Pharmacological Actions : Anti-Inflammatory Agents : CK(4688) : AC(1630)

Dietary resveratrol suppresses muscle indices of oxidative stress.

Pubmed Data : J Gerontol A Biol Sci Med Sci. 2010 Aug;65(8):815-31. Epub 2010 May 27. PMID: 20507922

Article Published Date : Aug 01, 2010

Authors : Michael J Ryan, Janna R Jackson, Yanlei Hao, Courtney L Williamson, Erinne R Dabkowski, John M Hollander, Stephen E Alway

Study Type : Animal Study
Additional Links
Substances : Resveratrol : CK(1245) : AC(746)
Diseases : Aging : CK(1658) : AC(438), Lipid Peroxidation : CK(695) : AC(255), Muscle Damage: Exercise-Induced : CK(155) : AC(22), Oxidative Stress : CK(3871) : AC(1382)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682)
Additional Keywords : Stilbenes : CK(402) : AC(242)

Pterostilbene reduces the deleterious effects of aging in an animal model.

Pubmed Data : J Agric Food Chem. 2008 Nov 26;56(22):10544-51. PMID: 18954071

Article Published Date : Nov 26, 2008

Authors : James A Joseph, Derek R Fisher, Vivian Cheng, Agnes M Rimando, Barbara Shukitt-Hale

Study Type : Animal Study
Additional Links
Substances : Pterostilbene : CK(88) : AC(52), Resveratrol : CK(1245) : AC(746)
Diseases : Aging : CK(1633) : AC(434), Aging: Brain : CK(248) : AC(85), Cognitive Decline/Dysfunction : CK(1151) : AC(215), Oxidative Stress : CK(3871) : AC(1382)
Additional Keywords : Stilbenes : CK(402) : AC(242)

Resveratrol and NAC may prevent age-associated decline in skin and/or connective tissue quality.

Pubmed Data : Minerva Ginecol. 2010 Jun;62(3):195-201. PMID: 20595944

Article Published Date : Jun 01, 2010

Authors : S Giardina, A Michelotti, G Zavattini, S Finzi, C Ghisalberti, F Marzatico

Study Type : In Vitro Study

Additional Links
Substances : NAC (N-acetyl-L-cysteine) : CK(295) : AC(72) , Resveratrol : CK(1245) : AC(746)
Diseases : Aging Skin : CK(426) : AC(101) , Postmenopausal Disorders : CK(329) : AC(42)
Pharmacological Actions : Antiproliferative : CK(2479) : AC(1685), Enzyme Inhibitors : CK(473) : AC(251)
Additional Keywords : Stilbenes : CK(402) : AC(242)

Resveratrol compares favorably to caloric restriction in extending the lifespan of Drosophila.

Pubmed Data : Cell Cycle. 2011 Mar 15;10(6). Epub 2011 Mar 15. PMID: **21325893**

Article Published Date : Mar 15, 2011

Authors : Michael Antosh, Rachel Whitaker, Adam Kroll, Suzanne Hosier, Chengyi Chang, Johannes Bauer, Leon Cooper, Nicola Neretti, Stephen L Helfand

Study Type : In Vitro Study
Additional Links
Substances : Resveratrol : CK(1245) : AC(746)
Diseases : Aging : CK(1658) : AC(438)
Therapeutic Actions : Fasting/Caloric Restriction : CK(297) : AC(63)

Resveratrol exhibits anti-aging immunomodulatory properties.

Pubmed Data : Zhong Yao Cai. 2006 May;29(5):464-7. PMID: **16981461**

Article Published Date : May 01, 2006

Authors : Yu Yao, Tao Tian, Ke-jun Nan

Study Type : Animal Study
Additional Links
Substances : Resveratrol : CK(1245) : AC(746)
Diseases : Aging : CK(1658) : AC(438) , Aging: Immunosenecence : CK(52) : AC(13)
Pharmacological Actions : Immunomodulatory: CD8+ Up-regulation : CK(2) : AC(1) , Interleukin-6 Downregulation : CK(1095) : AC(342), Interleukin-8 downregulation : CK(166) : AC(61) , Malondialdehyde Down-regulation : CK(554) : AC(152) , Superoxide Dismutase Up-regulation : CK(508) : AC(171)
Additional Keywords : Stilbenes : CK(402) : AC(242)

Resveratrol exhibits anti-aging properties.

Pubmed Data : Horm Metab Res. 2010 Nov;42(12):837-9. Epub 2010 Oct 5. PMID: **20925017**

Article Published Date : Nov 01, 2010

Authors : K Zarse, S Schmeisser, M Birringer, E Falk, D Schmoll, M Ristow

Study Type : Animal Study
Additional Links
Substances : Resveratrol : CK(1245) : AC(746)

Diseases : Aging : CK(1658) : AC(438)
Additional Keywords : Stilbenes : CK(402) : AC(242)

Resveratrol has a neuroprotective effect in a rat model of aging.

Pubmed Data : Mol Cells. 2008 Nov 30;26(5):486-9. PMID: **21122283**

Article Published Date : Nov 30, 2008

Authors : A Chiavaroli, L Brunetti, G Orlando, L Recinella, C Ferrante, S Leone, P Di Michele, C Di Nisio, M Vacca

Study Type : Meta Analysis
Additional Links
Substances : Resveratrol : CK(1245) : AC(746)
Diseases : Aging : CK(1658) : AC(438), Aging: Brain : CK(248) : AC(85), Oxidative Stress : CK(3871) : AC(1382)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682), Neuroprotective Agents : CK(2268) : AC(1071)
Additional Keywords : Stilbenes : CK(402) : AC(242)

Resveratrol has the potential to be an effective therapeutic agent to treat muscle functional decrements via improving the redox status associated with disuse.

Pubmed Data : Am J Physiol Regul Integr Comp Physiol. 2010 Dec;299(6):R1572-81. Epub 2010 Sep 22. PMID: **20861279**

Article Published Date : Dec 01, 2010

Authors : Janna R Jackson, Michael J Ryan, Yanlei Hao, Stephen E Alway

Study Type : Animal Study
Additional Links
Substances : Resveratrol : CK(1245) : AC(746)
Diseases : Aging : CK(1658) : AC(438), Lipid Peroxidation : CK(695) : AC(255), Muscle Atrophy : CK(105) : AC(35), Oxidative Stress : CK(3871) : AC(1382)
Pharmacological Actions : Apoptotic : CK(2958) : AC(2075)
Additional Keywords : Stilbenes : CK(402) : AC(242)

Resveratrol has therapeutic potential for age-associated chronic diseases.

Pubmed Data : Cell Cycle. 2008 Apr 15;7(8):1020-35. Epub 2008 Feb 15. PMID: **18414053**

Article Published Date : Apr 15, 2008

Authors : Kuzhuvelil B Harikumar, Bharat B Aggarwal

Study Type : Review
Additional Links

Substances : Resveratrol : CK(1245) : AC(746)
Diseases : Aging : CK(1658) : AC(438)
Additional Keywords : Stilbenes : CK(402) : AC(242)

Resveratrol imparts photoprotection of normal cells and enhances the efficacy of radiation therapy in cancer cells.

Pubmed Data : Photochem Photobiol. 2008 Mar-Apr;84(2):415-21. Epub 2008 Jan 23. PMID: 18221451

Article Published Date : Mar 01, 2008

Authors : Shannon Reagan-Shaw, Hasan Mukhtar, Nihal Ahmad

Study Type : Commentary
Additional Links
Substances : Resveratrol : CK(1245) : AC(746)
Diseases : Photochemotherapy : CK(1) : AC(1) , Radiation Induced Illness : CK(1046) : AC(264) , Skin Diseases: Photo-Aging : CK(132) : AC(51)
Pharmacological Actions : Radiosensitizer : CK(99) : AC(62)

Resveratrol improves insulin resistance hyperglycemia and hepatosteatosis but not hypertriglyceridemia, inflammation, and life span in a mouse model for werner syndrome.

Pubmed Data : J Gerontol A Biol Sci Med Sci. 2011 Mar;66(3):264-78. Epub 2010 Oct 25. PMID: 20974729

Article Published Date : Mar 01, 2011

Authors : Adam Labbé, Chantal Garand, Victoria C Cogger, Eric R Paquet, Myriam Desbiens, David G Le Couteur, Michel Lebel

Study Type : Animal Study
Additional Links
Substances : Resveratrol : CK(1245) : AC(746)
Diseases : Aging : CK(1633) : AC(434) , Fatty Liver : CK(844) : AC(193) , Inflammation : CK(3003) : AC(872), Insulin Resistance : CK(1683) : AC(346) , Triglycerides: Elevated : CK(678) : AC(117) , Werner Syndrome : CK(5) : AC(3)
Pharmacological Actions : Hypoglycemic Agents : CK(1394) : AC(342) , Hypolipidemic : CK(1229) : AC(256)

Resveratrol increases muscle performance in older individuals practising moderate exercise.

Pubmed Data : Br J Nutr. 2016 Aug 4:1-10. Epub 2016 Aug 4. PMID: 27488121

Article Published Date : Aug 03, 2016

Authors : Elizabeth Rodríguez-Bies, Bui Thanh Tung, Plácido Navas, Guillermo López-Lluch

Study Type : Animal Study
Additional Links
Substances : Resveratrol : CK(1245) : AC(746)
Diseases : Aging : CK(1658) : AC(438)
Therapeutic Actions : Exercise : CK(1256) : AC(196)

Resveratrol inhibits aging in a way to similar to caloric restriction.

Pubmed Data : Exp Gerontol. 2008 Jul 9. PMID: **18657603**

Article Published Date : Jul 09, 2008

Authors : J L Barger, T Kayo, T D Pugh, T A Prolla, R Weindruch

Study Type : In Vitro Study
Additional Links
Substances : Resveratrol : CK(1245) : AC(746)
Diseases : Aging : CK(1658) : AC(438)
Additional Keywords : Caloric Restriction : CK(3) : AC(1)

Resveratrol inhibits high glucose-induced cellular aging in endothelial cells.

Pubmed Data : Clin Exp Pharmacol Physiol. 2010 May;37(5-6):630-5. Epub 2010 Feb 4. PMID: **20132235**

Article Published Date : May 01, 2010

Authors : Qiong Yuan, Jun Peng, Si-Yu Liu, Chen-Jing Wang, Da-Xiong Xiang, Xiao-Ming Xiong, Chang-Ping Hu, Yuan-Jian Li

Study Type : In Vitro Study
Additional Links
Substances : Resveratrol : CK(1245) : AC(746)
Diseases : Aging : CK(1658) : AC(438), Endothelial Dysfunction : CK(1176) : AC(232), Hyperglycemia : CK(539) : AC(130)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682), Nitric Oxide Inhibitor : CK(223) : AC(108), SIRT1 Activator : CK(39) : AC(23)
Additional Keywords : Stilbenes : CK(402) : AC(242)

Resveratrol intake and habitual exercise suppresses age-associated decline in physical performance in senescence-accelerated mice.

Pubmed Data : Biogerontology. 2009 Aug;10(4):423-34. Epub 2008 Oct 1. PMID: **18830683**

Article Published Date : Aug 01, 2009

Authors : Takatoshi Murase, Satoshi Haramizu, Noriyasu Ota, Tadashi Hase

Study Type : Animal Study
Additional Links
Substances : Resveratrol : CK(1245) : AC(746)
Diseases : Aging : CK(1658) : AC(438)
Therapeutic Actions : Exercise : CK(1256) : AC(196)
Additional Keywords : Stilbenes : CK(402) : AC(242)

Resveratrol may have a protective effect against skin cancer and skin photo-aging.

Pubmed Data : J Drugs Dermatol. 2010 Dec;9(12):1523-6. PMID: **21120261**

Article Published Date : Dec 01, 2010

Authors : Jared Jagdeo, Lauren Adams, Hadar Lev-Tov, Jolanta Sieminska, Josef Michl, Neil Brody

Study Type : In Vitro Study
Additional Links
Substances : Resveratrol : CK(1245) : AC(746)
Diseases : Skin Cancer : CK(652) : AC(264), Skin Diseases: Photo-Aging : CK(132) : AC(51)
Pharmacological Actions : Chemopreventive : CK(2835) : AC(787)

Resveratrol may have therapeutic value in endothelial dysfunction.

Pubmed Data : Biofactors. 2010 Sep;36(5):342-9. PMID: **20730905**

Article Published Date : Sep 01, 2010

Authors : Christoph A Schmitt, Elke H Heiss, Verena M Dirsch

Study Type : Review
Additional Links
Substances : Resveratrol : CK(1245) : AC(746)
Diseases : Aging : CK(1633) : AC(434), Endothelial Dysfunction : CK(1176) : AC(232), Inflammation : CK(3003) : AC(872)
Pharmacological Actions : Apoptotic : CK(2958) : AC(2075)
Additional Keywords : Stilbenes : CK(402) : AC(242)

Resveratrol preserves cerebrovascular density and cognitive function in aging mice.

Pubmed Data : Front Aging Neurosci. 2009;1:4. Epub 2009 Dec 9. PMID: **20552055**

Article Published Date : Jan 01, 2009

Authors : Charlotte A Oomen, Eszter Farkas, Viktor Roman, Eline M van der Beek, Paul G M Luiten, Peter Meerlo

Study Type : Animal Study
Additional Links
Substances : Resveratrol : CK(1245) : AC(746)

Diseases : Aging: Brain : CK(248) : AC(85)
Pharmacological Actions : Neuroprotective Agents : CK(2268) : AC(1071)

Resveratrol protects against age-associated changes in cultured human fibroblasts.

Pubmed Data : J Gerontol A Biol Sci Med Sci. 2011 Jan;66(1):9-18. Epub 2010 Sep 24. PMID: 20884849

Article Published Date : Jan 01, 2011

Authors : Lisa Giovannelli, Vanessa Pitozzi, Michela Jacomelli, Nadia Mulinacci, Anna Laurenzana, Piero Dolara, Alessandra Mocali

Study Type : In Vitro Study
Additional Links
Substances : Resveratrol : CK(1245) : AC(746)
Diseases : Aging : CK(1658) : AC(438), DNA damage : CK(993) : AC(382)
Additional Keywords : Stilbenes : CK(402) : AC(242)

Resveratrol protects human endothelium from hydrogen peroxide-induced oxidative stress and senescence.

Pubmed Data : J Atheroscler Thromb. 2010 Sep 30;17(9):970-9. Epub 2010 Jul 13. PMID: 20644332

Article Published Date : Sep 30, 2010

Authors : Chung-Lan Kao, Liang-Kung Chen, Yuh-Lih Chang, Ming-Chih Yung, Chuan-Chih Hsu, Yu-Chih Chen, Wen-Liang Lo, Shih-Jen Chen, Hung-Hai Ku, Shin-Jang Hwang

Study Type : In Vitro Study
Additional Links
Substances : Resveratrol : CK(1245) : AC(746)
Diseases : Aging : CK(1658) : AC(438), Atherosclerosis : CK(601) : AC(150), Endothelial Dysfunction : CK(1176) : AC(232), Oxidative Stress : CK(3871) : AC(1382)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682), Vasoprotective : CK(21) : AC(9)
Additional Keywords : Stilbenes : CK(402) : AC(242)

Resveratrol protects human skin cells against UVA-induced oxidative stress.

Pubmed Data : Eur J Pharmacol. 2011 Jan 10;650(1):130-7. Epub 2010 Oct 14. PMID: 20951123

Article Published Date : Jan 10, 2011

Authors : Yong Liu, Fangxiao Chan, Haimei Sun, Jihong Yan, Dongying Fan, Dongzhi Zhao, Jing An, Deshan Zhou

Study Type : In Vitro Study
Additional Links
Substances : Resveratrol : CK(1245) : AC(746)
Diseases : Skin Diseases: Photo-Aging : CK(132) : AC(51), Sunburn : CK(41) : AC(19)

Pharmacological Actions : Antioxidants : CK(7331) : AC(2682)

Resveratrol reduces aging via telomerase activation.

Pubmed Data : Br J Pharmacol. 2008 Jun 30. PMID: **18587418**

Article Published Date : Jun 30, 2008

Authors : L Xia, X X Wang, X S Hu, X G Guo, Y P Shang, H J Chen, C L Zeng, F R Zhang, J Z Chen

Study Type : In Vitro Study
Additional Links
Substances : Resveratrol : CK(1245) : AC(746)
Diseases : Aging : CK(1658) : AC(438)
Pharmacological Actions : Telomerase Upregulation : CK(102) : AC(28)

Resveratrol reduces infection-related neuroinflammation and deficits in working memory in aged mice.

Pubmed Data : Rejuvenation Res. 2009 Dec;12(6):445-53. PMID: **20041738**

Article Published Date : Dec 01, 2009

Authors : Jayne Abraham, Rodney W Johnson

Study Type : Animal Study
Additional Links
Substances : Resveratrol : CK(1245) : AC(746), Stilbenes : CK(136) : AC(101)
Diseases : Aging : CK(1633) : AC(434), Brain: Microglial Activation : CK(82) : AC(53), Inflammation : CK(3003) : AC(872), Lipopolysaccharide-Induced Toxicity : CK(359) : AC(218), Memory Disorders : CK(342) : AC(104)
Pharmacological Actions : Anti-Inflammatory Agents : CK(4688) : AC(1630), Interleukin-1 beta downregulation : CK(463) : AC(205), Neuroprotective Agents : CK(2268) : AC(1071)

Resveratrol reduces remodeling associated with hypertension.

Pubmed Data : Am J Hypertens. 2010 Dec;23(12):1273-8. Epub 2010 Jul 29. PMID: **20671721**

Article Published Date : Dec 01, 2010

Authors : John Behbahani, Sijo J Thandapilly, Xavier L Louis, Yingsu Huang, Zongjun Shao, Melanie A Kopilas, Peter Wojciechowski, Thomas Netticadan, Hope D Anderson

Study Type : Animal Study
Additional Links
Substances : Resveratrol : CK(1245) : AC(746)
Diseases : Aging : CK(1658) : AC(438), Hypertension : CK(2984) : AC(406)
Pharmacological Actions : Cardioprotective : CK(1596) : AC(409), Hypotensive : CK(435) : AC(59)
Additional Keywords : Stilbenes : CK(402) : AC(242)

Resveratrol suppresses cellular aging.

Pubmed Data : Cell Cycle. 2009 Jun 15;8(12):1901-4. Epub 2009 Jun 21. PMID: **19471118**

Article Published Date : Jun 15, 2009

Authors : Zoya N Demidenko, Mikhail V Blagosklonny

Study Type : In Vitro Study
Additional Links
Substances : Resveratrol : CK(1245) : AC(746)
Diseases : Aging : CK(1658) : AC(438)
Pharmacological Actions : Antiproliferative : CK(2479) : AC(1685), Enzyme Inhibitors : CK(473) : AC(251)
Additional Keywords : Stilbenes : CK(402) : AC(242)

Resveratrol, by acting on specific polyphenol binding sites in epidermis, may be useful to prevent skin disorders associated with aging.

Pubmed Data : PLoS One. 2010;5(9):e12935. Epub 2010 Sep 23. PMID: **20886076**

Article Published Date : Jan 01, 2010

Authors : Stéphane Bastianetto, Yvan Dumont, Albert Duranton, Freya Vercauteren, Lionel Breton, Rémi Quirion

Study Type : In Vitro Study
Additional Links
Substances : Flavonoids : CK(1215) : AC(379) , Polyphenols : CK(931) : AC(335) , Resveratrol : CK(1245) : AC(746)
Diseases : Aging Skin : CK(426) : AC(101)
Pharmacological Actions : Apoptotic : CK(2958) : AC(2075)
Additional Keywords : Stilbenes : CK(402) : AC(242)

Review: Resveratrol's therapeutic role in Alzheimer's disease.

Pubmed Data : Brain Res Rev. 2006 Sep;52(2):316-26. PMID: **16766037**

Article Published Date : Sep 01, 2006

Authors : Thimmappa S Anekonda

Study Type : Review
Additional Links
Substances : Resveratrol : CK(1245) : AC(746)
Diseases : Aging : CK(1658) : AC(438) , Alzheimer's Disease : CK(1292) : AC(382)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682)
Additional Keywords : Stilbenes : CK(402) : AC(242)

Review: resveratrol may improve insulin action and aging.

Pubmed Data : Curr Aging Sci. 2008 Dec;1(3):145-51. PMID: **20021385**

Article Published Date : Dec 01, 2008

Authors : Sara Fröjdö, Christine Durand, Luciano Pirola

Study Type : Review
Additional Links
Substances : Resveratrol : CK(1245) : AC(746) , Stilbenes : CK(136) : AC(101)
Diseases : Aging : CK(1658) : AC(438) , Insulin Resistance : CK(1683) : AC(346)

Spermidine and resveratrol mediates pharmacological lifespan extension through the up-regulation of autophagy.

Pubmed Data : Aging (Albany NY). 2009 Dec;1(12):961-70. Epub 2009 Dec 23. PMID: **20157579**

Article Published Date : Dec 01, 2009

Authors : Eugenia Morselli, Lorenzo Galluzzi, Oliver Kepp, Alfredo Criollo, Maria Chiara Maiuri, Nektarios Tavernarakis, Frank Madeo, Guido Kroemer

Study Type : Review
Additional Links
Substances : Resveratrol : CK(1245) : AC(746) , Spermidine : CK(4) : AC(3)
Diseases : Aging : CK(1658) : AC(438)
Pharmacological Actions : Autophagy Up-regulation : CK(108) : AC(65) , Histone deacetylase inhibitor : CK(48) : AC(37)
Additional Keywords : Stilbenes : CK(402) : AC(242)

The plant polyphenols genistein and resveratrol preserve ovarian follicular function in aging rats.

Pubmed Data : Biochem Cell Biol. 2010 Aug;88(4):737-45. PMID: **20651847**

Article Published Date : Aug 01, 2010

Authors : Zhen-Guo Chen, Li-Li Luo, Jin-Jie Xu, Xiao-Lan Zhuang, Xiao-Xia Kong, Yu-Cai Fu

Study Type : Animal Study
Additional Links
Substances : Flavonoids : CK(1215) : AC(379) , Genistein : CK(515) : AC(228) , Polyphenols : CK(931) : AC(335), Resveratrol : CK(1245) : AC(746)
Diseases : Aging : CK(1658) : AC(438) , Infertility: Aging Associated : CK(2) : AC(1) , Infertility: Female : CK(280) : AC(50)
Additional Keywords : Plant Extracts : CK(7484) : AC(2463) , Stilbenes : CK(402) : AC(242)

Rhodiola (Tibetan Ginseng) (AC 4) (CK 5)

Eleutherococcus senticosus and Rhodiola rosea induce increased stress response and a longer lifespan.

Pubmed Data : Biogerontology. 2008 Jun 7. PMID: 18536978

Article Published Date : Jun 07, 2008

Authors : F A C Wiegant, S Surinova, E Ytsma, M Langelaar-Makkinje, G Wikman, J A Post

Additional Links
Substances : Ginseng (Siberian) : CK(88) : AC(20) , Rhodiola (Tibetan Ginseng) : CK(156) : AC(35)
Diseases : Aging : CK(1658) : AC(438)

Rhodiola exhibits an effect on decelerated aging in the fruit fly.

Pubmed Data : Rejuvenation Res. 2007 Dec;10(4):587-602. PMID: 17990971

Article Published Date : Dec 01, 2007

Authors : Mahtab Jafari, Jeffrey S Felgner, Irvin I Bussel, Tony Hutchili, Behnood Khodayari, Michael R Rose, C Vince-Cruz, Laurence D Mueller

Study Type : Animal Study
Additional Links
Substances : Rhodiola (Tibetan Ginseng) : CK(156) : AC(35)
Diseases : Aging : CK(1658) : AC(438)

Salidroside, a compound found within rhodiola, exhibits anti-aging properties.

