# 27 FOODS TO FIGHT INFLAMMATION

and reduce your risk for chronic disease



Modern
Holistic Health
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### 27 FOODS TO FIGHT INFLAMMATION

#### and Reduce Your Risk for Chronic Disease

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### WHAT CAUSES INFLAMMATION?

Your body has a series of defence mechanisms to protect you from the barrages of the outside world – blocking pollutants from getting inside our skin and organs and reacting to injuries or infection if it does.

One of those key tactics is inflammation – or swelling. It is a sign that your body is flooding the area with healing white blood cells and fluids while encouraging you to rest and recover. However, there are times when an inflammatory reaction arises, even when there is no infection to fight. At that point, your immune system begins to attack the healthy cells in your joints, organs, and arteries. At that point, your immunity is doing more damage than good. This unnatural response can be prompted by stress and is best managed by healthy habits, such as exercise, adequate quality sleep, and a nutritious eating plan.

We often ignore those early warning signs, such as fatigue or exposure to pollutants. However, ignoring them over time can lead to your immune system beginning to damage the very cells you rely on to keep you mobile and energized. If you don't notice the changes and adapt your way of life, they can develop into heart disease, obesity, diabetes, dementia, or even cancer. If those conditions are common in your family's genetic history, then the risks are even higher. This cycle ultimately weakens your immune system, making it less prepared when a genuine infection hits you. If you are concerned, you can request a blood test for C-reactive protein to gauge your level of inflammation. Knowing your levels will alert you before you develop an autoimmune condition, which only leads to more inflammation and health risks.

#### How does inflammation affect your body?

Researchers can trace just about every type of chronic illness back to inflammation within the human body. Here are some examples of how it can affect you:

- Asthma and allergies arise from inflammation within the linings of your airways
- ▶ Damage of your intestinal lining can lead to celiac or Crohn's Disease
- Inflamed cytokines (small proteins important in cell signaling) cut off blood flow to your kidneys, leading to hypertension and other ailments.
- ▶ The same cells incite autoimmune reactions in the brain, opening you up to depression, memory loss, and Alzheimer's Disease
- Stress on your internal organs prompt rashes, eczema, acne, and even wrinkles
- Inflammation slows the ability to repair your bones, weakening them and possibly meaning more fractures
- ▶ Extra strain on your heart, arteries, and veins makes your cardiovascular system work harder, raising your blood sugar levels and risk for heart disease and stroke.



Whether you are at high risk for chronic diseases or not, you can take matters into your own hands by changing your habits to reduce inflammation and better support your immune system. That way, the little fighters inside you can do the job they are supposed to do, rather than undermining your overall health. For starters, get out and move more. Exercise not only burns calories, but it is a great way to alleviate stress and prepare your body for a better night's sleep. Giving up alcohol and smoking also help, as does managing your weight and stress levels.

Anti-inflammatory drugs can aid in the treatment of chronic inflammation that is linked with the generation and progression of cancer, diabetes, and atherosclerosis. Or you can turn to a more natural way of caring for yourself by another key daily habit – eating.

### WHAT IS THE ROLE OF DIET?

The most powerful tool you have at your fingertips is the food you feed yourself. Certain foods will soothe your body's urge to fire up inappropriate immunity while others will turn on the afterburners. By loading up on anti-inflammatory dishes, you increase your odds of dodging diseases that can derail your life.

Did you know that 70 percent of your immune system functions out of your gut? Therefore, it makes sense to feed it good things that make it stronger and better able to support you. If your stomach lining becomes damaged, food can escape through holes and get into your bloodstream. This can lead to food sensitivities, which will limit your diet. They can show up as fatigue, migraines, skin blemishes, and achy joints, slowing you down and impeding your ability to live life to the fullest.

Your wisest course of action is to get the good stuff and avoid foods that invite inflammation. It means steering away from items that are staples within a Standard American Diet (aptly known as SAD). Here are the greatest villains on our naughty list:

- √ Simple carbs such as white flour, rice, potatoes, and pasta
- ✓ Anything containing refined sugar or high fructose corn syrup
- √ Foods with trans fats, such as deep-fried or packaged foods
- ✓ Processed meats and farm-raised fish
- √ Highly processed oils, such as corn, canola, sunflower, and peanut
- ✓ Artificial sweeteners
- ✓ Monosodium Glutamate and other preservatives.

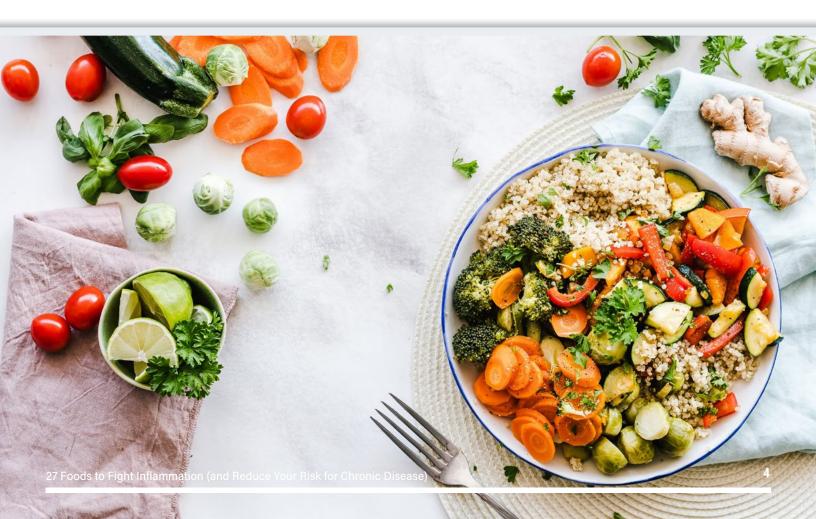


Instead, build your meals around real whole foods – such lean proteins, fresh vegetables, and high-fiber foods – to fuel yourself for better days ahead. Grass-fed meat, poultry, and wild game is always a better option than those raised in factory farms or overly processed with chemicals you don't want in your life. Aim to ingest foods that are high in omega-3 oils, such as fatty fish, tofu, walnuts, flax seeds, and soybeans. You also want to count on polyphenols, which is a fancy name for natural sources of organic compounds. These are found in vegetables, fruits, cereals, tea, coffee, and wine. However, you want to narrow down your exposure to those with the lowest sugar content.

There is growing evidence on how helpful fermented foods are in restoring balance in the gut and alleviating inflammation, thanks to their probiotics. They help to eliminate pathogens, produce beneficial components such as vitamin B12, creating a good environment for 'good bugs' to grow while boosting immunity and fostering a healthy intestinal harmony. Probiotics have been shown to reduce inflammation associated with irritable bowel syndrome. Also, the short-chain fatty acids created during the process of fermentation have anti-inflammatory properties.<sup>2</sup>

This guide will help you to build a grocery list of ingredients that will not only pump you full of good nutrients, their anti-inflammatory properties will reduce the risks of developing heart disease and certain cancers.<sup>3</sup> You need a mix of vitamins, antioxidants, and micronutrients to build a strong immune system. By adding variety to your diet, you can discover new tastes while supplementing your gut, bones, and organs with elements that will amplify your efforts to create a healthier version of you.

Whether you are embracing healthy oil-rich allies, vibrant vegetables, or friendly fermented foods, here are the 27 treats for you and your immune system alongside tips on how to incorporate each one of them into your meals and snacks more often.



### **FATTY FISH**

Brain-boosting omega-3 oils help your bodies in various ways so finding more ways to add them to your diet only makes you stronger. You've likely already heard about the value of eating cold-water fish, so what are you waiting for? Start adding salmon, trout, herring, and sardines to your meals three to five times a week.

A December 2019 study published in the American Heart Association journal Circulation Journal stated a specific formula of omega-3 fatty acids cuts inflammation by increasing the concentration of special molecule "mediators" that moderate how healing white blood cells work.



The researchers gave 22 healthy volunteers, ages 19 to 37, three different doses of fish-based omega-3 supplements. After testing their blood at level intervals, researchers discovered the natural oils boosted the level of anti-inflammatory molecules for 24 hours. In particular, they 'supercharge' macrophages, specialized cells that wipe out bacteria and drive out dead cells. The oils also make platelets less likely to stick to others, reducing the risk of blood clots, and helping tissues regenerate. While the research team did not directly relate these findings to a reduction in cardiovascular disease, the benefits from ingesting these oils clearly exist<sup>4</sup> for people with heart disease and diabetes.