Pubmed Data : Mech Ageing Dev. 2010 Nov-Dec;131(11-12):723-31. Epub 2010 Oct 28. PMID: 21035481

Article Published Date : Nov 01, 2010

Authors : Gen-xiang Mao, Yan Wang, Qiang Qiu, Hong-bin Deng, Long-guo Yuan, Rui-guo Li, Dan-qing Song, Yi-yang Yvonne Li, Dian-dong Li, Zhen Wang

Study Type : In Vitro Study
Additional Links
Substances : Rhodiola (Tibetan Ginseng) : CK(156) : AC(35)
Diseases : Aging : CK(1658) : AC(438) , DNA damage : CK(993) : AC(382) , Oxidative Stress : CK(3871) : AC(1382)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682) , Cell cycle arrest : CK(810) : AC(612)

Salidroside, a compound found within rhodiola, protects against aging in a mouse model.

Pubmed Data : Biomed Environ Sci. 2010 Apr;23(2):161-6. PMID: 20514993

Article Published Date : Apr 01, 2010

Authors : Gen-Xiang Mao, Hong-Bin Deng, Long-Guo Yuan, Dian-Dong Li, Yi-Yang Yvonne Li, Zhen Wang

Study Type : Animal Study
Additional Links
Substances : Rhodiola (Tibetan Ginseng) : CK(156) : AC(35)
Diseases : Advanced Glycation End products (AGE) : CK(231) : AC(73) , Aging : CK(1658) : AC(438)

Rice Bran (AC 1) (CK 2)

Long-term treatment with a nutraceutical containing rice bran extract could be useful for slowing down brain aging.

Pubmed Data : Neuromolecular Med. 2016 Jun 27. Epub 2016 Jun 27. PMID: 27350374

Article Published Date : Jun 26, 2016

Authors : Stephanie Hagl, Heike Asseburg, Martina Heinrich, Nadine Sus, Eva-Maria Blumrich, Ralf Dringen, Jan Frank, Gunter P Eckert

Study Type : Animal Study
Additional Links
Substances : Rice Bran : CK(127) : AC(37) , Vitamin E : CK(1656) : AC(290)
Diseases : Aging: Brain : CK(248) : AC(85), Alzheimer's Disease : CK(1292) : AC(382) , Mitochondrial Dysfunction : CK(225) : AC(91), Neurodegenerative Diseases : CK(3376) : AC(850)
Pharmacological Actions : Neuroprotective Agents : CK(2268) : AC(1071)
Additional Keywords : Plant Extracts : CK(7484) : AC(2463) , Risk Reduction : CK(6417) : AC(686)

Rose (AC 3) (CK 5)

A number of botanical extracts reduce skin wrinkling.

Pubmed Data : Drugs Aging. 2010 Dec 1;27(12):973-85. PMID: **21087067**

Article Published Date : Dec 01, 2010

Authors : Katherine J Hunt, Shao Kang Hung, Edzard Ernst

Study Type : Review
Additional Links
Substances : Cork Extract : CK(11) : AC(2) , Date Kernel Extract : CK(11) : AC(2) , Peony : CK(50) : AC(14), Rose : CK(167) : AC(46), Soy : CK(1787) : AC(399)
Diseases : Aging Skin : CK(426) : AC(101)

Rose extract exhibits anti-aging properties in a fruit fly model.

Pubmed Data : J Med Food. 2008 Mar;11(1):9-13. PMID: **18361732**

Article Published Date : Mar 01, 2008

Authors : Mahtab Jafari, Asghar Zarban, Steven Pham, Thomas Wang

Study Type : Animal Study
Additional Links
Substances : Rose : CK(167) : AC(46)
Diseases : Aging : CK(1658) : AC(438)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682)
Additional Keywords : Plant Extracts : CK(7484) : AC(2463)

Rose flower extracts increase lifespan in mice via up-regulation of antioxidant enzymes.

Pubmed Data : Biochem Cell Biol. 2005 Feb;83(1):78-85. PMID: **15746969**

Article Published Date : Feb 01, 2005

Authors : T B Ng, W Gao, L Li, S M Niu, L Zhao, J Liu, L S Shi, M Fu, F Liu

Study Type : Animal Study
Additional Links
Substances : Rose : CK(167) : AC(46)
Diseases : Aging : CK(1658) : AC(438)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682)
Additional Keywords : Plant Extracts : CK(7484) : AC(2463)

Rosemary (AC 3) (CK 4)

A water-soluble extract of rosemary protects human skin

cells against UV-induced damage.

Pubmed Data : Eur J Dermatol. 2008 Mar-Apr;18(2):128-35. PMID: **18424370**

Article Published Date : Mar 01, 2008

Authors : Richard Martin, Cécile Pierrard, François Lejeune, Pascal Hilaire, Lionel Breton, Françoise Bernerd

Study Type : In Vitro Study
Additional Links
Substances : Rosemary : CK(218) : AC(78)
Diseases : Skin Diseases: Photo-Aging : CK(132) : AC(51)

Extracts from spearmint and rosemary have beneficial effects on learning and memory and brain tissue markers of oxidation.

Pubmed Data : Physiol Behav. 2016 Aug 12. Epub 2016 Aug 12. PMID: **27527000**

Article Published Date : Aug 11, 2016

Authors : Susan A Farr, Michael L Niehoff, Michael A Ceddia, Kelli A Herrlinger, Brandon J Lewis, Shulin Feng, Andrew Welleford, D Allan Butterfield, John E Morley

Study Type : Animal Study
Additional Links
Substances : Carnosic Acid : CK(29) : AC(21) , Rosemary : CK(218) : AC(78) , Rosmarinic acid : CK(27) : AC(14), Spearmint : CK(45) : AC(7)
Diseases : Aging: Brain : CK(248) : AC(85), Brain: Oxidative Stress : CK(79) : AC(46) , Learning disorders : CK(190) : AC(51), Memory Disorders : CK(342) : AC(104)
Pharmacological Actions : Neuroprotective Agents : CK(2268) : AC(1071)
Additional Keywords : Plant Extracts : CK(7484) : AC(2463)

Rosmarinic acid has protective properties against UV and other ionizing radiations.

Pubmed Data : Food Chem Toxicol. 2009 Feb;47(2):386-92. Epub 2008 Nov 30. PMID: **19084569**

Article Published Date : Feb 01, 2009

Authors : M Sánchez-Campillo, J A Gabaldon, J Castillo, O Benavente-García, M J Del Baño, M Alcaraz, V Vicente, N Alvarez, J A Lozano

Study Type : In Vitro Study
Additional Links
Substances : Rosemary : CK(218) : AC(78)
Diseases : DNA damage : CK(993) : AC(382) , Radiation Induced Illness : CK(1046) : AC(264) , Skin Cancer : CK(652) : AC(264), Skin Diseases: Photo-Aging : CK(132) : AC(51)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682) , Radioprotective : CK(756) : AC(262)
Additional Keywords : Plant Extracts : CK(7484) : AC(2463)

Rosmarinic acid (AC 1) (CK 2)

Extracts from spearmint and rosemary have beneficial effects on learning and memory and brain tissue markers of oxidation.

Pubmed Data : Physiol Behav. 2016 Aug 12. Epub 2016 Aug 12. PMID: **27527000**

Article Published Date : Aug 11, 2016

Authors : Susan A Farr, Michael L Niehoff, Michael A Ceddia, Kelli A Herrlinger, Brandon J Lewis, Shulin Feng, Andrew Welleford, D Allan Butterfield, John E Morley

Study Type : Animal Study
Additional Links
Substances : Carnosic Acid : CK(29) : AC(21) , Rosemary : CK(218) : AC(78) , Rosmarinic acid : CK(27) : AC(14), Spearmint : CK(45) : AC(7)
Diseases : Aging: Brain : CK(248) : AC(85), Brain: Oxidative Stress : CK(79) : AC(46) , Learning disorders : CK(190) : AC(51), Memory Disorders : CK(342) : AC(104)
Pharmacological Actions : Neuroprotective Agents : CK(2268) : AC(1071)
Additional Keywords : Plant Extracts : CK(7484) : AC(2463)

Royal Jelly (AC 2) (CK 4)

Royal jelly increases collagen production in rat skin after ovariectomy.

Pubmed Data : J Med Food. 2012 Apr 2. Epub 2012 Apr 2. PMID: **22468645**

Article Published Date : Apr 02, 2012

Authors : Hye Min Park, Min Hyoung Cho, Yunhi Cho, Sun Yeou Kim

Study Type : Animal Study
Additional Links
Substances : Royal Jelly : CK(105) : AC(37)
Diseases : Aging Skin : CK(426) : AC(101) , Estrogen Deficiency : CK(57) : AC(19) , Ovariectomy Associated Adverse Changes : CK(18) : AC(7)
Additional Keywords : Ovariectomy-Induced Changes : CK(84) : AC(39)

Royal jelly prolongs the life span of mice.

Pubmed Data : Exp Gerontol. 2003 Sep;38(9):965-9. PMID: **12954483**

Article Published Date : Sep 01, 2003

Authors : Shin-ichiro Inoue, Satomi Koya-Miyata, Shimpei Ushio, Kanso Iwaki, Masao Ikeda, Masashi Kurimoto

Study Type : Animal Study
Additional Links
Substances : Royal Jelly : CK(105) : AC(37)
Diseases : Aging : CK(1658) : AC(438)

Rutin (AC 1) (CK 1)

buckwheat extract has antioxidant and photoprotective properties.

Pubmed Data : Pharmazie. 2006 Mar;61(3):237-40. PMID: **16599267**

Article Published Date : Mar 01, 2006

Authors : I Hinneburg, S Kempe, H H Rüttinger, R H H Neubert

Study Type : In Vitro Study
Additional Links
Substances : Rutin : CK(126) : AC(48)
Diseases : Oxidative Stress : CK(3871) : AC(1382) , Skin Diseases: Photo-Aging : CK(132) : AC(51) , Sunburn : CK(41) : AC(19)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682) , Radioprotective : CK(756) : AC(262)
Additional Keywords : Plant Extracts : CK(7484) : AC(2463)

Schisandra (AC 1) (CK 1)

Schisandra and Eluetherococcus improve the cellular response to stress, thereby attenuating fatigue, enhancing metnal and physical performance and possibly

increasing longevity.

Pubmed Data : Curr Clin Pharmacol. 2009 Sep 1. PMID: 19500070

Article Published Date : Sep 01, 2009

Authors : Alexander Panossian, Georg Wikman

Study Type : Review
Additional Links
Substances : Ginseng (Siberian) : CK(88) : AC(20) , Schisandra : CK(129) : AC(45)
Diseases : Aging : CK(1633) : AC(434) , Athletic Performance : CK(583) : AC(73) , Fatigue : CK(301) : AC(47)

Selenium (AC 4) (CK 14)

A multi-nutrient mixture of vitamin C, vitamin E, carotenoids, selenium, zinc, amino acids and glycosaminoglycans, blueberry extract and pycnogenol improves visible signs of ageing in women 45-73 years of age.

Pubmed Data : J Dermatolog Treat. 2004 Jul;15(4):222-6. PMID: 15764035

Article Published Date : Jul 01, 2004

Authors : D Segger, F Schönlau

Study Type : Human Study
Additional Links
Substances : Amino Acids : CK(100) : AC(16) , Blueberry : CK(260) : AC(90) , Glycosaminoglycans : CK(12) : AC(2), Pycnogenol (Pine Bark) : CK(556) : AC(94) , Selenium : CK(784) : AC(139) , Vitamin C : CK(1957) : AC(404), Vitamin E : CK(1656) : AC(290) , Zinc : CK(941) : AC(139)
Diseases : Aging Skin : CK(426) : AC(101) , Skin Diseases : CK(67) : AC(12)

A selenium/arginine mixture prevents chemically-induced immunosuppresion and accelerated aging.

Pubmed Data : Xi Bao Yu Fen Zi Mian Yi Xue Za Zhi. 2007 Dec;23(12):1126-9. PMID: 18062883

Article Published Date : Dec 01, 2007

Authors : Yan-Hong Ma, An-Jun Liu, Guo-Rong Zhang, Jing Lang

Study Type : Animal Study
Additional Links

Substances : Arginine : CK(1012) : AC(176) , Selenium : CK(784) : AC(139)
Diseases : Aging : CK(1658) : AC(438) , Aging: Immunosenecence : CK(52) : AC(13) , Immune Disorders: Low Immune Function : CK(489) : AC(118)
Pharmacological Actions : Antiproliferative : CK(2479) : AC(1685), Immunomodulatory : CK(1287) : AC(358)

Vitamin A, vitamin E, zinc and selenium deficiencies may be associated with androgen deficiency in aging men.

Pubmed Data : Clin Neuropharmacol. 1999 Jul-Aug;22(4):241-3. PMID: **16281517**

Article Published Date : Jul 01, 1999

Authors : Fang He, Lei Feng

Study Type : Commentary
Additional Links
Substances : Selenium : CK(784) : AC(139) , Vitamin A : CK(498) : AC(77) , Vitamin E : CK(1656) : AC(290), Zinc : CK(941) : AC(139)
Diseases : Aging : CK(1658) : AC(438) , Androgen Deficiency : CK(42) : AC(14) , Low Testosterone : CK(433) : AC(78)

Zinc and selenium may have therapeutic roles in anti-aging medicine.

Pubmed Data : Curr Pharm Des. 2008;14(26):2719-32. PMID: **18991691**

Article Published Date : Jan 01, 2008

Authors : E Mocchegiani, M Malavolta, E Muti, L Costarelli, C Cipriano, F Piacenza, S Tesei, R Giacconi, F Lattanzio

Study Type : Review
Additional Links
Substances : Selenium : CK(784) : AC(139) , Zinc : CK(941) : AC(139)
Diseases : Aging : CK(1658) : AC(438)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682)

Sesame oil: topical (AC 1) (CK 1)

Herbs provide protection against harmful UV radiation due to their antioxidant activity.

Pubmed Data : Pharmacogn Rev. 2011 Jul ;5(10):164-73. PMID: **22279374**

Article Published Date : Jul 01, 2011

Authors : Radava R Korać, Kapil M Khambholja

Study Type : Review

Additional Links

Substances : Coconut oil: topical : CK(1) : AC(1), Flavonoids : CK(1215) : AC(379), Krameria lappacea: topical : CK(1) : AC(1), Olive oil: topical : CK(1) : AC(1), Peanut oil: topical : CK(1) : AC(1), Sesame oil: topical : CK(1) : AC(1), Vitamin C : CK(1957) : AC(404), Vitamin E : CK(1656) : AC(290)

Diseases : Skin Diseases: Photo-Aging : CK(132) : AC(51), Sunburn : CK(41) : AC(19), Ultraviolet Radiation Induced Damage : CK(80) : AC(34)

Pharmacological Actions : Antioxidants : CK(7331) : AC(2682), Photoprotective : CK(74) : AC(27)

Sesamol (AC 1) (CK 1)

Sesamol prevents UVB-induced damage to cultured skin cells.

Pubmed Data : Arch Dermatol Res. 2010 Dec ;302(10):733-44. Epub 2010 Aug 10. PMID: 20697726

Article Published Date : Dec 01, 2010

Authors : S Ramachandran, N Rajendra Prasad, S Karthikeyan

Study Type : In Vitro Study

Additional Links

Substances : Sesamol : CK(56) : AC(32)

Diseases : DNA damage : CK(993) : AC(382), Lipid Peroxidation : CK(695) : AC(255), Oxidative Stress : CK(3871) : AC(1382), Skin Diseases: Photo-Aging : CK(132) : AC(51)

Pharmacological Actions : Antioxidants : CK(7331) : AC(2682), Apoptotic : CK(2958) : AC(2075), Superoxide Dismutase Up-regulation : CK(508) : AC(171)

Shiitake Mushroom (AC 1) (CK 2)

Shiitake mushroom derived polysaccharide can partly reverse the age-altered composition of gut microbiota.

Pubmed Data : Food Funct. 2015 Aug ;6(8):2653-63. Epub 2015 Jul 2. PMID: 26135107

Article Published Date : Jul 31, 2015

Authors : Xiaofei Xu, Jiguo Yang, Zhengxiang Ning, Xuewu Zhang

Study Type : Animal Study
Additional Links
Substances : Shiitake Mushroom : CK(43) : AC(22)
Diseases : Aging : CK(1658) : AC(438)
Pharmacological Actions : Immunomodulatory : CK(1287) : AC(358)
Additional Keywords : Microbiota : CK(396) : AC(101) , Plant Extracts : CK(7484) : AC(2463)

Shorea robusta (AC 1) (CK 2)

A traditional Indian medical formula containing clarified butter (ghee), flax seed oil, amla (P. emblica fruits), Shorea robusta resin and zinc (Yashada bhasma) stimulates wound healing and tissue regeneration.

Pubmed Data : Evid Based Complement Alternat Med. 2009 Feb 27. PMID: 19252191

Article Published Date : Feb 27, 2009

Authors : Hema Sharma Datta, Shankar Kumar Mitra, Bhushan Patwardhan

Study Type : Animal Study
Additional Links
Substances : Amla Fruit : CK(80) : AC(33) , Flaxseed : CK(453) : AC(90) , Ghee : CK(24) : AC(4) , Shorea robusta : CK(2) : AC(1), Zinc : CK(941) : AC(139)
Diseases : Aging Skin : CK(426) : AC(101) , Wound Healing: Delayed : CK(74) : AC(29)
Additional Keywords : Ayurvedic Formulas : CK(2) : AC(1) , Regenerative Substances : CK(42) : AC(19)

Silica: Orthosilicic acid (AC 1) (CK 10)

Choline-stabilized orthosilicic acid has a positive effect on skin surface and skin mechanical properties, and on brittleness of hair and nails.

Pubmed Data : Arch Dermatol Res. 2005 Oct;297(4):147-53. Epub 2005 Oct 26. PMID: 16205932

Article Published Date : Oct 01, 2005

Authors : A Barel, M Calomme, A Timchenko, K De Paepe, K De Paepe, N Demeester, V Rogiers, P Clarys, D Vanden Berghe

Study Type : Human Study
Additional Links
Substances : Silica: Orthosilicic acid : CK(40) : AC(4)
Diseases : Aging Skin : CK(426) : AC(101), Hair Quality Problems : CK(31) : AC(4), Nail Diseases : CK(20) : AC(2)

Silymarin (AC 1) (CK 1)

Silymarin inhibits endothelial progenitor cell aging through telomerase upregulation.

Pubmed Data : Life Sci. 2002 Aug 9;71(12):1385-96. PMID: **20838231**

Article Published Date : Aug 09, 2002

Authors : Andrzej Parzonko, Marek Naruszewicz

Study Type : In Vitro Study
Additional Links
Substances : Silymarin : CK(130) : AC(33)
Diseases : Aging : CK(1658) : AC(438)
Pharmacological Actions : Telomerase Upregulation : CK(102) : AC(28)

Soy (AC 10) (CK 49)

A fermented soybean (natto) and astragalus combination stimulates hyaluronic acid synthesis in human skin cells.

Pubmed Data : J Ethnopharmacol. 2009 Jul 17. PMID: **19619633**

Article Published Date : Jul 17, 2009

Authors : Mei-Fang Hsu, Been-Huang Chiang

Study Type : In Vitro Study
Additional Links

Substances : Astragalus : CK(260) : AC(60) , Fermented Foods and Beverages : CK(864) : AC(194) , Natto : CK(105) : AC(17), Soy : CK(1787) : AC(399)
Diseases : Aging Skin : CK(426) : AC(101)

A moisturizer containing compounds found within soy is safe and effective in preventing photoaging.

Pubmed Data : J Drugs Dermatol. 2007 Sep;6(9):917-22. PMID: **17941363**

Article Published Date : Sep 01, 2007

Authors : Warren Wallo, Judith Nebus, James J Leyden

Study Type : Human Study
Additional Links
Substances : Soy : CK(1787) : AC(399)
Diseases : Skin Diseases: Photo-Aging : CK(132) : AC(51)

A multi-nutrient mixture of soy extract, fish protein polysaccharides, extracts from white tea, grape seed and tomato, vitamins C and E as well as zinc and chamomile extract improves signs of skin aging in post-menopausal women.

Pubmed Data : Eur J Clin Nutr. 2006 Oct;60(10):1201-6. Epub 2006 May 3. PMID: **16670692**

Article Published Date : Oct 01, 2006

Authors : G R Lange Skovgaard, A S Jensen, M L Sigler

Study Type : Human Study
Additional Links
Substances : Chamomile : CK(182) : AC(30) , Fish extract : CK(32) : AC(4), Grape Seed Extract : CK(316) : AC(88), Soy : CK(1787) : AC(399) , Tomato : CK(557) : AC(109) , Vitamin C : CK(1957) : AC(404), Vitamin E : CK(1656) : AC(290) , White Tea : CK(21) : AC(6) , Zinc : CK(941) : AC(139)
Diseases : Aging Skin : CK(426) : AC(101) , Postmenopausal Disorders : CK(329) : AC(42)

A number of botanical extracts reduce skin wrinkling.

Pubmed Data : Drugs Aging. 2010 Dec 1;27(12):973-85. PMID: **21087067**

Article Published Date : Dec 01, 2010

Authors : Katherine J Hunt, Shao Kang Hung, Edzard Ernst

Study Type : Review
Additional Links
Substances : Cork Extract : CK(11) : AC(2) , Date Kernel Extract : CK(11) : AC(2) , Peony : CK(50) : AC(14), Rose : CK(167) : AC(46), Soy : CK(1787) : AC(399)
Diseases : Aging Skin : CK(426) : AC(101)

Genistein aglycone might be an effective alternative therapy for the management of age-related skin changes in postmenopausal women.

Pubmed Data : Br J Pharmacol. 2012 Feb ;165(4):994-1005. PMID: **21827449**

Article Published Date : Jan 31, 2012

Authors : Francesca Polito, Herbert Marini, Alessandra Bitto, Natasha Irrera, Mario Vaccaro, Elena Bianca Adamo, Antonio Micali, Francesco Squadrito, Letteria Minutoli, Domenica Altavilla

Study Type : Animal Study
Additional Links
Substances : Genistein : CK(515) : AC(228) , Soy : CK(1787) : AC(399)
Diseases : Aging Skin : CK(426) : AC(101)
Pharmacological Actions : Matrix metalloproteinase-2 (MMP-2) inhibitor : CK(285) : AC(147) , Vascular Endothelial Growth Factor A Inhibitor : CK(132) : AC(71)
Additional Keywords : Drug: Raloxifene : CK(2) : AC(1) , Ovariectomy-Induced Changes : CK(84) : AC(39)

Oral intake of soy isoflavone aglycone improves the aged skin of adult women.

Pubmed Data : J Nutr Sci Vitaminol (Tokyo). 2007 Feb;53(1):57-62. PMID: **17484381**

Article Published Date : Feb 01, 2007

Authors : Toru Izumi, Makoto Saito, Akio Obata, Masayuki Arii, Hideyo Yamaguchi, Asahi Matsuyama

Study Type : Human Study
Additional Links
Substances : Beta-glucan : CK(249) : AC(44) , Isoflavones : CK(631) : AC(129) , Soy : CK(1787) : AC(399)
Diseases : Aging Skin : CK(426) : AC(101)

Skin aging can be decelerated with a nutrient complex containing soy, tomato, grape seed, and white tea extracts, and sodium ascorbate (vitamin C), tocopherol acetate (vitamin E), zinc, and Biomarine complex.

Pubmed Data : Gastroenterol Hepatol. 1997 Apr;20(4):172-4. PMID: **17028931**

Article Published Date : Apr 01, 1997

Authors : Sophie Lacroix, Charbel Bouez, Sandrine Vidal, Valérie Cenizo, Corinne Reymermier, Virginie Justin, Jana Vicanová, Odile Damour

Study Type : In Vitro Study
Additional Links
Substances : Grape Seed Extract : CK(316) : AC(88) , Soy : CK(1787) : AC(399) , Tomato : CK(557) :

AC(109), Vitamin C : CK(1957) : AC(404) , Vitamin E : CK(1656) : AC(290) , White Tea : CK(21) : AC(6) , Zinc : CK(941) : AC(139)
Diseases : Aging : CK(1658) : AC(438) , Aging Skin : CK(426) : AC(101)

Soy extract appears to rejuvenate the structure of mature skin.