Omega-3 fatty acids have also been linked to healthy aging at every stage of life, particularly during fetal development. They also help with cardiovascular function, development of retinal and neural cells, boosting immunity, and slowing rates of Alzheimer's Disease.<sup>5</sup> Since our bodies do not produce some omega-3 fatty acids efficiently from marine sources, ingesting them regularly is needed. They also keep your weight down and your mind sharp.<sup>6</sup>

If you're not a fan of fish, there are additional sources that bring other vitamins and nutrients to the table as well.



### **OYSTERS**

These low-calorie snacks are rich in protein, healthy fats, vitamins, and minerals. Oysters are rich in energizing B-12 vitamins, with eight medium-sized ones delivering about 230 percent of your daily B-12 requirement.

The enzyme superoxide dismutase plays a vital role in deactivating cell-damaging free-radicals but it needs three key minerals to do so: copper, zinc, and manganese. Luckily, oysters have all three! They also contain vitamins C, E, and iron. A 3.5-ounce (100-gram) serving also provides more than 75 percent of your daily needs for selenium and vitamin D.<sup>7</sup>

As a bonus, eating them before you get onto an airplane greatly reduces the probability of getting ill while in flight. Oysters also contain anti-inflammatory and antioxidant properties to help inhibit any unwanted bacteria.8

When serving them for yourself or guests at a party, squeeze on a little lemon juice to add extra flavor. To enhance their inherent tastiness, saute finely chopped mushrooms and garnish with less than a teaspoon; both tastes accent each other.





#### **CHIA SEEDS**

Studies suggest that this superfood has a long list of health benefits, from lowering body weight to reducing inflammation in your digestive tract. During a three-month study, 20 diabetics ate 37 grams of chia seeds daily and saw their inflammatory marker (high-sensitivity-CRP) drop by 40 percent. In another group, who consumed wheat bran, there were no measurable benefit.<sup>9</sup> (Take that, bran!)



Chia seeds are rich in minerals and nutrients, especially ones that aid digestion and soothe your tummy. These ancient seeds were first used by the Mayas and Aztecs and are beloved by vegans and vegetarians for their abundant omega-3 fatty acids.<sup>10</sup> On top of fighting inflammation, chia seeds heal your stomach lining, prevent nervous system disorders, and curtail cardiovascular diseases.

This is so easy to add to your daily regimen, it is ridiculous. Add a tablespoon into your smoothies, salads, and soups and enjoy the perks. They have such a subtle flavor that you won't even know they are there. Since they expand in liquid, you can use them to make plant-based puddings. Put two tablespoons in milk for two hours, then stir in a cup of fruit – such as stewed rhubarb – with a little vanilla, cinnamon, and a touch of maple syrup. It makes for a great, quick breakfast.



#### **KAMUT**

Would you believe there is another ancient grain with more protein per gram than quinoa? Kamut – also known as Khorasan wheat – is loaded with seven grams of hunger-busting fiber per cup, to boost your energy and protect your muscles. It also provides a good dose of minerals, such as iron, magnesium, and potassium. Replacing meat, especially processed ones, for plant-based foods reduces inflammation usually caused by animal protein's saturated fats. A study published in the European Journal of Clinical Nutrition credits kamut for lowering levels of cytokines, which incite inflammation.<sup>11</sup>

Kamut has more protein content than whole-wheat, but pasta made with either as a base provides similar amounts of energy, fats, and fiber. Tests on rats show that, when fed both types of pasta, those that consumed the whole-wheat version experienced inflammation in their tissues and organs, similar to the effects on humans with non-celiac wheat sensitivities. Kamut's high levels of selenium – another great antioxidant – convinced researchers that this grain's anti-inflammatory properties also protect cells from oxidative stress.

Enjoy some whole grains like quinoa, kamut, or gluten-free oats. Grain-based foods can boost your cognitive health and extend your life, says the Whole Grain Council. It also suggests quinoa and gluten-free oats as meat alternatives that are good for your brain.<sup>12</sup>

Pick up some kamut-based pasta and pair with your favorite sauce. Or cook the berries and mix them with Mediterranean-inspired vegetables, such as tomatoes, olives, zucchini, and onions, for a salad. You will fall in love with its nutty taste in no time.



### **MISO**

What does miso bring to the table? It is rich in probiotic compounds that only enhance the benefits of its soy base. Multiple studies prove that the isoflavones in soy, which imitate estrogen, act as anti-inflammatories. In 2016, Nutrients published a review of isoflavones which stated that isoflavones reduce activities by pro-inflammatory enzymes and cytokines. <sup>13</sup>

Miso provides you a great dose of essential minerals and vitamins E, K, folic acid and other B vitamins. Since it is fermented, it gives your gut healthy bacteria that support your overall mental and physical wellness. For generations, it has been used to combat fatigue, stomach ulcers, high blood pressure, and inflammation.<sup>14</sup>

You may know it best as the main ingredient in its namesake soup, but its paste is also tasty in stir-fries, salad dressings, sauteed vegetable dishes, mashed cauliflower, or even on corn on the cob, instead of butter. It comes in various shades so try different ones.



### **SAUERKRAUT**

Sauerkraut is based on the German words for 'sour root,' since it is made from fermented cabbage. Don't let the name deter you since it is loaded with iron, vitamins C and K, and lots of fiber. Its probiotics curate healthy gut bacteria and offer balance to our gut microbiome. You can get similar benefits from other fermented foods, such as kimchi or pickles. Kimchi is more of an acquired taste since it is spicier due to the addition of chili powder and other seasonings.

Eating either of these fermented dishes provides lots of vitamins and a few calories. Research suggests that "specific phytochemicals of sauerkraut have antioxidant, anti-inflammatory, and a chemopreventive action against certain types of cancer." <sup>16</sup>



You can easily make your sauerkraut at home by chopping cabbage and mixing it with salt, grated carrot, and flavorings, such as caraway seeds. You knead in the salt then compress the leaves until they get limp. You can easily find recipes online or in a thorough cookbook. Use it as a top to spice up burgers or a leafy salad. Either sauerkraut or kimchi makes a tasty side dish or snack, especially if you like spicy dishes.

#### **PU-ERH TEA**



We continue our tour of the world with this fermented tea from Yunnan Province in China. While you may be more familiar with other types of fermented tea, such as kombucha, pu-erh tea leaves are fermented rather than brewed.<sup>17</sup> Like the black, green, and white teas in your cupboard, this tea is made from the leaves of the Camellia sinensis plant. However, pu-erh tea goes through a specialized process that ferments it, then ages it for years or even decades. Therefore, it combines the benefits of tea and fermented foods.

While giving pu-erh tea its distinct flavor, the fermentation and aging processes give the tea unique medicinal properties to improve heart health, reduce cholesterol levels, promote weight loss, enhance eyesight, stimulate circulation and alleviate hangovers.<sup>18</sup> Its antioxidants and anti-inflammatory properties fend off free radicals.<sup>19</sup>

Several small studies have shown that pu-erh tea may help manage several risk factors for heart disease and diabetes, from excess belly fat to high blood pressure, high cholesterol, insulin resistance, and chronic inflammation.

It is often sold in compressed cakes or bricks and also as loose tea leaves. Watch for the longer-aged versions, since they taste better (just like wines).

#### **KELP**

The best-known type of seaweed brings a key ingredient from the sea – fucoidan, a complex carbohydrate that has properties that are anti-inflammatory, anti-tumor, and anti-oxidative.<sup>20</sup> Now that is a powerful trifecta. Together, they reduce inflammation in your entire body, while fucoidan also improves cholesterol levels in the blood, lowering your risk for cardiovascular disease.

Since inflammation and stress are considered risk factors for so many chronic diseases, ingesting the carotenoids, flavonoids, and alkaloids found in kelp can back you up in the fight against disease-causing free radicals. It also fills you up due to its high fiber content, which helps prevent unnecessary weight gain.