Pubmed Data : J Pediatr Gastroenterol Nutr. 2004 Nov;39(5):487-92. PMID: **15623355**

Article Published Date : Nov 01, 2004

Authors : Kirstin M Südel, Kirsten Venzke, Heiko Mielke, Ute Breitenbach, Claudia Mundt, Sören Jaspers, Urte Koop, Kirsten Sauermann, Elke Knussman-Hartig, Ingrid Moll, Günther Gercken, Anthony R Young, Franz Stäb, Horst Wenck, Stefan Gallinat

Study Type : Human Study
Additional Links
Substances : Genistein : CK(515) : AC(228) , Soy : CK(1787) : AC(399)
Diseases : Aging Skin : CK(426) : AC(101)
Additional Keywords : Plant Extracts : CK(7484) : AC(2463)

Soybean and green tea polyphenols improve immune function and redox status in very old ovariectomized mice.

Pubmed Data : Rejuvenation Res. 2010 Dec;13(6):665-74. Epub 2010 Sep 6. PMID: **20818935**

Article Published Date : Dec 01, 2010

Authors : Isabel Baeza, Nuria M De Castro, Lorena Arranz, Mónica De la Fuente

Study Type : Animal Study
Additional Links
Substances : Flavonoids : CK(1215) : AC(379) , Green Tea : CK(1971) : AC(562) , Polyphenols : CK(931) : AC(335), Soy : CK(1787) : AC(399) , Tea : CK(1840) : AC(385)
Diseases : Aging : CK(1658) : AC(438) , Aging: Immunosenecence : CK(52) : AC(13) , Lipid Peroxidation : CK(695) : AC(255), Ovariectomy Associated Adverse Changes : CK(18) : AC(7)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682) , Interleukin-10 downregulation : CK(128) : AC(45), Interleukin-6 Downregulation : CK(1095) : AC(342)

Soybean isoflavones and green tea improve immune cell functions in aged mice treated for five weeks.

Pubmed Data : Ann N Y Acad Sci. 2007 Apr;1100:497-504. PMID: **17460214**

Article Published Date : Apr 01, 2007

Authors : Isabel Baeza, Nuria M de Castro, Carmen Alvarado, Pedro Alvarez, Lorena Arranz, Julián Bayón, Mónica de la Fuente

Study Type : Animal Study
Additional Links

Substances : Green Tea : CK(1971) : AC(562) , Isoflavones : CK(631) : AC(129) , Soy : CK(1787) : AC(399)
Diseases : Aging : CK(1658) : AC(438) , Aging: Immunosenecence : CK(52) : AC(13) , Lipopolysaccharide-Induced Toxicity : CK(359) : AC(218)
Pharmacological Actions : Antiproliferative : CK(2479) : AC(1685)

Soybean Oil (AC 1) (CK 2)

A high consumption of unsaturated fatty acids is associated with better memory and greater longevity

Pubmed Data : J Nutr Sci Vitaminol (Tokyo). 2011;57(1):36-41. PMID: **21512289**

Article Published Date : Jan 01, 2011

Authors : Yukiko Ueda, Ming-Fu Wang, Amalia Veronica Irei, Nobuko Sarukura, Tohru Sakai, Tzu-Fang Hsu

Study Type : Animal Study
Additional Links
Substances : DHA (Docosahexaenoic Acid) : CK(813) : AC(134) , Polyunsaturated Fatty Acids (PUFAs) : CK(194) : AC(33), Soybean Oil : CK(3) : AC(2)
Diseases : Aging : CK(1658) : AC(438) , Aging: Brain : CK(248) : AC(85), Memory Disorders : CK(342) : AC(104)

Spearmint (AC 1) (CK 2)

Extracts from spearmint and rosemary have beneficial effects on learning and memory and brain tissue markers of oxidation.

Pubmed Data : Physiol Behav. 2016 Aug 12. Epub 2016 Aug 12. PMID: **27527000**

Article Published Date : Aug 11, 2016

Authors : Susan A Farr, Michael L Niehoff, Michael A Ceddia, Kelli A Herrlinger, Brandon J Lewis, Shulin Feng, Andrew Welleford, D Allan Butterfield, John E Morley

Study Type : Animal Study

Additional Links
Substances : Carnosic Acid : CK(29) : AC(21) , Rosemary : CK(218) : AC(78) , Rosmarinic acid : CK(27) : AC(14), Spearmint : CK(45) : AC(7)
Diseases : Aging: Brain : CK(248) : AC(85), Brain: Oxidative Stress : CK(79) : AC(46) , Learning disorders : CK(190) : AC(51), Memory Disorders : CK(342) : AC(104)
Pharmacological Actions : Neuroprotective Agents : CK(2268) : AC(1071)
Additional Keywords : Plant Extracts : CK(7484) : AC(2463)

Spermidine (AC 3) (CK 4)

Spermidine and resveratrol mediates pharmacological lifespan extension through the up-regulation of autophagy.

Pubmed Data : Aging (Albany NY). 2009 Dec;1(12):961-70. Epub 2009 Dec 23. PMID: **20157579**

Article Published Date : Dec 01, 2009

Authors : Eugenia Morselli, Lorenzo Galluzzi, Oliver Kepp, Alfredo Criollo, Maria Chiara Maiuri, Nektarios Tavernarakis, Frank Madeo, Guido Kroemer

Study Type : Review
Additional Links
Substances : Resveratrol : CK(1245) : AC(746) , Spermidine : CK(4) : AC(3)
Diseases : Aging : CK(1658) : AC(438)
Pharmacological Actions : Autophagy Up-regulation : CK(108) : AC(65) , Histone deacetylase inhibitor : CK(48) : AC(37)
Additional Keywords : Stilbenes : CK(402) : AC(242)

Spermidine induction promotes longevity.

Pubmed Data : Nat Cell Biol. 2009 Nov;11(11):1305-14. Epub 2009 Oct 4. PMID: **19801973**

Article Published Date : Nov 01, 2009

Authors : Tobias Eisenberg, Heide Knauer, Alexandra Schauer, Sabrina Büttner, Christoph Ruckenstuhl, Didac Carmona-Gutierrez, Julia Ring, Sabrina Schroeder, Christoph Magnes, Lucia Antonacci, Heike Fussi, Luiza Deszcz, Regina Hartl, Elisabeth Schraml, Alfredo Criollo, Evgenia Megalou, Daniela Weiskopf, Peter Laun, Gino Heeren, Michael Breitenbach, Beatrix Grubeck-Loebenstein, Eva Herker, Birthe Fahrenkrog, Kai-Uwe Fröhlich, Frank Sinner, Nektarios Tavernarakis, Nadege Minois, Guido Kroemer, Frank Madeo

Study Type : Animal Study
Additional Links
Substances : Spermidine : CK(4) : AC(3)
Diseases : Aging : CK(1658) : AC(438) , Oxidative Stress : CK(3871) : AC(1382)

Pharmacological Actions : Antioxidants : CK(7331) : AC(2682) , Autophagy Up-regulation : CK(108) : AC(65)

Spermidine is a novel autophagy inducer and longevity elixir.

Pubmed Data : Autophagy. 2010 Jan;6(1):160-2. PMID: **20110777**

Article Published Date : Jan 01, 2010

Authors : Frank Madeo, Tobias Eisenberg, Sabrina Büttner, Christoph Ruckenstuhl, Guido Kroemer

Study Type : Review
Additional Links
Substances : Spermidine : CK(4) : AC(3)
Diseases : Aging : CK(1658) : AC(438)
Pharmacological Actions : Autophagy Up-regulation : CK(108) : AC(65)

Spinach (AC 1) (CK 2)

Dietary supplementation with blueberry, spinach, or strawberry reverses age-related declines in neuronal signal transduction, cognitive, and motor behavioral deficits.

Pubmed Data : J Gastroenterol. 2002 Nov;37 Suppl 14:67-72. PMID: **10479711**

Article Published Date : Nov 01, 2002

Authors : J A Joseph, B Shukitt-Hale, N A Denisova, D Bielinski, A Martin, J J McEwen, P C Bickford

Study Type : Animal Study
Additional Links
Substances : Blueberry : CK(260) : AC(90) , Spinach : CK(9) : AC(7) , Strawberry : CK(145) : AC(37)
Diseases : Aging : CK(1633) : AC(434) , Aging: Brain : CK(248) : AC(85), Cognitive Decline/Dysfunction : CK(1151) : AC(215)
Pharmacological Actions : Neuroprotective Agents : CK(2268) : AC(1071)
Additional Keywords : Disease Regression : CK(150) : AC(26) , Plant Extracts : CK(7484) : AC(2463)

Spirulina (AC 1) (CK 2)

Spirulina prevents memory dysfunction, reduces oxidative stress damage and augments antioxidant activity in senescence-accelerated mice.

Pubmed Data : J Nutr Sci Vitaminol (Tokyo). 2011;57(2):186-91. PMID: 21697639

Article Published Date : Apr 01, 2005

Authors : Juen-Haur Hwang, I-Te Lee, Kee-Ching Jeng, Ming-Fu Wang, Rolis Chien-Wei Hou, Su-Mei Wu, Yin-Ching Chan

Study Type : Animal Study
Additional Links
Substances : Spirulina : CK(266) : AC(73)
Diseases : Aging : CK(1658) : AC(438), Aging: Brain : CK(248) : AC(85), Memory Disorders : CK(342) : AC(104)
Pharmacological Actions : Neuroprotective Agents : CK(2268) : AC(1071)

Sprouts (AC 2) (CK 4)

Broccoli sprouts contain compounds which protect the skin against damage by UV radiation.

Pubmed Data : Proc Natl Acad Sci U S A. 2007 Oct 30;104(44):17500-5. Epub 2007 Oct 23. PMID: 17956979

Article Published Date : Oct 30, 2007

Authors : Paul Talalay, Jed W Fahey, Zachary R Healy, Scott L Wehage, Andrea L Benedict, Christine Min, Albena T Dinkova-Kostova

Study Type : Animal Study
Additional Links
Substances : Broccoli : CK(962) : AC(298), Sprouts : CK(87) : AC(38), Sulforaphane : CK(533) : AC(262)
Diseases : Aging Skin : CK(426) : AC(101)

Sulforaphane-containing broccoli sprout extracts protect against UV-light-induced skin carcinogenesis.

Pubmed Data : Cancer Lett. 2006 Aug 28;240(2):243-52. Epub 2005 Nov 3. PMID: 16271437

Article Published Date : Aug 28, 2006

Authors : Albena T Dinkova-Kostova, Stephanie N Jenkins, Jed W Fahey, Lingxiang Ye, Scott L Wehage, Karen T Liby, Katherine K Stephenson, Kristina L Wade, Paul Talalay

Study Type : Animal Study
Additional Links
Substances : Broccoli : CK(962) : AC(298) , Sprouts : CK(87) : AC(38) , Sulforaphane : CK(533) : AC(262)
Diseases : DNA damage : CK(993) : AC(382) , Light Sensitivity : CK(2) : AC(1) , Oxidative Stress : CK(3871) : AC(1382), Skin Diseases: Photo-Aging : CK(132) : AC(51)
Pharmacological Actions : Anticarcinogenic Agents : CK(1099) : AC(519) , Chemopreventive : CK(2835) : AC(787), Radioprotective : CK(756) : AC(262)
Additional Keywords : Plant Extracts : CK(7484) : AC(2463)

St. Johns Wort (AC 1) (CK 2)

St. John's wort may diminish deleterious effects of aging on spatial memory.

Pubmed Data : AAPS PharmSciTech. 2005 Sep 20;6(1):E74-82. PMID: **20361314**

Article Published Date : Sep 20, 2005

Authors : Emil Trofimiuk, Adam Holownia, Jan J Braszko

Study Type : Animal Study
Additional Links
Substances : St. Johns Wort : CK(191) : AC(54)
Diseases : Aging: Brain : CK(248) : AC(85), Memory Loss : CK(153) : AC(40)
Pharmacological Actions : Neuroprotective Agents : CK(2268) : AC(1071)

Stilbenes (AC 2) (CK 3)

Resveratrol reduces infection-related neuroinflammation and deficits in working memory in aged mice.

Pubmed Data : Rejuvenation Res. 2009 Dec;12(6):445-53. PMID: **20041738**

Article Published Date : Dec 01, 2009

Authors : Jayne Abraham, Rodney W Johnson

Study Type : Animal Study
Additional Links
Substances : Resveratrol : CK(1245) : AC(746) , Stilbenes : CK(136) : AC(101)
Diseases : Aging : CK(1633) : AC(434) , Brain: Microglial Activation : CK(82) : AC(53) , Inflammation : CK(3003) : AC(872), Lipopolysaccharide-Induced Toxicity : CK(359) : AC(218) , Memory Disorders : CK(342) : AC(104)
Pharmacological Actions : Anti-Inflammatory Agents : CK(4688) : AC(1630) , Interleukin-1 beta downregulation : CK(463) : AC(205), Neuroprotective Agents : CK(2268) : AC(1071)

Review: resveratrol may improve insulin action and aging.

Pubmed Data : Curr Aging Sci. 2008 Dec;1(3):145-51. PMID: **20021385**

Article Published Date : Dec 01, 2008

Authors : Sara Fröjdö, Christine Durand, Luciano Pirola

Study Type : Review
Additional Links
Substances : Resveratrol : CK(1245) : AC(746) , Stilbenes : CK(136) : AC(101)
Diseases : Aging : CK(1658) : AC(438) , Insulin Resistance : CK(1683) : AC(346)

Strawberry (AC 2) (CK 12)

Dietary supplementation with blueberry, spinach, or strawberry reverses age-related declines in neuronal signal transduction, cognitive, and motor behavioral deficits.

Pubmed Data : J Gastroenterol. 2002 Nov;37 Suppl 14:67-72. PMID: **10479711**

Article Published Date : Nov 01, 2002

Authors : J A Joseph, B Shukitt-Hale, N A Denisova, D Bielinski, A Martin, J J McEwen, P C Bickford

Study Type : Animal Study
Additional Links
Substances : Blueberry : CK(260) : AC(90) , Spinach : CK(9) : AC(7) , Strawberry : CK(145) : AC(37)
Diseases : Aging : CK(1633) : AC(434) , Aging: Brain : CK(248) : AC(85), Cognitive Decline/Dysfunction : CK(1151) : AC(215)
Pharmacological Actions : Neuroprotective Agents : CK(2268) : AC(1071)
Additional Keywords : Disease Regression : CK(150) : AC(26) , Plant Extracts : CK(7484) : AC(2463)

Higher intake of flavonoids, particularly from berries, appears to reduce rates of cognitive decline in older adults.

Pubmed Data : Ann Neurol. 2012 Jul ;72(1):135-43. Epub 2012 Apr 26. PMID: 22535616

Article Published Date : Jun 30, 2012

Authors : Elizabeth E Devore, Jae Hee Kang, Monique M B Breteler, Francine Grodstein

Study Type : Human Study
Additional Links
Substances : Berries: All : CK(1443) : AC(356) , Blueberry : CK(260) : AC(90) , Flavonoids : CK(1215) : AC(379), Strawberry : CK(145) : AC(37)
Diseases : Aging : CK(1633) : AC(434) , Cognitive Decline/Dysfunction : CK(1151) : AC(215)
Pharmacological Actions : Neuroprotective Agents : CK(2268) : AC(1071)
Additional Keywords : Risk Reduction : CK(6417) : AC(686)

Sulforaphane (AC 5) (CK 8)

Broccoli sprouts contain compounds which protect the skin against damage by UV radiation.

Pubmed Data : Proc Natl Acad Sci U S A. 2007 Oct 30;104(44):17500-5. Epub 2007 Oct 23. PMID: 17956979

Article Published Date : Oct 30, 2007

Authors : Paul Talalay, Jed W Fahey, Zachary R Healy, Scott L Wehage, Andrea L Benedict, Christine Min, Albena T Dinkova-Kostova

Study Type : Animal Study
Additional Links
Substances : Broccoli : CK(962) : AC(298) , Sprouts : CK(87) : AC(38) , Sulforaphane : CK(533) : AC(262)
Diseases : Aging Skin : CK(426) : AC(101)

Sulforaphane and NAC (N-acetyl-L-cysteine) upregulate T(H)1 immunity in aging.

Pubmed Data : J Allergy Clin Immunol. 2008 May;121(5):1255-1261.e7. Epub 2008 Mar 5. PMID: 18325578

Article Published Date : May 01, 2008

Authors : Hyon-Jeen Kim, Berenice Barajas, Meiying Wang, Andre E Nel

Study Type : Animal Study
Additional Links
Substances : NAC (N-acetyl-L-cysteine) : CK(295) : AC(72) , Sulforaphane : CK(533) : AC(262)
Diseases : Aging : CK(1658) : AC(438) , Immune Disorders: Low Immune Function : CK(489) : AC(118), Immune Dysregulation: TH1/TH2 imbalance : CK(169) : AC(44) , Low Disorders: Low TH1 : CK(6) : AC(4)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682) , Immunomodulatory : CK(1287) : AC(358)

Sulforaphane has a potential use as a compound for protection against UVB-induced skin inflammation.

Pubmed Data : J Nutr Biochem. 2010 Aug;21(8):702-9. Epub 2009 Jul 2. PMID: **19576749**

Article Published Date : Aug 01, 2010

Authors : Akira Shibata, Kiyotaka Nakagawa, Hiroko Yamanoi, Tsuyoshi Tsuduki, Phumon Sookwong, Ohki Higuchi, Fumiko Kimura, Teruo Miyazawa

Study Type : In Vitro Study
Additional Links
Substances : Sulforaphane : CK(533) : AC(262)
Diseases : Skin Diseases: Photo-Aging : CK(132) : AC(51) , Sunburn : CK(41) : AC(19) , Ultraviolet Radiation Induced Damage : CK(80) : AC(34)
Pharmacological Actions : Anti-Inflammatory Agents : CK(4688) : AC(1630) , Cyclooxygenase 2 Inhibitors : CK(464) : AC(272), Interleukin-1 beta downregulation : CK(463) : AC(205) , Interleukin-6 Downregulation : CK(1095) : AC(342)

Sulforaphane treatment may present a strategy for enhancing the cellular defense mechanisms in skin.

Pubmed Data : Exp Dermatol. 2010 Feb;19(2):137-44. Epub 2009 Jun 23. PMID: **19558496**

Article Published Date : Feb 01, 2010

Authors : Anika E Wagner, Insa Ernst, Renato Iori, Christine Desel, Gerald Rimbach

Study Type : In Vitro Study
Additional Links
Substances : Sulforaphane : CK(533) : AC(262)
Diseases : Aging Skin : CK(426) : AC(101) , Glutathione Deficiency : CK(65) : AC(15), Skin Diseases : CK(67) : AC(12)
Pharmacological Actions : Anticarcinogenic Agents : CK(1099) : AC(519) , Glutathione Upregulation : CK(152) : AC(53), NF-kappaB Inhibitor : CK(1114) : AC(694)

Sulforaphane-containing broccoli sprout extracts protect against UV-light-induced skin carcinogenesis.

Pubmed Data : Cancer Lett. 2006 Aug 28;240(2):243-52. Epub 2005 Nov 3. PMID: **16271437**

Article Published Date : Aug 28, 2006

Authors : Albena T Dinkova-Kostova, Stephanie N Jenkins, Jed W Fahey, Lingxiang Ye, Scott L Wehage, Karen T Liby, Katherine K Stephenson, Kristina L Wade, Paul Talalay

Study Type : Animal Study
Additional Links
Substances : Broccoli : CK(962) : AC(298) , Sprouts : CK(87) : AC(38) , Sulforaphane : CK(533) : AC(262)
Diseases : DNA damage : CK(993) : AC(382) , Light Sensitivity : CK(2) : AC(1) , Oxidative Stress : CK(3871) : AC(1382), Skin Diseases: Photo-Aging : CK(132) : AC(51)
Pharmacological Actions : Anticarcinogenic Agents : CK(1099) : AC(519) , Chemopreventive : CK(2835) : AC(787), Radioprotective : CK(756) : AC(262)
Additional Keywords : Plant Extracts : CK(7484) : AC(2463)

Superoxide dismutase (AC 1) (CK 2)

Superoxide dismutase prevents free radical and UV-A light induced hair graying in a mouse model.

Pubmed Data : Photochem Photobiol. 2004 Nov-Dec;80(3):579-82. PMID: 15623346

Article Published Date : Nov 01, 2004

Authors : I Emerit, P Filipe, J Freitas, J Vassy

Study Type : Animal Study
Additional Links
Substances : Superoxide dismutase : CK(16) : AC(5)
Diseases : Aging : CK(1658) : AC(438) , Graying Hair : CK(6) : AC(3) , Hair: Graying : CK(4) : AC(2)

TA-65 (Astragalus compound) (AC 1) (CK 2)

TA-65 dietary supplementation in female mice leads to an improvement of certain health-span indicators including glucose tolerance, osteoporosis and skin fitness, without

significantly increasing global cancer incidence.

Pubmed Data : Aging Cell. 2011 Aug ;10(4):604-21. Epub 2011 Apr 14. PMID: **21426483**

Article Published Date : Jul 31, 2011

Authors : Bruno Bernardes de Jesus, Kerstin Schneeberger, Elsa Vera, Agueda Tejera, Calvin B Harley, Maria A Blasco

Study Type : Animal Study
Additional Links
Substances : TA-65 (Astragalus compound) : CK(2) : AC(1)
Diseases : Aging : CK(1658) : AC(438) , DNA damage : CK(993) : AC(382) , Osteoporosis : CK(1283) : AC(245)
Pharmacological Actions : Anticarcinogenic Agents : CK(1099) : AC(519) , Telomerase Upregulation : CK(102) : AC(28)

Tea (AC 6) (CK 9)

Black tea polyphenols may positively modulate a longevity factor (FOXO1).

Pubmed Data : Aging Cell. 2008 Jan;7(1):69-77. Epub 2007 Dec 19. PMID: **18005251**

Article Published Date : Jan 01, 2008

Authors : Amy R Cameron, Siobhan Anton, Laura Melville, Nicola P Houston, Saurabh Dayal, Gordon J McDougall, Derek Stewart, Graham Rena

Study Type : In Vitro Study
Additional Links
Substances : Black Tea : CK(360) : AC(80) , Black Tea Theaflavins : CK(1) : AC(1) , Catechin : CK(512) : AC(169), Flavonoids : CK(1215) : AC(379) , Polyphenols : CK(931) : AC(335) , Tea : CK(1840) : AC(385)
Diseases : Aging : CK(1658) : AC(438)
Pharmacological Actions : Forkhead Transcription Factor Family O (FOXO) Modulator : CK(3) : AC(2)

Daily ingestion of green tea catechins from adulthood suppressed brain dysfunction in aged mice.

Pubmed Data : Biofactors. 2008;34(4):263-71. PMID: **19850981**

Article Published Date : Jan 01, 2008

Authors : Keiko Unno, Yuichi Ishikawa, Fumiyo Takabayashi, Toru Sasaki, Nina Takamori, Kazuaki Iguchi, Minoru Hoshino

Study Type : Animal Study

Additional Links
Substances : Catechin : CK(512) : AC(169), Green Tea : CK(1971) : AC(562) , Tea : CK(1840) : AC(385)
Diseases : Aging : CK(1658) : AC(438) , Aging: Brain : CK(248) : AC(85), Learning disorders : CK(190) : AC(51)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682) , Neuroprotective Agents : CK(2268) : AC(1071)

Green tea and red light contribute to skin rejuvenation.

Pubmed Data : Photomed Laser Surg. 2009 Dec;27(6):969-71. PMID: **19817517**

Article Published Date : Dec 01, 2009

Authors : Andrei P Sommer, Dan Zhu

Study Type : In Vitro Study
Additional Links
Substances : Green Tea : CK(1971) : AC(562) , Tea : CK(1840) : AC(385)
Diseases : Aging Skin : CK(426) : AC(101)
Therapeutic Actions : Light Therapy : CK(154) : AC(31) , Light Therapy: Colored : CK(21) : AC(3), Light Therapy: Red Colored : CK(1) : AC(1)

Green tea catechins have a suppressive effect on morphologic and functional regression of the brain in aged mice with accelerated senescence .