For a little variety, try kelp's cousin dulse, which is deep purple, and adds iron, iodine, potassium, and plant-based protein to your arsenal of inflammation fighters.<sup>21</sup>

Eating seaweed regularly can reduce your risk of diabetes, inflammation, fat levels, and insulin sensitivity. It has also been linked to better thyroid health, stronger bones, and lower risk of many forms of cancer.<sup>22</sup>

Focus on finding organic kelp and stay away from seaweed snacks that are loaded with vegetable oil and salt to distract from the base ingredient's unique taste.<sup>23</sup> Sneak seaweed into stocks, soups, stews, salads, or smoothies. It adds delicious flavor to bean and avocado dishes as well.



#### **KEFIR**

Kefir is a cultured, fermented drink made from milk, originating from the mountainous region that divides Asia and Europe. Think of yogurt – but thinner so it is easier to drink. As a dairy product, it is rich in calcium and probiotic bacteria thanks to several bacteria and yeasts, which provide anti-bacterial, antimycotic, anti-neoplastic, and immunomodulatory properties.<sup>24</sup>

Kefir is tart and slightly sour taste with a slight 'fizz', due to its carbon dioxide content arising from the fermentation process. Like Pu-erh tea, the length of the fermentation time determines the quality of the flavor. Kefir is a good source of calcium and is rich in probiotic bacteria.



In one study, researchers fed kefir and milk to rats over 15 days to test the anti-inflammatory effects of each batch on the animals' swollen paws. While they saw better gains in blood flow and new connective tissue with milk and kefir, the fermented beverage showed faster healing. "These results point to the existence of anti-inflammatory prebiotic compounds present in symbiotic cultures of kefir," they concluded.<sup>25</sup>

You can use this beverage just as you would milk, pouring it on your breakfast cereal, or adding it to a smoothie. Since it's a little thicker, you can use it in parfaits with fruit and granola or as a base for creamy salad dressing. If you're baking, you can substitute it in recipes that call for buttermilk.

### **BROCCOLI**

Broccoli is one of those powerhouse vegetables, packed with antioxidants like the flavonoids kaempferol and quercetin, as well as a variety of carotenoids, folate, and Vitamins C and K. Like all cruciferous vegetables it is rich in phytonutrients, that help combat free radical damage and neutralize toxins in the body.<sup>26</sup>

This green treat also contains glucosinolates which boost the production of specific enzymatic reactions to detoxify the liver and to enhance its role of removing carcinogens and heavy metals from your blood. These compounds also reduce cancer-cell replication, bolster the immune system, and help you digest your food so your gut keeps operating as it should.

You get similar benefits from broccoli's cousins, Brussels sprouts, cauliflower, kale, and mustard greens. Eating them as fresh as possible gives you the maximum benefit.

Sauté broccoli with garlic — another great anti-inflammatory food — as a side dish. You can also snack on the florets and chop the stems to go into salads and soups.



### **CELERY**

Celery and celery seeds have an incredible 25 anti-inflammatory compounds that can protect your cells against inflammation.<sup>27</sup> These simple stalks are high in phytonutrients, anti-inflammatory components, and antioxidants, especially flavonoids, polyphenols and phenolic acids and flavanols, such as querce-tin.<sup>28</sup>

The combination of healthy plant compounds like luteolin, along with the components listed above, is why some nutrition experts celebrate celery as a great food for patients with rheumatoid arthritis. On top of the benefits we've noted, it hydrates you and is a satisfying and highly portable, low-calorie snack.

Celery seeds have been used in massage oils and salves for pain, due to their healing properties.

It is ridiculously easy to eat celery daily without getting tired of it. Snack on a stalk plain or slather it with hummus or guacamole. You can chop it into green or pasta salad for a bit of crunchiness. It makes a great addition to soups or green juices as well.



### **SWEET POTATO**

Once you start using this vegetable, you'll keep in our grocery list forever. It is a great source of complex carbs, fiber, beta-carotene, manganese, and vitamin B6 and C.<sup>29</sup> Virtually every vitamin in its orange flesh has powerful anti-inflammatory properties. They also have that wonderful choline, which calms inflammatory responses and lowers the incidence of systemic flareups.



Extracts from the purple variations actively inhibit the production of inflammatory components, researchers say. They also have anthocyanins, which are known for slowing and even stopping inflammation in colon cancer cells and discouraging cell growth within cells for other types of cancers.<sup>30</sup>

Whichever color you choose, you can chop them into strips and roast them as 'fries' or with other autumn vegetables, such as onions and carrots. If you love regular potatoes, start adding an equal amount of sweet potato when you mash them, then wean yourself to a smaller dose of the white ones until you don't miss them at all. You can also slice them into disks, bake them then use them as a base for mini bruschetta.