Pubmed Data : Exp Gerontol. 2004 Jul;39(7):1027-34. PMID: **15236762**

Article Published Date : Jul 01, 2004

Authors : Keiko Unno, Fumiyo Takabayashi, Takahiro Kishido, Naoto Oku

Study Type : Animal Study
Additional Links
Substances : Catechin : CK(512) : AC(169), Tea : CK(1840) : AC(385)
Diseases : Aging : CK(1658) : AC(438) , Aging: Brain : CK(248) : AC(85), DNA damage : CK(993) : AC(382), Learning disorders : CK(190) : AC(51) , Oxidative Stress : CK(3871) : AC(1382)
Pharmacological Actions : Neuroprotective Agents : CK(2268) : AC(1071)
Additional Keywords : Plant Extracts : CK(7484) : AC(2463)

Soybean and green tea polyphenols improve immune function and redox status in very old ovariectomized mice.

Pubmed Data : Rejuvenation Res. 2010 Dec;13(6):665-74. Epub 2010 Sep 6. PMID: **20818935**

Article Published Date : Dec 01, 2010

Authors : Isabel Baeza, Nuria M De Castro, Lorena Arranz, Mónica De la Fuente

Study Type : Animal Study
Additional Links

Substances : Flavonoids : CK(1215) : AC(379) , Green Tea : CK(1971) : AC(562) , Polyphenols : CK(931) : AC(335), Soy : CK(1787) : AC(399) , Tea : CK(1840) : AC(385)
Diseases : Aging : CK(1658) : AC(438) , Aging: Immunosenecence : CK(52) : AC(13) , Lipid Peroxidation : CK(695) : AC(255), Ovariectomy Associated Adverse Changes : CK(18) : AC(7)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682) , Interleukin-10 downregulation : CK(128) : AC(45), Interleukin-6 Downregulation : CK(1095) : AC(342)

Tea catechins protect red blood cells subjected to oxidative stress during human aging.

Pubmed Data : Nat Prod Res. 2009;23(12):1072-9. PMID: **18846469**

Article Published Date : Jan 01, 2009

Authors : Pawan Kumar Maurya, Syed Ibrahim Rizvi

Study Type : In Vitro Study
Additional Links
Substances : Catechin : CK(512) : AC(169), Tea : CK(1840) : AC(385)
Diseases : Aging : CK(1658) : AC(438) , Oxidative Stress : CK(3871) : AC(1382)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682)

Terminalia (AC 1) (CK 1)

Terminalia chebula gall extract has anti-aging properties in human skin fibroblasts.

Pubmed Data : Pharm Biol. 2010 Apr;48(4):469-81. PMID: **20645728**

Article Published Date : Apr 01, 2010

Authors : Aranya Manosroi, Pensak Jantrawut, Toshihiro Akihisa, Worapaka Manosroi, Jiradej Manosroi

Study Type : In Vitro Study
Additional Links
Substances : Terminalia : CK(25) : AC(16) , Terminalia Chebula Gall Extract : CK(1) : AC(1)
Diseases : Aging Skin : CK(426) : AC(101)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682) , Antiproliferative : CK(2479) : AC(1685), Matrix metalloproteinase-2 (MMP-2) inhibitor : CK(285) : AC(147)
Additional Keywords : Plant Extracts : CK(7484) : AC(2463)

Terminalia Chebula Gall Extract (AC 1) (CK 1)

Terminalia chebula gall extract has anti-aging properties in human skin fibroblasts.

Pubmed Data : Pharm Biol. 2010 Apr;48(4):469-81. PMID: **20645728**

Article Published Date : Apr 01, 2010

Authors : Aranya Manosroi, Pensak Jantrawut, Toshihiro Akihisa, Worapaka Manosroi, Jiradej Manosroi

Study Type : In Vitro Study
Additional Links
Substances : Terminalia : CK(25) : AC(16) , Terminalia Chebula Gall Extract : CK(1) : AC(1)
Diseases : Aging Skin : CK(426) : AC(101)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682) , Antiproliferative : CK(2479) : AC(1685), Matrix metalloproteinase-2 (MMP-2) inhibitor : CK(285) : AC(147)
Additional Keywords : Plant Extracts : CK(7484) : AC(2463)

Testosterone (AC 1) (CK 1)

Testosterone has protective effects in Alzheimer's disease.

Pubmed Data : Front Neuroendocrinol. 2009 Jul ;30(2):239-58. Epub 2009 May 7. PMID: **19427328**

Article Published Date : Jul 01, 2009

Authors : Christian J Pike, Jenna C Carroll, Emily R Rosario, Anna M Barron

Study Type : Review
Additional Links
Substances : Testosterone : CK(164) : AC(29)
Diseases : Aging : CK(1658) : AC(438)
Pharmacological Actions : Neuroprotective Agents : CK(2268) : AC(1071) , Secretagogue : CK(178) : AC(38)

Tetrahydrocurcumin (AC 2) (CK 4)

Curcumin was shown to have positive effects on lifespan extension in animal studies.

Pubmed Data : Biofactors. 2013 Jan-Feb;39(1):133-40. Epub 2013 Jan 17. PMID: 23325575

Article Published Date : Dec 31, 2012

Authors : Li-Rong Shen, Laurence D Parnell, Jose M Ordovas, Chao-Qiang Lai

Study Type : Animal Study, Insect Study

Additional Links

Substances : Curcumin : CK(4135) : AC(2175), Tetrahydrocurcumin : CK(66) : AC(30)

Diseases : Aging : CK(1633) : AC(434), Oxidative Stress : CK(3871) : AC(1382)

Pharmacological Actions : Antioxidants : CK(7331) : AC(2682), Superoxide Dismutase Up-regulation : CK(508) : AC(171)

Additional Keywords : Gene Expression Regulation : CK(427) : AC(212), Longevity : CK(2) : AC(1)

Nutritional antioxidants such as green tea polyphenols and tetrahydrocurcumin may beneficially modify the life span of animals.

Pubmed Data : Biogerontology. 2007 Oct;8(5):567-73. Epub 2007 May 22. PMID: 17516143

Article Published Date : Oct 01, 2007

Authors : Kenichi Kitani, Toshihiko Osawa, Takako Yokozawa

Study Type : Animal Study

Additional Links

Substances : Flavonoids : CK(1215) : AC(379), Green Tea : CK(1971) : AC(562), Polyphenols : CK(931) : AC(335), Tetrahydrocurcumin : CK(66) : AC(30)

Diseases : Aging : CK(1658) : AC(438)

Additional Keywords : Plant Extracts : CK(7484) : AC(2463)

Thioproline (AC 2) (CK 4)

A diet supplemented with thiolic anti-oxidants improves immune function in an animal model of premature aging.

Pubmed Data : Clin Exp Pharmacol Physiol. 2002 Nov;29(11):1009-14. PMID: 12366393

Article Published Date : Nov 01, 2002

Authors : N Guayerbas, M Puerto, M D Ferrández, M De La Fuente

Study Type : Animal Study
Additional Links
Substances : NAC (N-acetyl-L-cysteine) : CK(295) : AC(72), Thioproline : CK(6) : AC(3)
Diseases : Aging: Immunosenecence : CK(52) : AC(13)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682), Immunomodulatory : CK(1287) : AC(358)

NAC and thioproline retard immune function in an animal model of aging.

Pubmed Data : Proc Nutr Soc. 2010 Nov;69(4):651-9. Epub 2010 Sep 28. PMID: **20875196**

Article Published Date : Nov 01, 2010

Authors : Mónica De la Fuente

Study Type : Animal Study
Additional Links
Substances : NAC (N-acetyl-L-cysteine) : CK(295) : AC(72), Thioproline : CK(6) : AC(3)
Diseases : Aging : CK(1658) : AC(438), Aging: Immunosenecence : CK(52) : AC(13)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682)

Thistle (AC 1) (CK 1)

S. oleraceus extracts have the potential to be used as an anti-ageing agent.

Pubmed Data : Molecules. 2015 ;20(3):4548-64. Epub 2015 Mar 12. PMID: **25774489**

Article Published Date : Dec 31, 2014

Authors : Zong-Quan Ou, Thomas Rades, Arlene McDowell

Study Type : In Vitro Study
Additional Links
Substances : Thistle : CK(18) : AC(12)
Diseases : Aging : CK(1658) : AC(438)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682)
Additional Keywords : Dose Response : CK(1056) : AC(408), Plant Extracts : CK(7484) : AC(2463)

Tocotrienol: Gamma (AC 1) (CK 1)

Gamma-tocotrienol protects against oxidative stress-induced cellular ageing by modulating the telomere length possibly via telomerase.

Pubmed Data : Oxid Med Cell Longev. 2010 Jan-Feb;3(1):35-43. PMID: 20716926

Article Published Date : Jan 01, 2010

Authors : Suzana Makpol, Azrina Zainal Abidin, Khalilah Sairin, Musalmah Mazlan, Gapor Md Top, Wan Zurinah Wan Ngah

Study Type : In Vitro Study
Additional Links
Substances : Tocotrienol: Gamma : CK(36) : AC(21)
Diseases : Aging : CK(1658) : AC(438), Oxidative Stress : CK(3871) : AC(1382)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682), Telomerase Upregulation : CK(102) : AC(28)
Additional Keywords : Telomere Length : CK(18) : AC(5), Upregulation of Telemere Length : CK(4) : AC(3)

Tomato (AC 2) (CK 11)

A multi-nutrient mixture of soy extract, fish protein polysaccharides, extracts from white tea, grape seed and tomato, vitamins C and E as well as zinc and chamomile extract improves signs of skin aging in post-menopausal women.

Pubmed Data : Eur J Clin Nutr. 2006 Oct;60(10):1201-6. Epub 2006 May 3. PMID: 16670692

Article Published Date : Oct 01, 2006

Authors : G R Lange Skovgaard, A S Jensen, M L Sigler

Study Type : Human Study
Additional Links
Substances : Chamomile : CK(182) : AC(30), Fish extract : CK(32) : AC(4), Grape Seed Extract : CK(316) : AC(88), Soy : CK(1787) : AC(399), Tomato : CK(557) : AC(109), Vitamin C : CK(1957) : AC(404), Vitamin E : CK(1656) : AC(290), White Tea : CK(21) : AC(6), Zinc : CK(941) : AC(139)
Diseases : Aging Skin : CK(426) : AC(101), Postmenopausal Disorders : CK(329) : AC(42)

Skin aging can be decelerated with a nutrient complex containing soy, tomato, grape seed, and white tea extracts, and sodium ascorbate (vitamin C), tocopherol acetate (vitamin E), zinc, and Biomarine complex.

Pubmed Data : Gastroenterol Hepatol. 1997 Apr;20(4):172-4. PMID: 17028931

Article Published Date : Apr 01, 1997

Authors : Sophie Lacroix, Charbel Bouez, Sandrine Vidal, Valérie Cenizo, Corinne Reymermier, Virginie Justin, Jana Vicanová, Odile Damour

Study Type : In Vitro Study
Additional Links
Substances : Grape Seed Extract : CK(316) : AC(88) , Soy : CK(1787) : AC(399) , Tomato : CK(557) : AC(109), Vitamin C : CK(1957) : AC(404) , Vitamin E : CK(1656) : AC(290) , White Tea : CK(21) : AC(6) , Zinc : CK(941) : AC(139)
Diseases : Aging : CK(1658) : AC(438) , Aging Skin : CK(426) : AC(101)

Torilus Fructus (AC 1) (CK 10)

Red ginseng root extract mixed with Torilus fructus and Corni fructus improves facial wrinkles and increases type I procollagen synthesis in human skin.

Pubmed Data : J Med Food. 2009 Dec;12(6):1252-9. PMID: 20041778

Article Published Date : Dec 01, 2009

Authors : Soyun Cho, Chong-Hyun Won, Dong Hun Lee, Min-Jung Lee, Serah Lee, Seung-Ho So, Seong-Kye Lee, Bon-Suk Koo, Na-Mi Kim, Jin Ho Chung

Study Type : Human Study
Additional Links
Substances : Corni Fructus : CK(10) : AC(1) , Ginseng : CK(473) : AC(133) , Torilus Fructus : CK(10) : AC(1), Unspecified Species : CK(11) : AC(2)
Diseases : Aging Skin : CK(426) : AC(101)
Pharmacological Actions : Matrix metalloproteinase-2 (MMP-2) inhibitor : CK(285) : AC(147)
Additional Keywords : Plant Extracts : CK(7484) : AC(2463)

Traditional Chinese Medicine: Sijunzi Decoction (AC 1) (CK 2)

Sijunzi decoction exhibits anti-aging properties, including increases in telomerase activity.

Pubmed Data : Biosci Biotechnol Biochem. 2006 May;70(5):1118-26. PMID: 16025969

Article Published Date : May 01, 2006

Authors : Jing Yang, Xiang-hong Zhan, Ye Sun

Study Type : Animal Study
Additional Links
Substances : Traditional Chinese Medicine: Sijunzi Decoction : CK(2) : AC(1)
Diseases : Aging : CK(1658) : AC(438)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682) , Telomerase Upregulation : CK(102) : AC(28)

Turmeric (AC 1) (CK 10)

Turmeric extract supplementation prevents UVB-induced skin aging.

Pubmed Data : Phytomedicine. 2009 Jul 3. PMID: 19577913

Article Published Date : Jul 03, 2009

Authors : Maho Sumiyoshi, Yoshiyuki Kimura

Study Type : Human Study
Additional Links
Substances : Turmeric : CK(4968) : AC(2348)
Diseases : Skin Diseases: Photo-Aging : CK(132) : AC(51)

Ubiquinol (AC 1) (CK 2)

The reduced form of coenzyme Q10 (ubiquinol) is more effective at decelerating aging than the oxidized form (ubiquinone).

Pubmed Data : Mol Nutr Food Res. 2010 Jun;54(6):805-15. PMID: **19960455**

Article Published Date : Jun 01, 2010

Authors : Constance Schmelzer, Hiroshi Kubo, Masayuki Mori, Jinko Sawashita, Mitsuaki Kitano, Kazunori Hosoe, Inka Boomgaarden, Frank Döring, Keiichi Higuchi

Study Type : Animal Study
Additional Links
Substances : Coenzyme Q10 : CK(941) : AC(140) , Ubiquinol : CK(138) : AC(24)
Diseases : Aging : CK(1658) : AC(438)
Additional Keywords : Bioavailability : CK(182) : AC(34) , Nutrient Differences: Reduced/Oxidized Forms : CK(5) : AC(3)

Unspecified Species (AC 1) (CK 10)

Red ginseng root extract mixed with Torilus fructus and Corni fructus improves facial wrinkles and increases type I procollagen synthesis in human skin.

Pubmed Data : J Med Food. 2009 Dec;12(6):1252-9. PMID: **20041778**

Article Published Date : Dec 01, 2009

Authors : Soyun Cho, Chong-Hyun Won, Dong Hun Lee, Min-Jung Lee, Serah Lee, Seung-Ho So, Seong-Kye Lee, Bon-Suk Koo, Na-Mi Kim, Jin Ho Chung

Study Type : Human Study
Additional Links
Substances : Corni Fructus : CK(10) : AC(1) , Ginseng : CK(473) : AC(133) , Torilus Fructus : CK(10) : AC(1), Unspecified Species : CK(11) : AC(2)
Diseases : Aging Skin : CK(426) : AC(101)
Pharmacological Actions : Matrix metalloproteinase-2 (MMP-2) inhibitor : CK(285) : AC(147)
Additional Keywords : Plant Extracts : CK(7484) : AC(2463)

Vegetables: All (AC 3) (CK 21)

Association of dietary fat, vegetables and antioxidant micronutrients with skin ageing in Japanese women.

Pubmed Data : Br J Nutr. 2010 May;103(10):1493-8. Epub 2010 Jan 20. PMID: 20085665

Article Published Date : May 01, 2010

Authors : Chisato Nagata, Kozue Nakamura, Keiko Wada, Shino Oba, Makoto Hayashi, Noriyuki Takeda, Keigo Yasuda

Study Type : Human Study
Additional Links
Substances : Vegetables: All : CK(1092) : AC(118)
Diseases : Aging Skin : CK(426) : AC(101)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682)

Review: natural approaches to reduce skin aging.

Pubmed Data : Acta Dermatovenerol Alp Panonica Adriat. 2008 Jun;17(2):47-54. PMID: 18709289

Article Published Date : Jun 01, 2008

Authors : Neira Puizina-Ivić

Study Type : Review
Additional Links
Substances : Antioxidant formulas : CK(492) : AC(76), Fruit: All : CK(3727) : AC(793), Vegetables: All : CK(1092) : AC(118)
Diseases : Aging Skin : CK(426) : AC(101)

Women consuming the most green leafy vegetables experienced slower decline than women consuming the least amount

Pubmed Data : Ann Neurol. 2005 May ;57(5):713-20. PMID: 15852398

Article Published Date : Apr 30, 2005

Authors : Jae H Kang, Alberto Ascherio, Francine Grodstein

Study Type : Human Study
Additional Links
Substances : Cruciferous Vegetables : CK(1131) : AC(358), Green Leafy Vegetables : CK(341) : AC(67), Vegetables: All : CK(1092) : AC(118)
Diseases : Aging : CK(1633) : AC(434), Cognitive Decline/Dysfunction : CK(1151) : AC(215)
Additional Keywords : Risk Reduction : CK(6417) : AC(686)

Vitamin A (AC 1) (CK 1)

Vitamin A, vitamin E, zinc and selenium deficiencies may be associated with androgen deficiency in aging men.

Pubmed Data : Clin Neuropharmacol. 1999 Jul-Aug;22(4):241-3. PMID: 16281517

Article Published Date : Jul 01, 1999

Authors : Fang He, Lei Feng

Study Type : Commentary
Additional Links
Substances : Selenium : CK(784) : AC(139) , Vitamin A : CK(498) : AC(77) , Vitamin E : CK(1656) : AC(290), Zinc : CK(941) : AC(139)
Diseases : Aging : CK(1658) : AC(438) , Androgen Deficiency : CK(42) : AC(14) , Low Testosterone : CK(433) : AC(78)

Vitamin B-12 (AC 1) (CK 10)

Vitamin B12 levels in human frontal cortex were found to decrease with age.

Pubmed Data : PLoS One. 2016 ;11(1):e0146797. Epub 2016 Jan 22. PMID: 26799654

Article Published Date : Dec 31, 2015

Authors : Yiting Zhang, Nathaniel W Hodgson, Malav S Trivedi, Hamid M Abdolmaleky, Margot Fournier, Michel Cuenod, Kim Quang Do, Richard C Deth

Study Type : Human Study
Additional Links
Substances : Vitamin B-12 : CK(780) : AC(104)
Diseases : Aging : CK(1658) : AC(438) , Autism Spectrum Disorders : CK(1461) : AC(159) , Schizophrenia : CK(445) : AC(70) , Vitamin B 12 Deficiency : CK(248) : AC(40)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682)
Additional Keywords : Increased Risk : CK(1450) : AC(181) , Risk Factors : CK(2618) : AC(336)

Vitamin B-6 (AC 1) (CK 2)

A combination of phosphatidylserine, Ginkgo biloba, vitamin E, and pyridoxine improves short term memory in aging beagles.

Pubmed Data : Can Vet J. 2008 Apr;49(4):379-85. PMID: 18481547

Article Published Date : Apr 01, 2008

Authors : Joseph A Araujo, Gary M Landsberg, Norton W Milgram, Alda Miolo

Study Type : Animal Study

Additional Links

Substances : Ginkgo biloba : CK(798) : AC(162) , Phosphatidylserine : CK(134) : AC(20) , Vitamin B-6 : CK(435) : AC(54), Vitamin E : CK(1656) : AC(290)

Diseases : Aging: Brain : CK(248) : AC(85), Memory Disorders : CK(342) : AC(104)

Additional Keywords : Plant Extracts : CK(7484) : AC(2463)

Vitamin C (AC 8) (CK 37)

A multi-nutrient mixture of soy extract, fish protein polysaccharides, extracts from white tea, grape seed and tomato, vitamins C and E as well as zinc and chamomile extract improves signs of skin aging in post-menopausal women.

Pubmed Data : Eur J Clin Nutr. 2006 Oct;60(10):1201-6. Epub 2006 May 3. PMID: 16670692

Article Published Date : Oct 01, 2006

Authors : G R Lange Skovgaard, A S Jensen, M L Sigler

Study Type : Human Study

Additional Links

Substances : Chamomile : CK(182) : AC(30) , Fish extract : CK(32) : AC(4), Grape Seed Extract : CK(316) : AC(88), Soy : CK(1787) : AC(399) , Tomato : CK(557) : AC(109) , Vitamin C : CK(1957) : AC(404), Vitamin E : CK(1656) : AC(290) , White Tea : CK(21) : AC(6) , Zinc : CK(941) : AC(139)

Diseases : Aging Skin : CK(426) : AC(101) , Postmenopausal Disorders : CK(329) : AC(42)

A multi-nutrient mixture of vitamin C, vitamin E, carotenoids, selenium, zinc, amino acids and glycosaminoglycans, blueberry extract and pycnogenol improves visible signs of ageing in women 45-73 years of age.

Pubmed Data : J Dermatolog Treat. 2004 Jul;15(4):222-6. PMID: **15764035**

Article Published Date : Jul 01, 2004

Authors : D Segger, F Schönlau

Study Type : Human Study
Additional Links
Substances : Amino Acids : CK(100) : AC(16), Blueberry : CK(260) : AC(90), Glycosaminoglycans : CK(12) : AC(2), Pycnogenol (Pine Bark) : CK(556) : AC(94), Selenium : CK(784) : AC(139), Vitamin C : CK(1957) : AC(404), Vitamin E : CK(1656) : AC(290), Zinc : CK(941) : AC(139)
Diseases : Aging Skin : CK(426) : AC(101), Skin Diseases : CK(67) : AC(12)

Curcumin prevents radiation-induced thymic lymphoma in mice.

Pubmed Data : J Environ Pathol Toxicol Oncol. 2007;26(4):273-9. PMID: **18197825**

Article Published Date : Jan 01, 2007

Authors : P Dange, H Sarma, Badri Narain Pandey, Kaushala Prasad Mishra

Study Type : Animal Study
Additional Links
Substances : Curcumin : CK(4135) : AC(2175), Vitamin C : CK(1957) : AC(404)
Diseases : Aging : CK(1633) : AC(434), Lymphoma : CK(253) : AC(83), Radiation Induced Illness : CK(1046) : AC(264)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682), Chemopreventive : CK(2835) : AC(787)

Herbs provide protection against harmful UV radiation due to their antioxidant activity.

Pubmed Data : Pharmacogn Rev. 2011 Jul ;5(10):164-73. PMID: **22279374**

Article Published Date : Jul 01, 2011

Authors : Radava R Korać, Kapil M Khambholja

Study Type : Review
Additional Links
Substances : Coconut oil: topical : CK(1) : AC(1), Flavonoids : CK(1215) : AC(379), Krameria lappacea: topical : CK(1) : AC(1), Olive oil: topical : CK(1) : AC(1), Peanut oil: topical : CK(1) : AC(1), Sesame oil: topical : CK(1) : AC(1), Vitamin C : CK(1957) : AC(404), Vitamin E : CK(1656) : AC(290)
Diseases : Skin Diseases: Photo-Aging : CK(132) : AC(51), Sunburn : CK(41) : AC(19), Ultraviolet Radiation Induced Damage : CK(80) : AC(34)

Pharmacological Actions : Antioxidants : CK(7331) : AC(2682) , Photoprotective : CK(74) : AC(27)

Multivitamin use is associated with longer telomere length in women.