#### **GARLIC**



Garlic has been a staple in medicine and cooking for generations. Its anti-cancer properties arise from its phytochemicals and allyl sulfur compounds. While it is great for flavoring, this vegetable plays a role in cancer prevention as well. Its water-soluble sulfur compounds impede the onset of cancer by kickstarting genes that suppress the growth of tumors, particularly in colon cancer.

It has also been widely recognized as a prevention and treatment agent for cardiovascular diseases. An abundance of scientific literature credits garlic consumption for significantly lowering blood pressure, preventing plaque buildup, reducing cholesterol, and breaking up clots that can lead to strokes.<sup>31</sup>

In live animal experiments, garlic extract injections and oral doses both reduced the participants' blood pressures. Several clinical studies on humans reported that eating garlic regularly lowered blood pressure in four out of five people, with no side effects or complications. The ideal dosage ranged from 240 to 960 mg (less than a quarter of a teaspoon), depending on the subject, daily over 12 weeks.

Just crush or chop garlic then toss it into any main dish, from roasted vegetables to dips to dressings. Boil a clove with your sweet potatoes then mash it with the pulp. While you may find the taste strong at first, you get used to it quite quickly and will miss it if you omit it by accident.

### **BEETS**

The distinctive deep coloring of beets signals that they are rich in antioxidants. This root vegetable provides a solid dose of magnesium and the betalain antioxidant that reduces inflammation.<sup>32</sup> Since some studies have linked infections to magnesium deficiencies, adding this vitamin to your diet adds another layer of protection. Magnesium prevents the accumulations of calcium that can build kidney stones and infections.

Beets (and their juices) lower rates of inflammation while protecting you from cancer and heart disease, thanks to their fiber and folate.<sup>33</sup>

They are easy to add to dinner by roasting them with other autumn vegetables, like onions and sweet potatoes. You can also boil them for 10 minutes then eat them as a side dish or shred them to add a vibrant hue to your salads.



### **AVOCADO**

This superfood is a rock star on so many levels. It is nutrient-dense, rich in pathogen-unfriendly phytochemicals, and has compounds that love to fight inflammation. One of those phytochemicals is glutathione, known as 'the master antioxidant'. When paired with beta-sitosterol, it is particularly gifted at protecting your body from damage by free radicals.



What's more, they are loaded with vitamins B, C, E, and K, which also help neutralize free radicals and reduce inflammation in your cells. The vitamin A and fiber in the fleshy fruit protects the lining in your gastrointestinal tract, helping to keep you regular and assisting your metabolism. There's more! Avocados have carotenoids, lutein, and zeaxanthin which are additional antioxidants. Throw in a healthy dose of magnesium and potassium, with a little natural sodium, and you've covered a lot of healthy infection-fighting ingredients.

Avocados help your metabolism, thanks to their choline content. Their healthy monounsaturated fatty acids protect you from risk factors for cardiovascular disease and metabolic syndrome while helping you to absorb the other good nutrients, such as fiber. And just when you didn't think it could get any better, they are low in carbs.

To get more into your diet, treat yourself to guacamole as a regular snack. Just scoop out the flesh and mash it with a little lime juice, cumin, garlic, and salt. Toss in some halved cherry tomatoes for color and enjoy on celery or rye crisps. You can also add them to salads and smoothies since their ripe flavor blends so well with veggies.

#### **CAMU CAMU**

This sour tropical berry is grown in the Amazon forests of Brazil, Peru, Colombia, and Venezuela and brings a healthy dose of vitamin C and its antioxidant and anti-inflammatory properties. Often identified as a superfood, the ellagic acid in its pulp slows the inflammation-triggering enzyme aldose reductase. A study of male smokers provided each participant 70 milliliters of camu camu juice for a week and recorded significant decreases in the men's inflammatory markers.