Pubmed Data : Hepatogastroenterology. 2002 Nov-Dec;49(48):1571-5. PMID: **19279081**

Article Published Date : Nov 01, 2002

Authors : Qun Xu, Christine G Parks, Lisa A DeRoo, Richard M Cawthon, Dale P Sandler, Honglei Chen

Study Type : Human Study
Additional Links
Substances : Multivitamin : CK(257) : AC(25) , Vitamin C : CK(1957) : AC(404) , Vitamin E : CK(1656) : AC(290)
Diseases : Aging : CK(1658) : AC(438)
Pharmacological Actions : Telomerase Upregulation : CK(102) : AC(28)

Skin aging can be decelerated with a nutrient complex containing soy, tomato, grape seed, and white tea extracts, and sodium ascorbate (vitamin C), tocopherol acetate (vitamin E), zinc, and Biomarine complex.

Pubmed Data : Gastroenterol Hepatol. 1997 Apr;20(4):172-4. PMID: **17028931**

Article Published Date : Apr 01, 1997

Authors : Sophie Lacroix, Charbel Bouez, Sandrine Vidal, Valérie Cenizo, Corinne Reymermier, Virginie Justin, Jana Vicanová, Odile Damour

Study Type : In Vitro Study
Additional Links
Substances : Grape Seed Extract : CK(316) : AC(88) , Soy : CK(1787) : AC(399) , Tomato : CK(557) : AC(109), Vitamin C : CK(1957) : AC(404) , Vitamin E : CK(1656) : AC(290) , White Tea : CK(21) : AC(6) , Zinc : CK(941) : AC(139)
Diseases : Aging : CK(1658) : AC(438) , Aging Skin : CK(426) : AC(101)

These results suggest that a long-term high-dose intake of VC is effective in the maintenance of immune cells.

Pubmed Data : Br J Nutr. 2015 Feb 28 ;113(4):603-9. Epub 2015 Jan 22. PMID: **25608928**

Article Published Date : Feb 27, 2015

Authors : Ryusei Uchio, Yoshitaka Hirose, Shinji Murosaki, Yoshihiro Yamamoto, Akihito Ishigami

Study Type : Animal Study
Additional Links
Substances : Vitamin C : CK(1957) : AC(404)
Diseases : Aging : CK(1658) : AC(438)

Pharmacological Actions : Antioxidants : CK(7331) : AC(2682) , Immunomodulatory : CK(1287) : AC(358)

Vitamin C may prevent age-related cognitive decline and Alzheimer's disease.

Pubmed Data : J Alzheimers Dis. 2012 ;29(4):711-26. PMID: **22366772**

Article Published Date : Dec 31, 2011

Authors : Fiona E Harrison

Study Type : Review
Additional Links
Substances : Vitamin C : CK(1957) : AC(404)
Diseases : Aging: Brain : CK(248) : AC(85)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682) , Neuroprotective Agents : CK(2268) : AC(1071)

Vitamin D (AC 3) (CK 7)

"Vitamin D may improve telomere maintenance and prevent cell senescence and counteract obesity-induced acceleration of cellular aging."

Pubmed Data : Int J Obes (Lond). 2012 Jun ;36(6):805-9. Epub 2011 Oct 11. PMID: **21986705**

Article Published Date : Jun 01, 2012

Authors : H Zhu, D Guo, K Li, J Pedersen-White, I S Stallmann-Jorgensen, Y Huang, S Parikh, K Liu, Y Dong

Study Type : Human In Vitro
Additional Links
Substances : Vitamin D : CK(3209) : AC(455)
Diseases : African-American Specific Deficiencies/Diseases : CK(205) : AC(20) , Aging : CK(1658) : AC(438), Obesity : CK(2208) : AC(467)
Pharmacological Actions : Telomerase Upregulation : CK(102) : AC(28)

This reviews the existing knowledge about the link between telomere biology and cellular aging with a focus on the role of vitamin D.

Pubmed Data : Clin Chem Lab Med. 2015 Mar 21. Epub 2015 Mar 21. PMID: 25803084

Article Published Date : Mar 20, 2015

Authors : Irene Pusceddu, Christopher-John L Farrell, Angela Maria Di Pierro, Erika Jani, Wolfgang Herrmann, Markus Herrmann

Study Type : Review
Additional Links
Substances : Vitamin D : CK(3209) : AC(455)
Diseases : Aging : CK(1658) : AC(438), Cardiovascular Diseases : CK(7200) : AC(911), Neurodegenerative Diseases : CK(3376) : AC(850)
Pharmacological Actions : Genoprotective : CK(270) : AC(97)
Additional Keywords : Telomere Length : CK(18) : AC(5)

Vitamin D3 inhibits ultraviolet-B-indcued damage in human skin cells.

Pubmed Data : J Cell Biochem. 2003 Jul 1;89(4):663-73. PMID: 12858333

Article Published Date : Jul 01, 2003

Authors : Petra De Haes, Marjan Garmyn, Hugo Degreef, Katleen Vantieghem, Roger Bouillon, Siegfried Segaert

Study Type : In Vitro Study
Additional Links
Substances : Vitamin D : CK(3209) : AC(455)
Diseases : Aging Skin : CK(426) : AC(101), Skin Diseases: Photo-Aging : CK(132) : AC(51)
Pharmacological Actions : Apoptotic : CK(2958) : AC(2075), Interleukin-6 Downregulation : CK(1095) : AC(342), Tumor Necrosis Factor (TNF) Alpha Inhibitor : CK(1803) : AC(655)

Vitamin E (AC 10) (CK 58)

A combination of phosphatidylserine, Ginkgo biloba, vitamin E, and pyridoxine improves short term memory in aging beagles.

Pubmed Data : Can Vet J. 2008 Apr;49(4):379-85. PMID: 18481547

Article Published Date : Apr 01, 2008

Authors : Joseph A Araujo, Gary M Landsberg, Norton W Milgram, Alda Miolo

Study Type : Animal Study
Additional Links
Substances : Ginkgo biloba : CK(798) : AC(162), Phosphatidylserine : CK(134) : AC(20), Vitamin B-6 :

CK(435) : AC(54), Vitamin E : CK(1656) : AC(290)
Diseases : Aging: Brain : CK(248) : AC(85), Memory Disorders : CK(342) : AC(104)
Additional Keywords : Plant Extracts : CK(7484) : AC(2463)

A multi-nutrient mixture of soy extract, fish protein polysaccharides, extracts from white tea, grape seed and tomato, vitamins C and E as well as zinc and chamomile extract improves signs of skin aging in post-menopausal women.

Pubmed Data : Eur J Clin Nutr. 2006 Oct;60(10):1201-6. Epub 2006 May 3. PMID: 16670692

Article Published Date : Oct 01, 2006

Authors : G R Lange Skovgaard, A S Jensen, M L Sigler

Study Type : Human Study
Additional Links
Substances : Chamomile : CK(182) : AC(30) , Fish extract : CK(32) : AC(4), Grape Seed Extract : CK(316) : AC(88), Soy : CK(1787) : AC(399) , Tomato : CK(557) : AC(109) , Vitamin C : CK(1957) : AC(404), Vitamin E : CK(1656) : AC(290) , White Tea : CK(21) : AC(6) , Zinc : CK(941) : AC(139)
Diseases : Aging Skin : CK(426) : AC(101) , Postmenopausal Disorders : CK(329) : AC(42)

A multi-nutrient mixture of vitamin C, vitamin E, carotenoids, selenium, zinc, amino acids and glycosaminoglycans, blueberry extract and pycnogenol improves visible signs of ageing in women 45-73 years of age.

Pubmed Data : J Dermatolog Treat. 2004 Jul;15(4):222-6. PMID: 15764035

Article Published Date : Jul 01, 2004

Authors : D Segger, F Schönlau

Study Type : Human Study
Additional Links
Substances : Amino Acids : CK(100) : AC(16) , Blueberry : CK(260) : AC(90) , Glycosaminoglycans : CK(12) : AC(2), Pycnogenol (Pine Bark) : CK(556) : AC(94) , Selenium : CK(784) : AC(139) , Vitamin C : CK(1957) : AC(404), Vitamin E : CK(1656) : AC(290) , Zinc : CK(941) : AC(139)
Diseases : Aging Skin : CK(426) : AC(101) , Skin Diseases : CK(67) : AC(12)

Alpha-tocopherol prevents hydrogen peroxide-induced DNA damage and telomere shortening and upregulates telomerase activity in human skin cells.

Pubmed Data : Planta Med. 2010 Jun;76(9):869-75. Epub 2010 Jan 28. PMID: **20112180**

Article Published Date : Jun 01, 2010

Authors : Suzana Makpol, Azalina Zainuddin, Norhazira Abdul Rahim, Yasmin Anum Yusof, Wan Zurinah Ngah

Study Type : In Vitro Study
Additional Links
Substances : Vitamin E : CK(1656) : AC(290)
Diseases : Aging : CK(1658) : AC(438) , Aging Skin : CK(426) : AC(101) , DNA damage : CK(993) : AC(382), Oxidative Stress : CK(3871) : AC(1382)
Pharmacological Actions : Telomerase Upregulation : CK(102) : AC(28)

Cynanchum auriculatum in combination with vitamin E exhibits anti-aging properties.

Pubmed Data : Zhongguo Zhong Yao Za Zhi. 2007 Dec;32(23):2511-4. PMID: **18330246**

Article Published Date : Dec 01, 2007

Authors : Shi-Xia Zhang, Xin Li, Jia-Le Yin, Li-Li Chen, Hong-Quan Zhang

Study Type : Meta Analysis
Additional Links
Substances : Cynanchum Auriculatum : CK(20) : AC(1) , Vitamin E : CK(1656) : AC(290)
Diseases : Aging : CK(1658) : AC(438)
Pharmacological Actions : Malondialdehyde Down-regulation : CK(554) : AC(152) , Superoxide Dismutase Up-regulation : CK(508) : AC(171), Telomerase Upregulation : CK(102) : AC(28)

Herbs provide protection against harmful UV radiation due to their antioxidant activity.

Pubmed Data : Pharmacogn Rev. 2011 Jul ;5(10):164-73. PMID: **22279374**

Article Published Date : Jul 01, 2011

Authors : Radava R Korać, Kapil M Khambholja

Study Type : Review
Additional Links
Substances : Coconut oil: topical : CK(1) : AC(1) , Flavonoids : CK(1215) : AC(379) , Krameria lappacea: topical : CK(1) : AC(1), Olive oil: topical : CK(1) : AC(1) , Peanut oil: topical : CK(1) : AC(1) , Sesame oil: topical : CK(1) : AC(1) , Vitamin C : CK(1957) : AC(404) , Vitamin E : CK(1656) : AC(290)
Diseases : Skin Diseases: Photo-Aging : CK(132) : AC(51) , Sunburn : CK(41) : AC(19) , Ultraviolet Radiation Induced Damage : CK(80) : AC(34)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682) , Photoprotective : CK(74) : AC(27)

Long-term treatment with a nutraceutical containing rice bran extract could be useful for slowing down brain aging.

Pubmed Data : Neuromolecular Med. 2016 Jun 27. Epub 2016 Jun 27. PMID: **27350374**

Article Published Date : Jun 26, 2016

Authors : Stephanie Hagl, Heike Asseburg, Martina Heinrich, Nadine Sus, Eva-Maria Blumrich, Ralf Dringen, Jan Frank, Gunter P Eckert

Study Type : Animal Study
Additional Links
Substances : Rice Bran : CK(127) : AC(37) , Vitamin E : CK(1656) : AC(290)
Diseases : Aging: Brain : CK(248) : AC(85), Alzheimer's Disease : CK(1292) : AC(382) , Mitochondrial Dysfunction : CK(225) : AC(91), Neurodegenerative Diseases : CK(3376) : AC(850)
Pharmacological Actions : Neuroprotective Agents : CK(2268) : AC(1071)
Additional Keywords : Plant Extracts : CK(7484) : AC(2463) , Risk Reduction : CK(6417) : AC(686)

Multivitamin use is associated with longer telomere length in women.

Pubmed Data : Hepatogastroenterology. 2002 Nov-Dec;49(48):1571-5. PMID: **19279081**

Article Published Date : Nov 01, 2002

Authors : Qun Xu, Christine G Parks, Lisa A DeRoo, Richard M Cawthon, Dale P Sandler, Honglei Chen

Study Type : Human Study
Additional Links
Substances : Multivitamin : CK(257) : AC(25) , Vitamin C : CK(1957) : AC(404) , Vitamin E : CK(1656) : AC(290)
Diseases : Aging : CK(1658) : AC(438)
Pharmacological Actions : Telomerase Upregulation : CK(102) : AC(28)

Skin aging can be decelerated with a nutrient complex containing soy, tomato, grape seed, and white tea extracts, and sodium ascorbate (vitamin C), tocopherol acetate (vitamin E), zinc, and Biomarine complex.

Pubmed Data : Gastroenterol Hepatol. 1997 Apr;20(4):172-4. PMID: **17028931**

Article Published Date : Apr 01, 1997

Authors : Sophie Lacroix, Charbel Bouez, Sandrine Vidal, Valérie Cenizo, Corinne Reymermier, Virginie Justin, Jana Vicanová, Odile Damour

Study Type : In Vitro Study
Additional Links
Substances : Grape Seed Extract : CK(316) : AC(88) , Soy : CK(1787) : AC(399) , Tomato : CK(557) : AC(109), Vitamin C : CK(1957) : AC(404) , Vitamin E : CK(1656) : AC(290) , White Tea : CK(21) : AC(6) , Zinc : CK(941) : AC(139)
Diseases : Aging : CK(1658) : AC(438) , Aging Skin : CK(426) : AC(101)

Vitamin A, vitamin E, zinc and selenium deficiencies may be associated with androgen deficiency in aging men.

Pubmed Data : Clin Neuropharmacol. 1999 Jul-Aug;22(4):241-3. PMID: **16281517**

Article Published Date : Jul 01, 1999

Authors : Fang He, Lei Feng

Study Type : Commentary
Additional Links
Substances : Selenium : CK(784) : AC(139) , Vitamin A : CK(498) : AC(77) , Vitamin E : CK(1656) : AC(290), Zinc : CK(941) : AC(139)
Diseases : Aging : CK(1658) : AC(438) , Androgen Deficiency : CK(42) : AC(14) , Low Testosterone : CK(433) : AC(78)

Vitamin K (AC 2) (CK 4)

Menaquinone-7, a form of vitamin K2, has a stimulatory effect on bone formation in the femoral tissues of elderly female rats in vitro.

Pubmed Data : Int J Mol Med. 2002 Dec;10(6):729-33. PMID: **12429999**

Article Published Date : Dec 01, 2002

Authors : Masayoshi Yamaguchi, Satoshi Uchiyama, Yoshinori Tsukamoto

Study Type : Animal Study
Additional Links
Substances : Genistein : CK(515) : AC(228) , Vitamin K : CK(645) : AC(85) , Vitamin K2: Menaquinone-7 : CK(108) : AC(16)
Diseases : Aging : CK(1658) : AC(438) , Osteopenia : CK(229) : AC(41) , Osteoporosis : CK(1283) : AC(245)

Menaquinone-7, a form of vitamin K2, may prevent age-related bone loss.

Pubmed Data : Biofactors. 2004;22(1-4):5-19. PMID: **15630245**

Article Published Date : Jan 01, 2004

Authors : Yoshinori Tsukamoto

Study Type : Animal Study
Additional Links

Substances : Vitamin K : CK(645) : AC(85) , Vitamin K2: Menaquinone-7 : CK(108) : AC(16)
Diseases : Aging : CK(1658) : AC(438) , Osteoporosis : CK(1283) : AC(245)

Vitamin K2: Menaquinone-7 (AC 2) (CK 4)

Menaquinone-7, a form of vitamin K2, has a stimulatory effect on bone formation in the femoral tissues of elderly female rats in vitro.

Pubmed Data : Int J Mol Med. 2002 Dec;10(6):729-33. PMID: **12429999**

Article Published Date : Dec 01, 2002

Authors : Masayoshi Yamaguchi, Satoshi Uchiyama, Yoshinori Tsukamoto

Study Type : Animal Study
Additional Links
Substances : Genistein : CK(515) : AC(228) , Vitamin K : CK(645) : AC(85) , Vitamin K2: Menaquinone-7 : CK(108) : AC(16)
Diseases : Aging : CK(1658) : AC(438) , Osteopenia : CK(229) : AC(41) , Osteoporosis : CK(1283) : AC(245)

Menaquinone-7, a form of vitamin K2, may prevent age-related bone loss.

Pubmed Data : Biofactors. 2004;22(1-4):5-19. PMID: **15630245**

Article Published Date : Jan 01, 2004

Authors : Yoshinori Tsukamoto

Study Type : Animal Study
Additional Links
Substances : Vitamin K : CK(645) : AC(85) , Vitamin K2: Menaquinone-7 : CK(108) : AC(16)
Diseases : Aging : CK(1658) : AC(438) , Osteoporosis : CK(1283) : AC(245)

Walnut (AC 2) (CK 3)

Grape juice, berries, and walnuts may decelerate brain aging.

Pubmed Data : J Ethnopharmacol. 2008 Aug 13;118(3):396-404. Epub 2008 May 20. PMID: 19640963

Article Published Date : Aug 13, 2008

Authors : James A Joseph, Barbara Shukitt-Hale, Lauren M Willis

Study Type : Commentary
Additional Links
Substances : Berries: All : CK(1443) : AC(356) , Grape : CK(1720) : AC(430) , Walnut : CK(187) : AC(43)
Diseases : Aging: Brain : CK(248) : AC(85)
Pharmacological Actions : Neuroprotective Agents : CK(2268) : AC(1071)

Walnuts have a beneficial efffect on motor and cognitive function in aged rats.

Pubmed Data : Br J Nutr. 2009 Apr;101(8):1140-4. PMID: 18778529

Article Published Date : Apr 01, 2009

Authors : Lauren M Willis, Barbara Shukitt-Hale, Vivian Cheng, James A Joseph

Study Type : Animal Study
Additional Links
Substances : Walnut : CK(187) : AC(43)
Diseases : Aging: Brain : CK(248) : AC(85), Cognitive Decline/Dysfunction : CK(1151) : AC(215)

Water: Deuterium Depleted (AC 1) (CK 2)

Treatment of manganese exposed worms with deuterium-depleted water (90 ppm) restored life-span, DAF-16 and SOD-3 levels to control levels.

Pubmed Data : Toxicol Lett. 2012 Jun 20 ;211(3):319-24. Epub 2012 Apr 26. PMID: 22561170

Article Published Date : Jun 19, 2012

Authors : Daiana Silva Avila, Gábor Somlyai, Ildikó Somlyai, Michael Aschner

Study Type : Animal Study

Additional Links
Substances : Water: Deuterium Depleted : CK(27) : AC(2)
Diseases : Aging : CK(1658) : AC(438)
Pharmacological Actions : Anti-Apoptotic : CK(384) : AC(212), Cytoprotective : CK(190) : AC(94)

Wheat Grass (AC 1) (CK 2)

Wheat sprout extract reduces lens opacity and reverses age-related alterations in physiology.

Pubmed Data : Biogerontology. 2005;6(4):245-53. PMID: **16333758**

Article Published Date : Jan 01, 2005

Authors : Andrea Basso, Giuliana Rossolini, Anna Piantanelli, Domenico Amici, Isabella Calzuola, Loretta Mancinelli, Valeria Marsili, Gian Luigi Gianfranceschi

Study Type : Animal Study
Additional Links
Substances : Wheat Grass : CK(48) : AC(16)
Diseases : Aging : CK(1658) : AC(438), Cataract : CK(196) : AC(61)

Whey (AC 1) (CK 1)

Whey protein has been shown to be effective in augmenting the effects of resistance exercise, particularly when supplementation occurs in the hours surrounding the exercise training.

Pubmed Data : Curr Opin Clin Nutr Metab Care. 2008 Jan;11(1):40-4. PMID: **18090657**

Article Published Date : Jan 01, 2008

Authors : Alan Hayes, Paul J Cribb

Study Type : Review
Additional Links
Substances : Whey : CK(348) : AC(75)
Diseases : Aging : CK(1658) : AC(438), Athlete's foot : CK(11) : AC(2)

White Mulberry (AC 1) (CK 10)

The combined formulation of fruit extracts showed excellent antioxidative and anti-collagenase activity as well as a significant effect on anti-wrinkle activity on human skin.

Pubmed Data : Clin Cosmet Investig Dermatol. 2015 ;8:389-96. Epub 2015 Jul 16. PMID: 26203268

Article Published Date : Dec 31, 2014

Authors : Amal Kumar Ghimeray, Un Sun Jung, Ha Youn Lee, Young Hoon Kim, Eun Kyung Ryu, Moon Sik Chang

Study Type : Human Study, In Vitro Study

Additional Links

Substances : Fig : CK(45) : AC(17), Ginkgo biloba : CK(798) : AC(162), Pomegranate : CK(499) : AC(168), White Mulberry : CK(11) : AC(1)

Diseases : Aging Skin : CK(426) : AC(101), Wrinkles : CK(10) : AC(1)

Pharmacological Actions : Anti-collagenase : CK(13) : AC(2), Antioxidants : CK(7331) : AC(2682)

Additional Keywords : Dose Response : CK(1056) : AC(408), Natural Substances Versus Drugs : CK(1696) : AC(301), Plant Extracts : CK(7484) : AC(2463)

White Tea (AC 3) (CK 12)

A multi-nutrient mixture of soy extract, fish protein polysaccharides, extracts from white tea, grape seed and tomato, vitamins C and E as well as zinc and chamomile extract improves signs of skin aging in post-menopausal women.

Pubmed Data : Eur J Clin Nutr. 2006 Oct;60(10):1201-6. Epub 2006 May 3. PMID: 16670692

Article Published Date : Oct 01, 2006

Authors : G R Lange Skovgaard, A S Jensen, M L Sigler

Study Type : Human Study
Additional Links
Substances : Chamomile : CK(182) : AC(30) , Fish extract : CK(32) : AC(4), Grape Seed Extract : CK(316) : AC(88), Soy : CK(1787) : AC(399) , Tomato : CK(557) : AC(109) , Vitamin C : CK(1957) : AC(404), Vitamin E : CK(1656) : AC(290) , White Tea : CK(21) : AC(6) , Zinc : CK(941) : AC(139)
Diseases : Aging Skin : CK(426) : AC(101) , Postmenopausal Disorders : CK(329) : AC(42)

Skin aging can be decelerated with a nutrient complex containing soy, tomato, grape seed, and white tea extracts, and sodium ascorbate (vitamin C), tocopherol acetate (vitamin E), zinc, and Biomarine complex.

Pubmed Data : Gastroenterol Hepatol. 1997 Apr;20(4):172-4. PMID: 17028931

Article Published Date : Apr 01, 1997

Authors : Sophie Lacroix, Charbel Bouez, Sandrine Vidal, Valérie Cenizo, Corinne Reymermier, Virginie Justin, Jana Vicanová, Odile Damour

Study Type : In Vitro Study
Additional Links
Substances : Grape Seed Extract : CK(316) : AC(88) , Soy : CK(1787) : AC(399) , Tomato : CK(557) : AC(109), Vitamin C : CK(1957) : AC(404) , Vitamin E : CK(1656) : AC(290) , White Tea : CK(21) : AC(6) , Zinc : CK(941) : AC(139)
Diseases : Aging : CK(1658) : AC(438) , Aging Skin : CK(426) : AC(101)

White tea, green tea, rose and witch hazel, have significant anti-collagenase or anti-elastase activities.

Pubmed Data : Int J Colorectal Dis. 2007 Dec;22(12):1445-51. Epub 2007 Sep 2. PMID: 19653897

Article Published Date : Dec 01, 2007

Authors : Tamsyn S A Thring, Pauline Hili, Declan P Naughton

Study Type : In Vitro Study
Additional Links
Substances : White Tea : CK(21) : AC(6)
Diseases : Aging : CK(1658) : AC(438) , Oxidative Stress : CK(3871) : AC(1382)
Pharmacological Actions : Anti-collagenase : CK(13) : AC(2) , Anti-elastase : CK(2) : AC(2)

Wine (AC 1) (CK 10)

Intake of flavonoid-rich wine, tea, and chocolate by elderly men and women is associated with better cognitive test performance.

Pubmed Data : J Nutr. 2009 Jan;139(1):120-7. Epub 2008 Dec 3. PMID: 19056649

Article Published Date : Jan 01, 2009

Authors : Eha Nurk, Helga Refsum, Christian A Drevon, Grethe S Tell, Harald A Nygaard, Knut Engedal, A David Smith

Study Type : Human Study
Additional Links
Substances : Black Tea : CK(360) : AC(80) , Flavonoids : CK(1215) : AC(379) , Green Tea : CK(1971) : AC(562), Wine : CK(197) : AC(44)
Diseases : Aging: Brain : CK(248) : AC(85), Cognitive Decline/Dysfunction : CK(1151) : AC(215)

X-xyloside (AC 1) (CK 10)

A topical product containing C-xyloside and blueberry extract improves the appearance of type II diabetic skin.

Pubmed Data : J Cosmet Dermatol. 2009 Jun;8(2):147-51. PMID: 19527341

Article Published Date : Jun 01, 2009

Authors : Zoe Diana Draelos, Margarita Yatskayer, Susana Raab, Christian Oresajo

Study Type : Human Study
Additional Links
Substances : Blueberry : CK(260) : AC(90) , X-xyloside : CK(10) : AC(1)
Diseases : Advanced Glycation End products (AGE) : CK(231) : AC(73) , Aging Skin : CK(426) : AC(101), Diabetes: Skin : CK(10) : AC(1) , Diabetes Mellitus: Type 2 : CK(3384) : AC(595)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682)
Additional Keywords : Plant Extracts : CK(7484) : AC(2463)

Yoghurt (AC 1) (CK 10)

Probiotic administration in the elderly normalises the response to endotoxin, and modulates activation markers in blood phagocytes, and therefore may help reduce low-grade chronic inflammation.

Pubmed Data : Nutr Cancer. 2009;61(5):680-6. PMID: 19353762

Article Published Date : Jan 01, 2009

Authors : Eduardo J Schiffrin, Alexandr Parlesak, Christiane Bode, J Christian Bode, Martin A van't Hof, Dominik Grathwohl, Yves Guigoz

Study Type : Human Study
Additional Links
Substances : Fermented Foods and Beverages : CK(864) : AC(194) , Probiotics : CK(2868) : AC(364) , Yoghurt : CK(154) : AC(23)
Diseases : Aging : CK(1658) : AC(438) , Endotoxemia : CK(83) : AC(43) , Immune Disorders: Low Immune Function : CK(489) : AC(118), Lipopolysaccharide-Induced Toxicity : CK(359) : AC(218)
Pharmacological Actions : Immunomodulatory : CK(1287) : AC(358)

Zinc (AC 10) (CK 49)

A multi-nutrient mixture of soy extract, fish protein polysaccharides, extracts from white tea, grape seed and tomato, vitamins C and E as well as zinc and chamomile extract improves signs of skin aging in post-menopausal women.

Pubmed Data : Eur J Clin Nutr. 2006 Oct;60(10):1201-6. Epub 2006 May 3. PMID: 16670692

Article Published Date : Oct 01, 2006

Authors : G R Lange Skovgaard, A S Jensen, M L Sigler

Study Type : Human Study
Additional Links
Substances : Chamomile : CK(182) : AC(30) , Fish extract : CK(32) : AC(4), Grape Seed Extract : CK(316) : AC(88), Soy : CK(1787) : AC(399) , Tomato : CK(557) : AC(109) , Vitamin C : CK(1957) : AC(404), Vitamin E : CK(1656) : AC(290) , White Tea : CK(21) : AC(6) , Zinc : CK(941) : AC(139)
Diseases : Aging Skin : CK(426) : AC(101) , Postmenopausal Disorders : CK(329) : AC(42)

A multi-nutrient mixture of vitamin C, vitamin E,

carotenoids, selenium, zinc, amino acids and glycosaminoglycans, blueberry extract and pycnogenol improves visible signs of ageing in women 45-73 years of age.

Pubmed Data : J Dermatolog Treat. 2004 Jul;15(4):222-6. PMID: 15764035

Article Published Date : Jul 01, 2004

Authors : D Segger, F Schönlau

Study Type : Human Study
Additional Links
Substances : Amino Acids : CK(100) : AC(16), Blueberry : CK(260) : AC(90), Glycosaminoglycans : CK(12) : AC(2), Pycnogenol (Pine Bark) : CK(556) : AC(94), Selenium : CK(784) : AC(139), Vitamin C : CK(1957) : AC(404), Vitamin E : CK(1656) : AC(290), Zinc : CK(941) : AC(139)
Diseases : Aging Skin : CK(426) : AC(101), Skin Diseases : CK(67) : AC(12)

A traditional Indian medical formula containing clarified butter (ghee), flax seed oil, amla (P. emblica fruits), Shorea robusta resin and zinc (Yashada bhasma) stimulates wound healing and tissue regeneration.

Pubmed Data : Evid Based Complement Alternat Med. 2009 Feb 27. PMID: 19252191

Article Published Date : Feb 27, 2009

Authors : Hema Sharma Datta, Shankar Kumar Mitra, Bhushan Patwardhan

Study Type : Animal Study
Additional Links
Substances : Amla Fruit : CK(80) : AC(33), Flaxseed : CK(453) : AC(90), Ghee : CK(24) : AC(4), Shorea robusta : CK(2) : AC(1), Zinc : CK(941) : AC(139)
Diseases : Aging Skin : CK(426) : AC(101), Wound Healing: Delayed : CK(74) : AC(29)
Additional Keywords : Ayurvedic Formulas : CK(2) : AC(1), Regenerative Substances : CK(42) : AC(19)

Skin aging can be decelerated with a nutrient complex containing soy, tomato, grape seed, and white tea extracts, and sodium ascorbate (vitamin C), tocopherol acetate (vitamin E), zinc, and Biomarine complex.

Pubmed Data : Gastroenterol Hepatol. 1997 Apr;20(4):172-4. PMID: 17028931

Article Published Date : Apr 01, 1997

Authors : Sophie Lacroix, Charbel Bouez, Sandrine Vidal, Valérie Cenizo, Corinne Reymermier, Virginie Justin, Jana Vicanová, Odile Damour

Study Type : In Vitro Study

Additional Links
Substances : Grape Seed Extract : CK(316) : AC(88) , Soy : CK(1787) : AC(399) , Tomato : CK(557) : AC(109), Vitamin C : CK(1957) : AC(404) , Vitamin E : CK(1656) : AC(290) , White Tea : CK(21) : AC(6) , Zinc : CK(941) : AC(139)
Diseases : Aging : CK(1658) : AC(438) , Aging Skin : CK(426) : AC(101)

Vitamin A, vitamin E, zinc and selenium deficiencies may be associated with androgen deficiency in aging men.

Pubmed Data : Clin Neuropharmacol. 1999 Jul-Aug;22(4):241-3. PMID: **16281517**

Article Published Date : Jul 01, 1999

Authors : Fang He, Lei Feng

Study Type : Commentary
Additional Links
Substances : Selenium : CK(784) : AC(139) , Vitamin A : CK(498) : AC(77) , Vitamin E : CK(1656) : AC(290), Zinc : CK(941) : AC(139)
Diseases : Aging : CK(1658) : AC(438) , Androgen Deficiency : CK(42) : AC(14) , Low Testosterone : CK(433) : AC(78)

Zinc and selenium may have therapeutic roles in anti-aging medicine.

Pubmed Data : Curr Pharm Des. 2008;14(26):2719-32. PMID: **18991691**

Article Published Date : Jan 01, 2008

Authors : E Mocchegiani, M Malavolta, E Muti, L Costarelli, C Cipriano, F Piacenza, S Tesei, R Giacconi, F Lattanzio

Study Type : Review
Additional Links
Substances : Selenium : CK(784) : AC(139) , Zinc : CK(941) : AC(139)
Diseases : Aging : CK(1658) : AC(438)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682)

Zinc deficiency may be responsible for age-associated loss of thymus size and function.

Pubmed Data : In Vivo. 1998 Nov-Dec;12(6):695-722. PMID: **9891234**

Article Published Date : Nov 01, 1998

Authors : B Bodey, B Bodey, S E Siegel, H E Kaiser

Study Type : Commentary
Additional Links
Substances : Zinc : CK(941) : AC(139)
Diseases : Aging : CK(1658) : AC(438) , Low Immune Function: Thymus Dysfunction : CK(19) : AC(6)

Zinc may have anti-aging properties and may slow immunosenescence.

Pubmed Data : Exp Gerontol. 2006 Nov;41(11):1094-107. Epub 2006 Oct 9. PMID: **17030107**

Article Published Date : Nov 01, 2006

Authors : Eugenio Mocchegiani, Laura Costarelli, Robertina Giacconi, Catia Cipriano, Elisa Muti, Marco Malavolta

Study Type : Review
Additional Links
Substances : Zinc : CK(941) : AC(139)
Diseases : Aging : CK(1658) : AC(438) , Aging: Immunosenecence : CK(52) : AC(13)

Zinc supplementation boosts the stress response in the elderly.

Pubmed Data : Exp Gerontol. 2008 May;43(5):452-61. Epub 2008 Jan 15. PMID: **18304769**

Article Published Date : May 01, 2008

Authors : Akos Putics, Dalma Vödrös, Marco Malavolta, Eugenio Mocchegiani, Péter Csermely, Csaba Soti

Study Type : Meta Analysis
Additional Links
Substances : Zinc : CK(941) : AC(139)
Diseases : Aging : CK(1658) : AC(438) , Aging: Immunosenecence : CK(52) : AC(13) , Elderly: Age Specific Diseases : CK(442) : AC(38), Stress : CK(623) : AC(103)
Pharmacological Actions : Heat Shock Protein Inducer : CK(83) : AC(30) , Immunomodulatory : CK(1287) : AC(358)

Zinc supplementation can reverse some age-related thymic defects, improving immune function and overall healthy in elderly populations.

Pubmed Data : J Nutr. 2009 Jul;139(7):1393-7. Epub 2009 May 27. PMID: **19474155**

Article Published Date : Jul 01, 2009

Authors : Carmen P Wong, Yang Song, Valerie D Elias, Kathy R Magnusson, Emily Ho

Study Type : Animal Study
Additional Links
Substances : Zinc : CK(941) : AC(139)
Diseases : Aging : CK(1658) : AC(438) , Low Immune Function: Thymus Dysfunction : CK(19) : AC(6) , Thymic disease: Atrophy : CK(2) : AC(1)
Additional Keywords : Thymopoiesis : CK(2) : AC(1)

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beta-Carotene (AC 1) (CK 2)

Beta-carotene protects against ozone induced skin oxidative stress which is consistent with its protective role on skin.

Pubmed Data : Toxicol Ind Health. 2009 May;25(4-5):241-7. PMID: 19651793

Article Published Date : May 01, 2009

Authors : G Valacchi, A Pecorelli, M Mencarelli, E Maioli, P A Davis

Study Type : Animal Study
Additional Links
Substances : beta-Carotene : CK(318) : AC(53)
Diseases : Oxidative Stress : CK(3871) : AC(1382) , Skin Diseases: Photo-Aging : CK(132) : AC(51)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682)

Category : Problem Substances

Acesulfame potassium (AC 1) (CK 1)

Long term consumption of artificial sweeteners might accelerate atherosclerosis and aging.

Pubmed Data : Mol Cells. 2011 May ;31(5):461-70. Epub 2011 Apr 21. PMID: 21533907

Article Published Date : May 01, 2011

Authors : Wookju Jang, Nam Ho Jeoung, Kyung-Hyun Cho

Study Type : In Vitro Study
Additional Links
Diseases : Aging : CK(1658) : AC(438) , Atherosclerosis : CK(601) : AC(150)
Problem Substances : Acesulfame potassium : CK(22) : AC(8), Artificial Sweeteners : CK(355) : AC(74), Aspartame : CK(135) : AC(47) , Saccharin : CK(48) : AC(15)

Artificial Sweeteners (AC 1) (CK 1)

Long term consumption of artificial sweeteners might accelerate atherosclerosis and aging.

Pubmed Data : Mol Cells. 2011 May ;31(5):461-70. Epub 2011 Apr 21. PMID: **21533907**

Article Published Date : May 01, 2011

Authors : Wookju Jang, Nam Ho Jeoung, Kyung-Hyun Cho

Study Type : In Vitro Study

Additional Links

Diseases : Aging : CK(1658) : AC(438), Atherosclerosis : CK(601) : AC(150)

Problem Substances : Acesulfame potassium : CK(22) : AC(8), Artificial Sweeteners : CK(355) : AC(74), Aspartame : CK(135) : AC(47), Saccharin : CK(48) : AC(15)

Aspartame (AC 1) (CK 1)

Long term consumption of artificial sweeteners might accelerate atherosclerosis and aging.

Pubmed Data : Mol Cells. 2011 May ;31(5):461-70. Epub 2011 Apr 21. PMID: **21533907**

Article Published Date : May 01, 2011

Authors : Wookju Jang, Nam Ho Jeoung, Kyung-Hyun Cho

Study Type : In Vitro Study

Additional Links

Diseases : Aging : CK(1658) : AC(438), Atherosclerosis : CK(601) : AC(150)

Problem Substances : Acesulfame potassium : CK(22) : AC(8), Artificial Sweeteners : CK(355) : AC(74), Aspartame : CK(135) : AC(47), Saccharin : CK(48) : AC(15)

Corticosteroid (AC 1) (CK 3)

Spontaneous skin tearing during systemic corticosteroid treatment has been reported.

Pubmed Data : JAMA. 1980 Mar 28;243(12):1260-1. PMID: **7359683**

Article Published Date : Mar 28, 1980

Authors : N L Gottlieb, N S Penneys

Study Type : Human: Case Report

Additional Links

Diseases : Aging Skin : CK(426) : AC(101) , Rheumatoid Arthritis : CK(706) : AC(117) , Skin: Thinning : CK(3) : AC(1)

Problem Substances : Corticosteroid : CK(169) : AC(18) , Prednisone : CK(170) : AC(19)

Fluoride (AC 1) (CK 1)

Fluorine is a factor in premature aging, and related adverse health effects.

Pubmed Data : Ann Acad Med Stetin. 2004 ;50 Suppl 1:9-13. PMID: **16892576**

Article Published Date : Jan 01, 2004

Authors : Anna Machoy-Mokrzyńska

Study Type : Review

Additional Links

Diseases : Aging : CK(1658) : AC(438) , Arterial Calcification : CK(186) : AC(29)

Problem Substances : Fluoride : CK(405) : AC(87) , Sodium Fluoride : CK(190) : AC(62)

Adverse Pharmacological Actions : Cardiotoxic : CK(722) : AC(96)

Fructose (AC 1) (CK 1)

Fructose may contribute more to accelerated aging than glucose.

Pubmed Data : Carbohydr Res. 2011 May 15;346(7):933-8. Epub 2011 Mar 10. PMID: **21459368**

Article Published Date : May 15, 2011

Authors : Halyna M Semchyshyn, Liudmyla M Lozinska, Jacek Miedzobrodzki, Volodymyr I Lushchak

Study Type : In Vitro Study
Additional Links
Diseases : Aging : CK(1658) : AC(438)
Problem Substances : Fructose : CK(361) : AC(106)

Glucose (AC 1) (CK 1)

Glucose signaling has a progeriatric effect on chronologically aged yeast cells.

Pubmed Data : Aging (Albany NY). 2010 Oct;2(10):643-9. PMID: **21076182**

Article Published Date : Oct 01, 2010

Authors : Christoph Ruckenstuhl, Didac Carmona-Gutierrez, Frank Madeo

Study Type : In Vitro Study
Additional Links
Diseases : Aging : CK(1658) : AC(438)
Problem Substances : Glucose : CK(8) : AC(5)
Adverse Pharmacological Actions : Progeriatric : CK(2) : AC(2)

Homocysteine (AC 1) (CK 1)

Homocysteine accelerates senescence and reduces proliferation of endothelial progenitor cells.

Pubmed Data : J Mol Cell Cardiol. 2006 May;40(5):648-52. PMID: **16600290**

Article Published Date : May 01, 2006

Authors : J H Zhu, J Z Chen, X X Wang, X D Xie, J Sun, F R Zhang

Study Type : In Vitro Study
Additional Links
Diseases : Aging : CK(1658) : AC(438), Endothelial Dysfunction : CK(1176) : AC(232)

Problem Substances : Homocysteine : CK(1) : AC(1)
Adverse Pharmacological Actions : Cardiotoxic : CK(722) : AC(96) , Telomerase Inhibition : CK(12) : AC(3)

Insulin (AC 1) (CK 2)

"Brain insulin impairs amyloid-beta(1-40) clearance from the brain."

Pubmed Data : J Neurosci. 2004 Oct 27 ;24(43):9632-7. PMID: **15509750**

Article Published Date : Oct 26, 2004

Authors : Takeshi Shiiki, Sumio Ohtsuki, Atsushi Kurihara, Hideo Naganuma, Kenji Nishimura, Masanori Tachikawa, Ken-ichi Hosoya, Tetsuya Terasaki

Study Type : Animal Study
Additional Links
Diseases : Aging: Brain : CK(248) : AC(85), Hyperinsulinism : CK(251) : AC(56)
Pharmacological Actions : Neuroprotective Agents : CK(2268) : AC(1071)
Problem Substances : Insulin : CK(149) : AC(23)

Lovastatin (AC 1) (CK 1)

Mevastatin accelerates loss of synaptic proteins and neurite degeneration in neurons.

Pubmed Data : Neurobiol Aging. 2010 Sep ;31(9):1543-53. Epub 2008 Oct 31. PMID: **18951667**

Article Published Date : Sep 01, 2010

Authors : Madhuvanthi Kannan, Joern R Steinert, Ian D Forsythe, Andrew G Smith, Tatyana Chernova

Study Type : In Vitro Study
Additional Links
Diseases : Aging : CK(1633) : AC(434) , Cognitive Decline/Dysfunction : CK(1140) : AC(213) , Neurotoxicity : CK(46) : AC(25) , Statin-Induced Pathologies : CK(1638) : AC(327)
Pharmacological Actions : Anticholesteremic Agents : CK(1244) : AC(230) , Apoptotic : CK(2958) : AC(2075)

Problem Substances : Lovastatin : CK(267) : AC(68)
Adverse Pharmacological Actions : Neurotoxic : CK(1239) : AC(224)

Parabens (AC 1) (CK 1)

Methylparaben potentiates UV-induced damage of skin keratinocytes.

Pubmed Data : Toxicology. 2006 Oct 3;227(1-2):62-72. Epub 2006 Jul 28. PMID: **16938376**

Article Published Date : Oct 03, 2006

Authors : Osamu Handa, Satoshi Kokura, Satoko Adachi, Tomohisa Takagi, Yuji Naito, Toru Tanigawa, Norimasa Yoshida, Toshikazu Yoshikawa

Study Type : In Vitro Study
Additional Links
Diseases : Skin Diseases: Photo-Aging : CK(132) : AC(51)
Problem Substances : Parabens : CK(101) : AC(29)

Pravastatin (AC 1) (CK 2)

Pravastatin accelerates aging effect on diaphragm mitochondrial respiratory function in rats.

Pubmed Data : Biochem Mol Biol Int. 1998 Dec ;46(5):923-31. PMID: **9861446**

Article Published Date : Dec 01, 1998

Authors : S Sugiyama

Study Type : Animal Study
Additional Links
Diseases : Aging : CK(1658) : AC(438), Drug-Induced Nutrient Depletion: Statin Drugs : CK(147) : AC(34), Mitochondrial Dysfunction : CK(225) : AC(91), Respiratory Diseases : CK(260) : AC(40), Statin-Induced Pathologies : CK(1638) : AC(327)
Problem Substances : Pravastatin : CK(251) : AC(42), Statin Drugs : CK(4171) : AC(500)

Prednisone (AC 1) (CK 3)

Spontaneous skin tearing during systemic corticosteroid treatment has been reported.

Pubmed Data : JAMA. 1980 Mar 28;243(12):1260-1. PMID: 7359683

Article Published Date : Mar 28, 1980

Authors : N L Gottlieb, N S Penneys

Study Type : Human: Case Report
Additional Links
Diseases : Aging Skin : CK(426) : AC(101) , Rheumatoid Arthritis : CK(706) : AC(117) , Skin: Thinning : CK(3) : AC(1)
Problem Substances : Corticosteroid : CK(169) : AC(18) , Prednisone : CK(170) : AC(19)

Rosiglitazone (trade name Avandia) (AC 2) (CK 4)

Rosiglitazone causes bone loss in mice by suppressing osteoblast (bone-building cells) differentiation and bone formation.

Pubmed Data : Endocrinology. 2005 Mar;146(3):1226-35. Epub 2004 Dec 9. PMID: 15591153

Article Published Date : Mar 01, 2005

Authors : A Afshan Ali, Robert S Weinstein, Scott A Stewart, A Michael Parfitt, Stavros C Manolagas, Robert L Jilka

Study Type : Animal Study
Additional Links
Diseases : Aging : CK(1658) : AC(438) , Osteopenia : CK(229) : AC(41) , Osteoporosis : CK(1283) : AC(245)
Additional Keywords : Accelerated Aging : CK(4) : AC(2)
Problem Substances : Rosiglitazone (trade name Avandia) : CK(108) : AC(16)

Rosiglitazone induces decreases in bone mass and

strength that are reminiscent of aged bone.

Pubmed Data : Endocrinology. 2007 Jun;148(6):2669-80. Epub 2007 Mar 1. PMID: 17332064

Article Published Date : Jun 01, 2007

Authors : Oxana P Lazarenko, Sylwia O Rzonca, William R Hogue, Frances L Swain, Larry J Suva, Beata Lecka-Czernik

Study Type : Animal Study
Additional Links
Diseases : Aging : CK(1658) : AC(438), Osteopenia : CK(229) : AC(41), Osteoporosis : CK(1283) : AC(245)
Additional Keywords : Accelerated Aging : CK(4) : AC(2)
Problem Substances : Rosiglitazone (trade name Avandia) : CK(108) : AC(16)

Saccharin (AC 1) (CK 1)

Long term consumption of artificial sweeteners might accelerate atherosclerosis and aging.

Pubmed Data : Mol Cells. 2011 May ;31(5):461-70. Epub 2011 Apr 21. PMID: 21533907

Article Published Date : May 01, 2011

Authors : Wookju Jang, Nam Ho Jeoung, Kyung-Hyun Cho

Study Type : In Vitro Study
Additional Links
Diseases : Aging : CK(1658) : AC(438), Atherosclerosis : CK(601) : AC(150)
Problem Substances : Acesulfame potassium : CK(22) : AC(8), Artificial Sweeteners : CK(355) : AC(74), Aspartame : CK(135) : AC(47), Saccharin : CK(48) : AC(15)

Sirolimus (AC 1) (CK 1)

Sirolimus accelerates senescence of endothelial progenitor cells through telomerase inactivation.

Pubmed Data : Atherosclerosis. 2006 Dec;189(2):288-96. Epub 2006 Feb 7. PMID: 16455087

Article Published Date : Dec 01, 2006

Authors : Toshio Imanishi, Katsunobu Kobayashi, Shintaro Kuki, Chizu Takahashi, Takashi Akasaka

Study Type : In Vitro Study

Additional Links

Diseases : Aging : CK(1658) : AC(438), Coronary Stenting : CK(33) : AC(5), Endothelial Dysfunction : CK(1176) : AC(232)

Problem Substances : Sirolimus : CK(1) : AC(1)

Adverse Pharmacological Actions : Cardiotoxic : CK(722) : AC(96), Progeriatric : CK(2) : AC(2), Telomerase Inhibition : CK(12) : AC(3)

Sodium Fluoride (AC 1) (CK 1)

Fluorine is a factor in premature aging, and related adverse health effects.