Its seeds also contain anti-inflammatory compounds and a study on rodents found that the seed extract helped to suppress inflammation. Eating these berries has also been linked to weight loss by increasing metabolism and supporting gut health (which helps prevent diabetes and heart disease in particular), lowering blood sugars, and fighting microbial bacteria such as Escherichia coli and Streptococcus mutans.<sup>34</sup>

Camu-flavored ice cream and beverages are popular in Peru, but most people add it in a powder or pill form to their smoothies, water, or yogurt as a supplement.<sup>35</sup> Fresh camu berries taste quite tart, so prepare to squint when you eat them for the first time. They are totally worth it.



# 17 JACKFRUIT

Another exotic fruit is about to become your friend in fighting inflammation.

Colorful jackfruit is grown in India, Southeast Asia, central and eastern Africa, and Brazil. These tree-borne fruits can grow to weigh more than 80 pounds.<sup>36</sup> Now that you know the trivia about this treat, let's get down to the facts.

Jackfruit is full of phytonutrients, such as phenols and flavonoids. Its sweet, buttery flesh also carries antioxidant, anti-inflammatory, and antibacterial properties that have been studied for their effects of lowering the risk of cancers and diabetes.<sup>37</sup> These phytonutrients team up with phenolic compounds to also protect you via treatments for rheumatoid arthritis, gastrointestinal diseases, and Parkinson's disease.

Jackfruit is full of fiber, to aid healthy digestion, and to keep you full. As a bonus, its seeds pump you full of B vitamins, such as thiamine and riboflavin for healthy skin, hair, and nails. It helps regular blood sugar levels, lowers blood pressure, and keeps your gut happy along so it can keep your immunity humming.

While you eat the seeds of the fruit raw, the fruit itself can be put on top of ice cream or made into crunchy jackfruit chips.



# 18 PAPAYA

The mildly flavored papaya is an incredibly healthy tropical fruit. It contains high levels of antioxidizing Vitamin C (more than an orange!), beta carotene, and digestive enzymes papain and Chymopapain. For generations, it has been used as a natural treatment for pain arising from inflammation arising from burns,<sup>38</sup> osteoarthritis, asthma, and rheumatoid arthritis.

Its carotenoids have the ability to neutralize free radicals while fermented versions of the fruit can reduce oxidative stress in older adults and pre-diabetic patients while relieving mild hypothyroidism and combating liver disease.<sup>39</sup>



A review of all studies published since 2000 on anti-inflammatory activity recognized papaya extracts and their phytochemicals on the effects on various immune-inflammatory mediators. For more upside, this fruit is ripe in antioxidants that fight disease and – bonus – help keep you looking young.

Multiple studies show that antioxidant-rich fruits and vegetables like papaya help reduce inflammatory markers. One of them noted that men who eat more carotenoid-rich fruits and vegetables see a significant decrease in the inflammatory marker CRP.<sup>40</sup>

Keep it simple by eating papaya as a snack or in a fruit salad. It should be cooked before eating if you are pregnant since it has been known to induce contractions. Due to its high fiber content, papaya makes for a great laxative so beware before you overdo it.

### **PINEAPPLE**

This delicious fruit delivers more than great flavor! Pineapple is rich in vitamin C and an enzyme called bromelain, which stimulates the digestion of protein. It also calms inflammation in your stomach and boosts immunity.<sup>41</sup> Test-tube studies showed promise that bromelain can suppress the growth of certain cancer cells by stimulating cell death, including breast, skin, bile duct, gastric system, and colon cancers.

Additional studies have found that this enzyme may stimulate the immune system to make white blood cells more effective at combating cancer cell growth while eliminating cancer cells.



Pineapple has countless nutrients and antioxidants to fight inflammation and disease, with a reputation for speeding up recovery from surgery. While low in calories, it is rife with manganese and Vitamins C and B6, while also providing key levels of copper, thiamin, folate, potassium, magnesium, niacin, riboflavin, and iron. The fruit is especially rich in flavonoids and phenolic acids. Even better, many of the antioxidants in pineapple are 'bound,' which allows them to thrive in harsher conditions within the body so they can produce longer-lasting effects.<sup>42</sup>

Put more pineapple in your life via a fruit salad, smoothies, or a simple snack.