Pubmed Data : Ann Acad Med Stetin. 2004 ;50 Suppl 1:9-13. PMID: **16892576**

Article Published Date : Jan 01, 2004

Authors : Anna Machoy-Mokrzyńska

Study Type : Review

Additional Links

Diseases : Aging : CK(1658) : AC(438), Arterial Calcification : CK(186) : AC(29)

Problem Substances : Fluoride : CK(405) : AC(87), Sodium Fluoride : CK(190) : AC(62)

Adverse Pharmacological Actions : Cardiotoxic : CK(722) : AC(96)

Statin Drugs (AC 1) (CK 2)

Pravastatin accelerates aging effect on diaphragm mitochondrial respiratory function in rats.

Pubmed Data : Biochem Mol Biol Int. 1998 Dec ;46(5):923-31. PMID: **9861446**

Article Published Date : Dec 01, 1998

Authors : S Sugiyama

Study Type : Animal Study

Additional Links
Diseases : Aging : CK(1658) : AC(438), Drug-Induced Nutrient Depletion: Statin Drugs : CK(147) : AC(34), Mitochondrial Dysfunction : CK(225) : AC(91), Respiratory Diseases : CK(260) : AC(40), Statin-Induced Pathologies : CK(1638) : AC(327)
Problem Substances : Pravastatin : CK(251) : AC(42), Statin Drugs : CK(4171) : AC(500)

Tobacco: Smoking (AC 1) (CK 10)

Smoking cessation improves skin quality.

Pubmed Data : Skinmed. 2010 Jan-Feb;8(1):23-9. PMID: **20839421**

Article Published Date : Jan 01, 2010

Authors : Riccarda Serri, Maria Concetta Romano, Adele Sparavigna

Study Type : Human Study
Additional Links
Diseases : Aging Skin : CK(426) : AC(101), Nicotine/Tobacco Toxicity : CK(107) : AC(38), Wrinkles, Aging Skin : CK(10) : AC(1)
Problem Substances : Tobacco: Smoking : CK(142) : AC(16)

Category : Therapeutic Actions

Acupressure (AC 1) (CK 1)

Telomere lengths remain long (near that of infancy) in the human heart, brain, eyes (retina), testes, and ovaries. Acupuncture and acupressure reduce telomerase activity in tumors and increase telomerase in normal tissue.

Pubmed Data : Chem Pharm Bull (Tokyo). 1991 Jun;39(6):1606-8. PMID: **10193703**

Article Published Date : Jun 01, 1991

Authors : Y Omura, Y Shimotsura, M Ooki, T Noguchi

Study Type : Review
Additional Links
Diseases : Aging : CK(1658) : AC(438)
Therapeutic Actions : Acupressure : CK(301) : AC(29) , Acupuncture : CK(1939) : AC(222)
Pharmacological Actions : Telomerase Inhibitor : CK(52) : AC(34) , Telomerase Upregulation : CK(102) : AC(28)

Acupuncture (AC 6) (CK 19)

Acupuncture could be a potential intervention to retard molecular events with aging in mammals.

Pubmed Data : Neurosci Lett. 2006 May 15;399(1-2):11-6. Epub 2006 Mar 3. PMID: 16516385

Article Published Date : May 15, 2006

Authors : Xiaorong Ding, Jianchun Yu, Tao Yu, Yu Fu, Jingxian Han

Study Type : Animal Study
Additional Links
Diseases : Aging : CK(1658) : AC(438) , Aging: Brain : CK(248) : AC(85)
Therapeutic Actions : Acupuncture : CK(1939) : AC(222)
Pharmacological Actions : Neuroprotective Agents : CK(2268) : AC(1071)

Acupuncture exhibits age-delaying activity in mice.

Pubmed Data : J Tradit Chin Med. 2009 Mar;29(1):54-9. PMID: 19514190

Article Published Date : Mar 01, 2009

Authors : Yu Fu, Jian-chun Yu, Xiao-rong Ding, Jingoxian Han

Study Type : Animal Study
Additional Links
Diseases : Aging : CK(1658) : AC(438)
Therapeutic Actions : Acupuncture : CK(1939) : AC(222)
Pharmacological Actions : Immunostimulatory : CK(265) : AC(60)

Acupuncture exhibits anti-brain aging properties.

Pubmed Data : Am J Chin Med. 2006;34(3):503-9. PMID: 16642617

Article Published Date : Jan 01, 2006

Authors : Yu Fu, Jian-chun Yu, Xiao-rong Ding, Jing-xian Han

Study Type : Animal Study

Additional Links
Diseases : Aging : CK(1658) : AC(438), Aging: Brain : CK(248) : AC(85)
Therapeutic Actions : Acupuncture : CK(1939) : AC(222)
Pharmacological Actions : Neuroprotective Agents : CK(2268) : AC(1071)

Acupuncture is effective to attenuate stress and stimulate lymphocyte proliferation in the elderly.

Pubmed Data : Neurosci Lett. 2010 Oct 22;484(1):47-50. Epub 2010 Aug 13. PMID: **20709154**

Article Published Date : Oct 22, 2010

Authors : Tiago S Pavão, Priscila Vianna, Micheli M Pillat, Amanda B Machado, Moisés E Bauer

Study Type : Human Study
Additional Links
Diseases : Aging: Immunosenecence : CK(52) : AC(13), Anxiety Disorders : CK(1215) : AC(180), Depression : CK(1964) : AC(277), Elderly: Age Specific Diseases : CK(442) : AC(38)
Therapeutic Actions : Acupuncture : CK(1939) : AC(222)
Pharmacological Actions : Immunostimulatory : CK(265) : AC(60)

Acupuncture significantly reduces aging-related changes in the cerebrum of age-accelerated mice.

Pubmed Data : Acupunct Electrother Res. 2005;30(1-2):27-42. PMID: **16231630**

Article Published Date : Jan 01, 2005

Authors : Jianchun Yu, Tao Yu, Jingxian Han

Study Type : Animal Study
Additional Links
Diseases : Aging : CK(1658) : AC(438), Aging: Brain : CK(248) : AC(85)
Therapeutic Actions : Acupuncture : CK(1939) : AC(222)

Telomere lengths remain long (near that of infancy) in the human heart, brain, eyes (retina), testes, and ovaries. Acupuncture and acupressure reduce telomerase activity in tumors and increase telomerase in normal tissue.

Pubmed Data : Chem Pharm Bull (Tokyo). 1991 Jun;39(6):1606-8. PMID: **10193703**

Article Published Date : Jun 01, 1991

Authors : Y Omura, Y Shimotsura, M Ooki, T Noguchi

Study Type : Review
Additional Links
Diseases : Aging : CK(1658) : AC(438)
Therapeutic Actions : Acupressure : CK(301) : AC(29), Acupuncture : CK(1939) : AC(222)
Pharmacological Actions : Telomerase Inhibitor : CK(52) : AC(34), Telomerase Upregulation :

CK(102) : AC(28)

Dancing (AC 1) (CK 10)

Physical activity based on dance may improve balance and hence be a useful tool in reducing the risk of falling in the elderly.

Pubmed Data : Aging Clin Exp Res. 2005 Oct;17(5):385-9. PMID: **16392413**

Article Published Date : Oct 01, 2005

Authors : Ario Federici, Silvia Bellagamba, Marco B L Rocchi

Study Type : Human Study
Additional Links
Diseases : Aging : CK(1658) : AC(438) , Bone Fractures : CK(514) : AC(78) , Hip Fracture : CK(188) : AC(23)
Therapeutic Actions : Dancing : CK(240) : AC(23)

Dietary Modification: Caloric Restriction (AC 1) (CK 2)

Caloric restriction enhances cell adaptation to hypoxia.

Pubmed Data : J Clin Invest. 2010 Apr 1;120(4):1043-55. Epub 2010 Mar 24. PMID: **20335657**

Article Published Date : Apr 01, 2010

Authors : Shinji Kume, Takashi Uzu, Kihachiro Horiike, Masami Chin-Kanasaki, Keiji Isshiki, Shin-Ichi Araki, Toshiro Sugimoto, Masakazu Haneda, Atsunori Kashiwagi, Daisuke Koya

Study Type : Animal Study
Additional Links
Diseases : Aging : CK(1658) : AC(438) , Hypoxia : CK(121) : AC(59)
Therapeutic Actions : Dietary Modification: Caloric Restriction : CK(44) : AC(10), Fasting/Caloric Restriction : CK(297) : AC(63)

Dietary Modification: Mediterranean Diet (AC 1) (CK 10)

Adherence to the Mediterranean may positively affect not only the risk of AD, but also of predementia syndromes and their progression to overt dementia.

Pubmed Data : Expert Rev Neurother. 2011 May ;11(5):677-708. PMID: 21539488

Article Published Date : May 01, 2011

Authors : Vincenzo Solfrizzi, Francesco Panza, Vincenza Frisardi, Davide Seripa, Giancarlo Logroscino, Bruno P Imbimbo, Alberto Pilotto

Study Type : Human Study
Additional Links
Diseases : Aging: Brain : CK(248) : AC(85), Dementia : CK(571) : AC(79)
Therapeutic Actions : Dietary Modification: Mediterranean Diet : CK(662) : AC(76)

Dietary Modification: Vegan Diet (AC 1) (CK 1)

The low methionine content of a vegan diet may result in increased longevity.

Pubmed Data : Med Hypotheses. 2009 Feb;72(2):125-8. Epub 2008 Sep 11. PMID: 18789600

Article Published Date : Feb 01, 2009

Authors : Mark F McCarty, Jorge Barroso-Aranda, Francisco Contreras

Study Type : Commentary
Additional Links
Diseases : Aging : CK(1658) : AC(438)
Therapeutic Actions : Dietary Modification: Vegan Diet : CK(24) : AC(7)

Electroacupuncture (AC 1) (CK 2)

Electroacupuncture may positively effect immune function and have an antiaging effect in aged rats.

Pubmed Data : Zhen Ci Yan Jiu. 2009 Aug;34(4):242-7. PMID: **19916287**

Article Published Date : Aug 01, 2009

Authors : Jian-Min Liu, Feng-Xia Liang, Jia Li, Xi-Quan Liu, Hong-Tu Tang, Song Wu, Hua Wang, Ze-Bin Chen

Study Type : Animal Study
Additional Links
Diseases : Aging : CK(1658) : AC(438)
Therapeutic Actions : Electroacupuncture : CK(374) : AC(54)
Pharmacological Actions : Immunomodulatory : CK(1287) : AC(358) , Interleukin-2 upregulation : CK(43) : AC(8)

Exercise (AC 8) (CK 30)

Exercise has been found to lead to cognitive improvement in normal aging.

Pubmed Data : Front Aging Neurosci. 2016 ;8:47. Epub 2016 Mar 7. PMID: **27014055**

Article Published Date : Dec 31, 2015

Authors : Pei Huang, Rong Fang, Bin-Yin Li, Sheng-Di Chen

Study Type : Review
Additional Links
Diseases : Aging: Brain : CK(248) : AC(85), Cognitive Decline/Dysfunction : CK(1151) : AC(215), Dementia : CK(571) : AC(79)
Therapeutic Actions : Exercise : CK(1256) : AC(196)

Exercise promotes healthy aging of skeletal muscle.

Pubmed Data : Cell Metab. 2016 Jun 14 ;23(6):1034-47. PMID: **27304505**

Article Published Date : Jun 13, 2016

Authors : Gregory D Cartee, Russell T Hepple, Marcas M Bamman, Juleen R Zierath

Study Type : Review
Additional Links
Diseases : Aging : CK(1658) : AC(438)
Therapeutic Actions : Exercise : CK(1256) : AC(196)

Exercise training can help minimize detrimental skeletal muscle aging deficits by improving mitochondrial protein quality control and biogenesis.

Pubmed Data : Am J Physiol Regul Integr Comp Physiol. 2012 May 9. Epub 2012 May 9. PMID: 22573103

Article Published Date : May 09, 2012

Authors : Erika Koltai, Nikolett Hart, Albert W Taylor, Sataro Goto, Jenny K Ngo, Kelvin J A Davies, Zsolt Radak

Study Type : Animal Study
Additional Links
Diseases : Aging : CK(1658) : AC(438), Mitochondrial Dysfunction : CK(225) : AC(91)
Therapeutic Actions : Exercise : CK(1256) : AC(196)
Additional Keywords : Mitochondrial Biogenesis : CK(28) : AC(14)

Inflammation is particularly detrimental in inactive older adults and may exacerbate the negative effects of physical inactivity on brain.

Pubmed Data : Hum Brain Mapp. 2016 May 9. Epub 2016 May 9. PMID: 27159568

Article Published Date : May 08, 2016

Authors : Goran Papenberg, Beata Ferencz, Francesca Mangialasche, Patrizia Mecocci, Roberta Cecchetti, Grégoria Kalpouzos, Laura Fratiglioni, Lars Bäckman

Study Type : Human Study
Additional Links
Diseases : Aging: Brain : CK(248) : AC(85), Cognitive Decline/Dysfunction : CK(1151) : AC(215), Dementia : CK(571) : AC(79), Inflammation : CK(2923) : AC(860), Sitting Sickness : CK(115) : AC(15)
Therapeutic Actions : Exercise : CK(1256) : AC(196)
Additional Keywords : Physical Activity : CK(41) : AC(4), Physical Inactivity : CK(10) : AC(1), Risk Factors : CK(2618) : AC(336)

Physical activity is associated with decreasing age-related losses of neurological function.

Pubmed Data : Behav Brain Res. 2011 Mar 24. Epub 2011 Mar 24. PMID: 21440574

Article Published Date : Mar 24, 2011

Authors : Keith M McGregor, Zvinka Zlatar, Erin Kleim, Atchar Sudhyadhom, Andrew Bauer,

Stephanie Phan, Lauren Seeds, Anastasia Ford, Todd M Manini, Keith D White, Jeffrey Kleim, Bruce Crosson

Study Type : Human Study
Additional Links
Diseases : Aging: Brain : CK(248) : AC(85), Cognitive Decline/Dysfunction : CK(1151) : AC(215)
Therapeutic Actions : Exercise : CK(1256) : AC(196)
Pharmacological Actions : Neuroprotective Agents : CK(2268) : AC(1071)

Resveratrol increases muscle performance in older individuals practising moderate exercise.

Pubmed Data : Br J Nutr. 2016 Aug 4:1-10. Epub 2016 Aug 4. PMID: **27488121**

Article Published Date : Aug 03, 2016

Authors : Elizabeth Rodríguez-Bies, Bui Thanh Tung, Plácido Navas, Guillermo López-Lluch

Study Type : Animal Study
Additional Links
Substances : Resveratrol : CK(1245) : AC(746)
Diseases : Aging : CK(1658) : AC(438)
Therapeutic Actions : Exercise : CK(1256) : AC(196)

Resveratrol intake and habitual exercise suppresses age-associated decline in physical performance in senescence-accelerated mice.

Pubmed Data : Biogerontology. 2009 Aug;10(4):423-34. Epub 2008 Oct 1. PMID: **18830683**

Article Published Date : Aug 01, 2009

Authors : Takatoshi Murase, Satoshi Haramizu, Noriyasu Ota, Tadashi Hase

Study Type : Animal Study
Additional Links
Substances : Resveratrol : CK(1245) : AC(746)
Diseases : Aging : CK(1658) : AC(438)
Therapeutic Actions : Exercise : CK(1256) : AC(196)
Additional Keywords : Stilbenes : CK(402) : AC(242)

Tea catechin ingestion combined with habitual exercise suppresses the aging-associated decline in physical performance in senescence-accelerated mice.

Pubmed Data : Am J Physiol Regul Integr Comp Physiol. 2008 Jul;295(1):R281-9. Epub 2008 May 14. PMID: **18480242**

Article Published Date : Jul 01, 2008

Authors : Takatoshi Murase, Satoshi Haramizu, Noriyasu Ota, Tadashi Hase

Study Type : Animal Study
Additional Links
Substances : Catechin : CK(512) : AC(169), Green Tea : CK(1971) : AC(562)
Diseases : Aging : CK(1658) : AC(438)
Therapeutic Actions : Exercise : CK(1256) : AC(196)

Exercise: Aerobic (AC 1) (CK 10)

A combined aerobic and resistance training exercise programme could reduce blood pressure and body fat percentage.

Pubmed Data : Exp Gerontol. 2013 Aug ;48(8):727-33. Epub 2013 Apr 26. PMID: 23628502
Article Published Date : Jul 31, 2013
Authors : Nelson Sousa, Romeu Mendes, Catarina Abrantes, Jaime Sampaio, José Oliveira
Study Type : Human Study
Additional Links
Diseases : Aging : CK(1658) : AC(438), Hypertension : CK(2984) : AC(406), Obesity : CK(2208) : AC(467)
Therapeutic Actions : Exercise: Aerobic : CK(218) : AC(24), Exercise: Resistance Training : CK(146) : AC(17)
Pharmacological Actions : Antihypertensive Agents : CK(1167) : AC(162)
Additional Keywords : Anti-Obesity Agents : CK(487) : AC(108)

Exercise: Cycling (AC 1) (CK 10)

A relatively low dose of speed-based exercise can improve neuromuscular function and tests of mobility in older adults.

Pubmed Data : Med Sci Sports Exerc. 2016 Aug 6. Epub 2016 Aug 6. PMID: 27501360
Article Published Date : Aug 05, 2016
Authors : Maria Bellumori, Mehmet Uygur, Christopher A Knight

Study Type : Human Study
Additional Links
Diseases : Aging : CK(1658) : AC(438)
Therapeutic Actions : Exercise: Cycling : CK(133) : AC(14)

Exercise: Endurance (AC 2) (CK 20)

Acute endurance exercise lowers serum FGF21 levels 24 hours following exercise.

Pubmed Data : Clin Endocrinol (Oxf). 2016 Jul 25. Epub 2016 Jul 25. PMID: 27453549

Article Published Date : Jul 24, 2016

Authors : Hirokazu Taniguchi, Kumpei Tanisawa, Xiaomin Sun, Mitsuru Higuchi

Study Type : Human Study
Additional Links
Diseases : Aging : CK(1658) : AC(438)
Therapeutic Actions : Exercise: Endurance : CK(144) : AC(15)

Long-term endurance exercise training may provide a protective effect on muscle telomere length in older people.

Pubmed Data : PLoS One. 2012 ;7(12):e52769. Epub 2012 Dec 26. PMID: 23300766

Article Published Date : Dec 31, 2011

Authors : Ida BeateØ Osthus, Antonella Sgura, Francesco Berardinelli, Ingvild Vatten Alsnes, Eivind Brønstad, Tommy Rehn, Per Kristian Støbakk, Håvard Hatle, Ulrik Wisløff, Javaid Nauman

Study Type : Human Study
Additional Links
Diseases : Aging : CK(1658) : AC(438)
Therapeutic Actions : Exercise: Endurance : CK(144) : AC(15)
Pharmacological Actions : Telomerase Upregulation : CK(102) : AC(28), Telomere Protective : CK(83) : AC(10)

Exercise: Resistance Training (AC 2)

Exercise: Resistance Training (AC 2) (CK 20)

A combined aerobic and resistance training exercise programme could reduce blood pressure and body fat percentage.

Pubmed Data : Exp Gerontol. 2013 Aug ;48(8):727-33. Epub 2013 Apr 26. PMID: 23628502

Article Published Date : Jul 31, 2013

Authors : Nelson Sousa, Romeu Mendes, Catarina Abrantes, Jaime Sampaio, José Oliveira

Study Type : Human Study

Additional Links

Diseases : Aging : CK(1658) : AC(438) , Hypertension : CK(2984) : AC(406) , Obesity : CK(2208) : AC(467)

Therapeutic Actions : Exercise: Aerobic : CK(218) : AC(24) , Exercise: Resistance Training : CK(146) : AC(17)

Pharmacological Actions : Antihypertensive Agents : CK(1167) : AC(162)

Additional Keywords : Anti-Obesity Agents : CK(487) : AC(108)

Resistance training leads to a genuine increase in lean body mass and muscle strength in healthy elderly adults and could treat amyotrophia.

Pubmed Data : Wien Klin Wochenschr. 2009 ;121(23-24):757-64. PMID: 20047114

Article Published Date : Dec 31, 2008

Authors : Barbara Strasser, Markus Keinrad, Paul Haber, Wolfgang Schobersberger

Study Type : Human Study

Additional Links

Diseases : Aging : CK(1658) : AC(438) , Chronic Wasting Disease : CK(11) : AC(2) , Muscle Atrophy : CK(105) : AC(35)

Therapeutic Actions : Exercise: Resistance Training : CK(146) : AC(17)

Fasting/Caloric Restriction (AC 11) (CK 19)

Caloric restriction and alternative-day fasting may increase lifespan.

Pubmed Data : PLoS One. 2008;3(9):e3211. Epub 2008 Sep 15. PMID: **18791640**

Article Published Date : Jan 01, 2008

Authors : Joanne S Allard, Leonie K Heilbronn, Carolina Smith, Nicole D Hunt, Donald K Ingram, Eric Ravussin, , Rafael de Cabo

Study Type : Animal Study
Additional Links
Diseases : Aging : CK(1658) : AC(438)
Therapeutic Actions : Fasting/Caloric Restriction : CK(297) : AC(63)

Caloric restriction and resveratrol promote longevity.

Pubmed Data : Cell Death Dis. 2010 Jan;1(1):e10. PMID: **21364612**

Article Published Date : Jan 01, 2010

Authors : E Morselli, M C Maiuri, M Markaki, E Megalou, A Pasparaki, K Palikaras, A Criollo, L Galluzzi, S A Malik, I Vitale, M Michaud, F Madeo, N Tavernarakis, G Kroemer

Study Type : Animal Study
Additional Links
Substances : Resveratrol : CK(1245) : AC(746)
Diseases : Aging : CK(1658) : AC(438)
Therapeutic Actions : Fasting/Caloric Restriction : CK(297) : AC(63)
Pharmacological Actions : Autophagy Up-regulation : CK(108) : AC(65) , SIRT1 Activator : CK(39) : AC(23)

Caloric restriction appears to ameliorate oxidative stress and aging in connection with the hydrogen sulfide signaling system.

Pubmed Data : Age (Dordr). 2010 May 26. Epub 2010 May 26. PMID: **20502969**

Article Published Date : May 26, 2010

Authors : Benjamin L Predmore, Maikel J Alendy, Khadija I Ahmed, Christiaan Leeuwenburgh, David Julian

Study Type : Animal Study
Additional Links
Diseases : Aging : CK(1658) : AC(438)
Therapeutic Actions : Fasting/Caloric Restriction : CK(297) : AC(63)

Caloric restriction attenuates age-associated impairment seen in left ventricular diastolic function and may retard

cardiac senescence by attenuating oxidative damage in the aged heart.

Pubmed Data : Geriatr Gerontol Int. 2011 Apr;11(2):143-56. Epub 2011 Jan 4. PMID: **21199236**

Article Published Date : Apr 01, 2011

Authors : Ken Shinmura

Study Type : Review
Additional Links
Diseases : Aging : CK(1658) : AC(438) , Cardiovascular Diseases : CK(7200) : AC(911) , Left Ventricular Dysfunction : CK(75) : AC(10)
Therapeutic Actions : Fasting/Caloric Restriction : CK(297) : AC(63)
Pharmacological Actions : Cardioprotective : CK(1596) : AC(409)

Caloric restriction delays disease onset and mortality in rhesus monkeys.

Pubmed Data : Theriogenology. 2009 Sep 15;72(5):624-35. Epub 2009 Jul 14. PMID: **19590001**

Article Published Date : Sep 15, 2009

Authors : Ricki J Colman, Rozalyn M Anderson, Sterling C Johnson, Erik K Kastman, Kristopher J Kosmatka, T Mark Beasley, David B Allison, Christina Cruzen, Heather A Simmons, Joseph W Kemnitz, Richard Weindruch

Study Type : Animal Study
Additional Links
Diseases : Aging : CK(1658) : AC(438) , Cardiovascular Diseases : CK(7200) : AC(911)
Therapeutic Actions : Fasting/Caloric Restriction : CK(297) : AC(63)

Caloric restriction enhances cell adaptation to hypoxia.

Pubmed Data : J Clin Invest. 2010 Apr 1;120(4):1043-55. Epub 2010 Mar 24. PMID: **20335657**

Article Published Date : Apr 01, 2010

Authors : Shinji Kume, Takashi Uzu, Kihachiro Horiike, Masami Chin-Kanasaki, Keiji Isshiki, Shin-Ichi Araki, Toshiro Sugimoto, Masakazu Haneda, Atsunori Kashiwagi, Daisuke Koya

Study Type : Animal Study
Additional Links
Diseases : Aging : CK(1658) : AC(438) , Hypoxia : CK(121) : AC(59)
Therapeutic Actions : Dietary Modification: Caloric Restriction : CK(44) : AC(10), Fasting/Caloric Restriction : CK(297) : AC(63)

Caloric restriction extend lifespan in animals with the decreased frequency of age-related diseases.

Pubmed Data : J Inorg Biochem. 2004 Dec;98(12):2063-70. PMID: **19591287**

Article Published Date : Dec 01, 2004

Authors : Takahiko Shimizu, Takuji Shirasawa

Study Type : Animal Study
Additional Links
Diseases : Aging : CK(1658) : AC(438)
Therapeutic Actions : Fasting/Caloric Restriction : CK(297) : AC(63)

Caloric restriction increases the expression of genes involved in energy metabolism and it down-regulates the expression of more than 50 pro-inflammatory genes.

Pubmed Data : Toxicol Pathol. 2009;37(1):47-51. Epub 2008 Dec 15. PMID: **19075044**

Article Published Date : Jan 01, 2009

Authors : Rozalyn M Anderson, Dhanansayan Shanmuganayagam, Richard Weindruch

Study Type : Animal Study
Additional Links
Diseases : Aging : CK(1633) : AC(434), Inflammation : CK(3003) : AC(872), Inflammation: Brain : CK(6) : AC(3), Sarcopenia : CK(29) : AC(7)
Therapeutic Actions : Fasting/Caloric Restriction : CK(297) : AC(63)

Dietary restriction may have neuroprotective effects in the aging brain.

Pubmed Data : Brain Res. 2000 Dec 15;886(1-2):47-53. PMID: **11119686**

Article Published Date : Dec 15, 2000

Authors : M P Mattson

Study Type : Review
Additional Links
Diseases : Aging : CK(1658) : AC(438), Aging: Brain : CK(248) : AC(85), Neurodegenerative Diseases : CK(3376) : AC(850)
Therapeutic Actions : Fasting/Caloric Restriction : CK(297) : AC(63)
Pharmacological Actions : Antiproliferative : CK(2479) : AC(1685), Neuroprotective Agents : CK(2268) : AC(1071)

Polyphenols potentiate dietary restriction-induced lifespan extension.

Pubmed Data : Biochim Biophys Acta. 2012 Jan 11 ;1822(4):522-526. Epub 2012 Jan 11. PMID: **22265987**

Article Published Date : Jan 11, 2012

Authors : Daniel J Aires, Graham Rockwell, Ting Wang, Jennifer Frontera, Jo Wick, Wenfang Wang, Marija Tonkovic-Capin, Jianghua Lu, Lezi E, Hao Zhu, Russell H Swerdlow

Study Type : Animal Study

Additional Links
Substances : Blueberry : CK(260) : AC(90) , Green Tea : CK(1971) : AC(562) , Polyphenols : CK(931) : AC(335), Pomegranate : CK(499) : AC(168)
Diseases : Aging : CK(1658) : AC(438)
Therapeutic Actions : Fasting/Caloric Restriction : CK(297) : AC(63)
Pharmacological Actions : Anti-Inflammatory Agents : CK(4688) : AC(1630)

Resveratrol compares favorably to caloric restriction in extending the lifespan of Drosophila.

Pubmed Data : Cell Cycle. 2011 Mar 15;10(6). Epub 2011 Mar 15. PMID: **21325893**

Article Published Date : Mar 15, 2011

Authors : Michael Antosh, Rachel Whitaker, Adam Kroll, Suzanne Hosier, Chengyi Chang, Johannes Bauer, Leon Cooper, Nicola Neretti, Stephen L Helfand

Study Type : In Vitro Study
Additional Links
Substances : Resveratrol : CK(1245) : AC(746)
Diseases : Aging : CK(1658) : AC(438)
Therapeutic Actions : Fasting/Caloric Restriction : CK(297) : AC(63)

Homeopathic Treatment (AC 1) (CK 10)

Homeopathic treatment appears to have therapeutic effects in the treatment of elderly patients.

Pubmed Data : BMC Geriatr. 2010;10:10. Epub 2010 Feb 22. PMID: **20175887**

Article Published Date : Jan 01, 2010

Authors : Michael Teut, Rainer Lüdtke, Katharina Schnabel, Stefan N Willich, Claudia M Witt

Study Type : Human Study
Additional Links
Diseases : Aging : CK(1658) : AC(438) , Hypertension : CK(2984) : AC(406) , Insomnia : CK(518) : AC(64)
Therapeutic Actions : Homeopathic Treatment : CK(658) : AC(72)

Kindness (AC 1) (CK 10)

Loving-Kindness Meditation practice associated with longer telomeres in women.

Pubmed Data : Brain Behav Immun. 2013 Apr 19. Epub 2013 Apr 19. PMID: 23602876

Article Published Date : Apr 18, 2013

Authors : Elizabeth A Hoge, Maxine M Chen, Esther Orr, Christina A Metcalf, Laura E Fischer, Mark H Pollack, Immaculata Devivo, Naomi M Simon

Study Type : Human Study
Additional Links
Diseases : Aging : CK(1658) : AC(438)
Therapeutic Actions : Kindness : CK(20) : AC(2), Meditation : CK(334) : AC(36)
Pharmacological Actions : Telomerase Upregulation : CK(102) : AC(28), Telomere Protective : CK(83) : AC(10)

Lifestyle Changes: Positive (AC 1) (CK 10)

Comprehensive lifestyle changes significantly increase telomerase activity and consequently telomere maintenance capacity in human immune-system cells.

Pubmed Data : Lancet Oncol. 2008 Nov;9(11):1048-57. Epub 2008 Sep 15. PMID: 18799354

Article Published Date : Nov 01, 2008

Authors : Dean Ornish, Jue Lin, Jennifer Daubenmier, Gerdi Weidner, Elissa Epel, Colleen Kemp, Mark Jesus M Magbanua, Ruth Marlin, Loren Yglecias, Peter R Carroll, Elizabeth H Blackburn

Study Type : Human Study
Additional Links
Diseases : Aging : CK(1658) : AC(438)
Therapeutic Actions : Lifestyle Changes: Positive : CK(10) : AC(1)
Pharmacological Actions : Telomerase Upregulation : CK(102) : AC(28)

Light Therapy (AC 2) (CK 2)

Broad band light has skin rejuvenating properties.

Pubmed Data : J Invest Dermatol. 2012 Aug 30. Epub 2012 Aug 30. PMID: 22931923

Article Published Date : Aug 29, 2012

Authors : Anne Lynn S Chang, Patrick H Bitter, Kun Qu, Meihong Lin, Nicole A Rapicavoli, Howard Y Chang

Study Type : Review
Additional Links
Diseases : Aging Skin : CK(426) : AC(101)
Therapeutic Actions : Light Therapy : CK(154) : AC(31)

Green tea and red light contribute to skin rejuvenation.

Pubmed Data : Photomed Laser Surg. 2009 Dec;27(6):969-71. PMID: 19817517

Article Published Date : Dec 01, 2009

Authors : Andrei P Sommer, Dan Zhu

Study Type : In Vitro Study
Additional Links
Substances : Green Tea : CK(1971) : AC(562) , Tea : CK(1840) : AC(385)
Diseases : Aging Skin : CK(426) : AC(101)
Therapeutic Actions : Light Therapy : CK(154) : AC(31) , Light Therapy: Colored : CK(21) : AC(3), Light Therapy: Red Colored : CK(1) : AC(1)

Light Therapy: Colored (AC 1) (CK 1)

Green tea and red light contribute to skin rejuvenation.

Pubmed Data : Photomed Laser Surg. 2009 Dec;27(6):969-71. PMID: 19817517

Article Published Date : Dec 01, 2009

Authors : Andrei P Sommer, Dan Zhu

Study Type : In Vitro Study
Additional Links
Substances : Green Tea : CK(1971) : AC(562) , Tea : CK(1840) : AC(385)
Diseases : Aging Skin : CK(426) : AC(101)
Therapeutic Actions : Light Therapy : CK(154) : AC(31) , Light Therapy: Colored : CK(21) : AC(3),

Light Therapy: Red Colored : CK(1) : AC(1)

Light Therapy: Red Colored (AC 1) (CK 1)

Green tea and red light contribute to skin rejuvenation.

Pubmed Data : Photomed Laser Surg. 2009 Dec;27(6):969-71. PMID: 19817517

Article Published Date : Dec 01, 2009

Authors : Andrei P Sommer, Dan Zhu

Study Type : In Vitro Study
Additional Links
Substances : Green Tea : CK(1971) : AC(562) , Tea : CK(1840) : AC(385)
Diseases : Aging Skin : CK(426) : AC(101)
Therapeutic Actions : Light Therapy : CK(154) : AC(31) , Light Therapy: Colored : CK(21) : AC(3), Light Therapy: Red Colored : CK(1) : AC(1)

Light-Emitting Diodes (LEDs) Therapy (AC 2) (CK 11)

Light-emitting diodes (LED) therapy has a skin rejuvenating effect in human subjects.

Pubmed Data : J Photochem Photobiol B. 2007 Jul 27;88(1):51-67. Epub 2007 May 1. PMID: 17566756

Article Published Date : Jul 27, 2007

Authors : Seung Yoon Lee, Ki-Ho Park, Jung-Woo Choi, Jung-Kyun Kwon, Doo Rak Lee, Mi Sun Shin, Jee Sung Lee, Chung Eui You, Mi Youn Park

Study Type : Human Study
Additional Links
Diseases : Aging Skin : CK(426) : AC(101)
Therapeutic Actions : Light-Emitting Diodes (LEDs) Therapy : CK(180) : AC(41)

Light-emitting diodes may have therapeutic value for skin as an anti-aging modality.

Pubmed Data : J Med Food. 2008 Jun;11(2):215-23. PMID: 17173579

Article Published Date : Jun 01, 2008

Authors : Mario A Trelles

Study Type : Review
Additional Links
Diseases : Aging Skin : CK(426) : AC(101)
Therapeutic Actions : Light-Emitting Diodes (LEDs) Therapy : CK(180) : AC(41)

Marital Status: Married (AC 1) (CK 10)

Leukocyte telomere length (an indicator of cellular age) is longer in married middle-aged adults.

Pubmed Data : Age Ageing. 2011 Jan ;40(1):73-8. Epub 2010 Sep 4. PMID: 20817935

Article Published Date : Jan 01, 2011

Authors : Arch G Mainous, Charles J Everett, Vanessa A Diaz, Richard Baker, Massimo Mangino, Veryan Codd, Nilesh J Samani

Study Type : Human Study
Additional Links
Diseases : Aging : CK(1658) : AC(438)
Therapeutic Actions : Marital Status: Married : CK(10) : AC(1)
Pharmacological Actions : Telomere Protective : CK(83) : AC(10)

Meditation (AC 4) (CK 31)

In this study the brains of long term meditators at the age of 50 were estimated to be 7.5 years younger than controls.

Pubmed Data : Neuroimage. 2016 Apr 11. Epub 2016 Apr 11. PMID: **27079530**

Article Published Date : Apr 10, 2016

Authors : Eileen Luders, Nicolas Cherbuin, Christian Gaser

Study Type : Human Study
Additional Links
Diseases : Aging: Brain : CK(248) : AC(85)
Therapeutic Actions : Meditation : CK(334) : AC(36)

Indo-Tibetan meditative and yogic practices may exert their beneficial effects on aging by enhancing the production of endogenous substances that possess general longevity-enhancing, regenerative properties.

Pubmed Data : Ann N Y Acad Sci. 2009 Aug;1172:163-71. PMID: **19735248**

Article Published Date : Aug 01, 2009

Authors : Erin L Olivo

Study Type : Commentary
Additional Links
Diseases : Aging : CK(1633) : AC(434)
Therapeutic Actions : Meditation : CK(334) : AC(36), Yoga : CK(1065) : AC(119)

Loving-Kindness Meditation practice associated with longer telomeres in women.

Pubmed Data : Brain Behav Immun. 2013 Apr 19. Epub 2013 Apr 19. PMID: **23602876**

Article Published Date : Apr 18, 2013

Authors : Elizabeth A Hoge, Maxine M Chen, Esther Orr, Christina A Metcalf, Laura E Fischer, Mark H Pollack, Immaculata Devivo, Naomi M Simon

Study Type : Human Study
Additional Links
Diseases : Aging : CK(1658) : AC(438)
Therapeutic Actions : Kindness : CK(20) : AC(2), Meditation : CK(334) : AC(36)
Pharmacological Actions : Telomerase Upregulation : CK(102) : AC(28), Telomere Protective : CK(83) : AC(10)

Meditation is associated with increased telomerase activity associated with cell longevity.

Pubmed Data : Psychoneuroendocrinology. 2010 Oct 29. Epub 2010 Oct 29. PMID: **21035949**

Article Published Date : Oct 29, 2010

Authors : Tonya L Jacobs, Elissa S Epel, Jue Lin, Elizabeth H Blackburn, Owen M Wolkowitz, David A Bridwell, Anthony P Zanesco, Stephen R Aichele, Baljinder K Sahdra, Katherine A MacLean,

Brandon G King, Phillip R Shaver, Erika L Rosenberg, Emilio Ferrer, B Alan Wallace, Clifford D Saron

Study Type : Human Study
Additional Links
Diseases : Aging : CK(1658) : AC(438)
Therapeutic Actions : Meditation : CK(334) : AC(36)
Pharmacological Actions : Telomerase Upregulation : CK(102) : AC(28)

Moxibustion (AC 1) (CK 2)

Moxibustion may contribute to delaying aging in senile mice.

Pubmed Data : Behav Brain Res. 2004 Aug 12;153(1):181-8. PMID: **21090325**

Article Published Date : Aug 12, 2004

Authors : Yan Du, Li-Hua Zhao, Hai-Biao Wu, Jin-Sheng Wang

Study Type : Animal Study
Additional Links
Diseases : Aging: Brain : CK(248) : AC(85)
Therapeutic Actions : Moxibustion : CK(274) : AC(28)
Pharmacological Actions : Neuroprotective Agents : CK(2268) : AC(1071)

Music (AC 2) (CK 11)

Music improves sleep quality in older adults.

Pubmed Data : J Adv Nurs. 2005 Feb;49(3):234-44. PMID: **15660547**

Article Published Date : Feb 01, 2005

Authors : Hui-Ling Lai, Marion Good

Study Type : Human Study
Additional Links
Diseases : Aging : CK(1658) : AC(438), Insomnia : CK(518) : AC(64)
Therapeutic Actions : Music : CK(412) : AC(47)

Music making may represent an interactive treatment or intervention for neurological and developmental disorders, as well as those associated with normal aging.

Pubmed Data : J Agric Food Chem. 1999 Mar;47(3):840-4. PMID: 20889966

Article Published Date : Mar 01, 1999

Authors : Catherine Y Wan, Gottfried Schlaug

Study Type : Review
Additional Links
Diseases : Aging : CK(1658) : AC(438), Aging: Brain : CK(248) : AC(85), Learning disorders : CK(190) : AC(51)
Therapeutic Actions : Music : CK(412) : AC(47)

Pilates (AC 1) (CK 10)

The Pilates method can offer significant improvement in personal autonomy, static balance and quality of life.

Pubmed Data : J Bodyw Mov Ther. 2010 Apr;14(2):195-202. Epub 2010 Jan 29. PMID: 20226367

Article Published Date : Apr 01, 2010

Authors : Brena Guedes de Siqueira Rodrigues, Samaria Ali Cader, Natáli Valim Oliver Bento Torres, Ediléa Monteiro de Oliveira, Estélio Henrique Martin Dantas

Study Type : Human Study
Additional Links
Diseases : Aging : CK(1658) : AC(438), Balance Disorders : CK(40) : AC(4)
Therapeutic Actions : Pilates : CK(140) : AC(14)

Sunlight exposure (AC 1) (CK 1)

"Glycyrrhizic acid (GA), a triterpenoid saponin glycoside alleviates ultraviolet-B irradiation-induced photoaging in

human dermal fibroblasts."

Pubmed Data : Phytomedicine. 2012 May 15 ;19(7):658-64. Epub 2012 Apr 18. PMID: 22516896

Article Published Date : May 14, 2012

Authors : Quadri Afnan, Mushtaq Dar Adil, Ashraf Nissar-Ul, Ahmad Rather Rafiq, Hussian Faridi Amir, Peerzada Kaiser, Vijay Kumar Gupta, Ram Vishwakarma, Sheikh Abdullah Tasduq

Study Type : In Vitro Study
Additional Links
Substances : Glycyrrhizin : CK(55) : AC(15)
Diseases : Skin Diseases: Photo-Aging : CK(132) : AC(51)
Therapeutic Actions : Sunlight exposure : CK(455) : AC(49)
Pharmacological Actions : NF-kappaB Inhibitor : CK(1114) : AC(694)
Additional Keywords : Plant Extracts : CK(7484) : AC(2463)

Tai Chi (AC 1) (CK 10)

Tai Chi prevents the decline in accuracy in finger-pointing toward stationary and moving visual targets.

Pubmed Data : Arch Phys Med Rehabil. 2010 Jan;91(1):149-55. PMID: 20103410

Article Published Date : Jan 01, 2010

Authors : Jasmine C Kwok, Christina W Hui-Chan, William W Tsang

Study Type : Human Study
Additional Links
Diseases : Aging : CK(1658) : AC(438)
Therapeutic Actions : Tai Chi : CK(564) : AC(54)

Traditional Chinese Medicine (AC 1) (CK 2)

The Kidney tonifying principle in Traditional Chinese Medicine may slow aging.

Pubmed Data : J Med Food. 2007 Dec;10(4):689-93. PMID: 12585100

Article Published Date : Dec 01, 2007

Authors : Zi-yin Shen, Zhen Zheng, Wei-min Guo

Study Type : Animal Study
Additional Links
Diseases : Aging : CK(1658) : AC(438)
Therapeutic Actions : Traditional Chinese Medicine : CK(72) : AC(7)
Pharmacological Actions : Anti-Apoptotic : CK(384) : AC(212)

Yoga (AC 3) (CK 14)

Indo-Tibetan meditative and yogic practices may exert their beneficial effects on aging by enhancing the production of endogenous substances that possess general longevity-enhancing, regenerative properties.

Pubmed Data : Ann N Y Acad Sci. 2009 Aug;1172:163-71. PMID: 19735248

Article Published Date : Aug 01, 2009

Authors : Erin L Olivo

Study Type : Commentary
Additional Links
Diseases : Aging : CK(1633) : AC(434)
Therapeutic Actions : Meditation : CK(334) : AC(36), Yoga : CK(1065) : AC(119)

Telomerase activity and cellular aging might be positively modified by a yoga-based lifestyle intervention.

Pubmed Data : J Altern Complement Med. 2015 Jun ;21(6):370-2. Epub 2015 May 12. PMID: 25964984

Article Published Date : May 31, 2015

Authors : Shiv Basant Kumar, Rashmi Yadav, Raj Kumar Yadav, Madhuri Tolahunase, Rima Dada

Study Type : Human: Case Report
Additional Links
Diseases : Aging : CK(1633) : AC(434), Oxidative Stress : CK(3871) : AC(1382)
Therapeutic Actions : Yoga : CK(1065) : AC(119)
Pharmacological Actions : Antioxidants : CK(7331) : AC(2682), Telomerase Inhibitor : CK(52) : AC(34)

Yogic practices might help in the prevention of age-related degeneration by changing cardiometabolic risk factors, autonomic function, and BDNF in healthy male.

Pubmed Data : Age (Dordr). 2014 ;36(4):9683. Epub 2014 Jul 11. PMID: 25012275

Article Published Date : Dec 31, 2013

Authors : Rameswar Pal, Som Nath Singh, Abhirup Chatterjee, Mantu Saha

Study Type : Human Study
Additional Links
Diseases : Aging : CK(1633) : AC(434) , Aging: Brain : CK(248) : AC(85), Hypertension : CK(2984) : AC(406)
Therapeutic Actions : Yoga : CK(1065) : AC(119)

Category : Problematic Actions

Childhood Trauma (AC 1) (CK 10)

Childhood trauma is associated with accelerated aging (shortened telomere length) in post-traumatic stress disorder.

Pubmed Data : Biol Psychiatry. 2011 Apr 12. Epub 2011 Apr 12. PMID: 21489410

Article Published Date : Apr 12, 2011

Authors : Aoife O'Donovan, Elissa Epel, Jue Lin, Owen Wolkowitz, Beth Cohen, Shira Maguen, Thomas Metzler, Maryann Lenoci, Elizabeth Blackburn, Thomas C Neylan

Study Type : Human Study
Additional Links
Diseases : Aging : CK(1658) : AC(438) , Childhood Trauma : CK(11) : AC(2) , Post-Traumatic Stress Disorders (PTSD) : CK(183) : AC(25)
Pharmacological Actions : Telomerase Inhibitor : CK(52) : AC(34)
Additional Keywords : Psychobiology : CK(10) : AC(1)
Anti Therapeutic Actions : Childhood Trauma : CK(10) : AC(1)

Hormone Replacement Therapy (AC 1) (CK 2)

Hormone replacement therapy may have adverse effects in connection with prostate health such as accelerated aging.

Pubmed Data : Micron. 2011 Aug;42(6):642-55. Epub 2011 Apr 1. PMID: 21489806

Article Published Date : Aug 01, 2011

Authors : Fábio Montico, Amanda Cia Hetzl, Eduardo Marcelo Cândido, Wagner José Fávaro, Valéria Helena Alves Cagnon

Study Type : Animal Study
Additional Links
Diseases : Aging : CK(1658) : AC(438) , Aging: Prostate : CK(2) : AC(1) , Hormone Replacement Therapy : CK(5) : AC(3), Prostate Diseases : CK(5) : AC(3)
Anti Therapeutic Actions : Hormone Replacement Therapy : CK(4) : AC(1)

Prenatal Stress (AC 1) (CK 10)

Stress exposure in intrauterine life is associated with shorter telomere length in young adulthood.

Pubmed Data : Proc Natl Acad Sci U S A. 2011 Aug 16 ;108(33):E513-8. Epub 2011 Aug 3. PMID: 21813766

Article Published Date : Aug 16, 2011

Authors : Sonja Entringer, Elissa S Epel, Robert Kumsta, Jue Lin, Dirk H Hellhammer, Elizabeth H Blackburn, Stefan Wüst, Pathik D Wadhwa

Study Type : Human Study
Additional Links
Diseases : Aging : CK(1658) : AC(438) , Infant Neurological Development : CK(46) : AC(7) , Pregnancy: Psychological and Physical Distress. : CK(36) : AC(6)
Anti Therapeutic Actions : Prenatal Stress : CK(50) : AC(7)
Adverse Pharmacological Actions : Telomerase Inhibition : CK(12) : AC(3)

Vaccination: Pneumococcal (AC 1) (CK 10)

Pneumococcal vaccines are ineffective in children with a history of recurrent acute ear infections.

Pubmed Data : Clin Infect Dis. 2004 Oct 1;39(7):911-9. Epub 2004 Sep 1. PMID: 15472839

Article Published Date : Oct 01, 2004

Authors : Reinier H Veenhoven, Debby Bogaert, Anne G M Schilder, Ger T Rijkers, Cuno S P M Uiterwaal, Herma H Kiezebrink, Muriel J P van Kempen, Inge J Dhooge, Jacob Bruin, Ed P F Ijzerman, Ronald de Groot, Wietse Kuis, Peter W M Hermans, Elisabeth A M Sanders

Study Type : Human Study
Additional Links
Diseases : Aging : CK(1658) : AC(438)
Anti Therapeutic Actions : Vaccination: Pneumococcal : CK(71) : AC(8)