#### **BLUEBERRIES**

Blueberries pack a lot into each small fruit. They are gems of fiber, vitamins, and minerals that sparkle with antioxidants called anthocyanins that prevent many diseases, including cancers. Not only do they give berries their distinctive colors, but they also bolster immunity, reduce inflammation, and protect you from heart disease. On top of anthocyanins, blueberries are rife with phytochemicals, which include ellagic acid and the flavonoids catechin, quercetin, and kaempferol, who love to fight off inflammation and cancerous cells.

In one study, men who ate blueberries daily produced much higher rates of "natural killer" cells than a control group, which helps keep their immune systems humming. If you prefer other types, you can substitute blackberries, raspberries, strawberries, cranberries, or cherries, which have similar properties.

It's easy to eat a small basket of berries while snacking. You can also throw these low-calorie goodies onto cereals or into smoothies, parfaits, or fruit salads. They pair well with spinach and other green salads as well.



### **MUNG BEANS**

Mung beans, or green gram, are from the legume family and are crammed with micronutrients that will make your immune system sing. These beans have a high nutritional value and contain vital levels of magnesium, manganese, potassium, folate, essential B vitamins, and zinc. The little capsules of goodness also provide dietary fiber and protein.<sup>43</sup>



As a bonus, they also help with controlling your cholesterol levels, lowering blood pressure, preventing type 2 diabetes, fighting off cancer, and boosting immunity. Their high levels of flavonoids help fight inflammation.<sup>44</sup> They have been used in herbal and traditional medicines for generations due to their well-known anti-inflammatory properties. They are grown in South Asian where farmers swear they help to guard you against heat stroke, thirst, and rising body temperatures.

Whip a cup of mung beans into a batch of cheela (pancakes) for breakfast or a snack. Mash a cup of cooked beans and mix with a little gluten-free flour, coriander, green chilies, ginger, garlic, ¾ cup of water, and other spices. Throw in an egg for extra protein or stickiness then fry two tablespoons of batter at a time in olive oil. They are great for anyone seeking to control or prevent diabetes.

If you are counting your carbs, mung bean sprouts contain 4 grams of net carbs in every 100 grams.<sup>45</sup>

#### **TURMERIC**

Turmeric's tour de force arises from the polyphenol curcumin, which offers an unbelievable amount of health benefits and the compounds that add the distinctive yellow shade. As a spice and medicinal herb, it has been used for healing for centuries. Curcumin has anti-inflammatory, antioxidant, anti-carcinogenic, anti-thrombotic, and cardiovascular protective benefits. It boosts the body's natural antioxidant capacity to further fight free radicals before they do any damage.<sup>46</sup>

Turmeric can be applied to the skin for pain or swelling and it is also commonly used to calm inflammation related to arthritis, heartburn, joint pain, irritable bowel syndrome, kidney disease, and Alzheimer's Disease.

The spice comes from the root of the turmeric plant, which is related to ginger, another anti-inflammatory powerhouse. Other herbs can also spice up your dishes while protecting your digestive and immune system.

Carminative herbs improve digestion by preventing the formation of gas in the intestinal tract and removing it when it occurs. They help to soothe the gut and cut back on intestinal contractions.<sup>47</sup> Try these variations: basil, black pepper, cilantro, cinnamon, peppermint, rosemary, sage, fennel, and thyme, for starters.

As for turmeric powder, add to foods after cooking to maintain its potency. Sprinkle it on roasted meats or add it to lentil dishes. It also comes in supplement form, if you wish to ask your doctors about adding it to your regimen that way.



### **TOMATOES**

Tomatoes are lit up with Vitamin C, potassium, and lycopene, an antioxidant carotenoid with high-powered anti-inflammatory properties. Lycopene is attributed with having the ability to neutralize compounds that stimulate several types of cancer. It is best absorbed with a source of fat, so add olive oil to get it working for you.<sup>48</sup>

Even drinking tomato juice significantly decreases inflammatory markers in women carrying extra weight, according to one study.

Tomatoes are easy to add to your daily dishes since they come in so many sizes. Snack on grape or cherry tomatoes and slice beefsteak varieties to put into sandwiches and wraps. Chop them into salads or make them the basis for sauces and stews. The fresh they are, the better you will be able to absorb their nutrients.





#### **NUTS**

Simply stated, tree nuts – including pistachios, cashews, hazelnuts, almonds, and walnuts – can stop cancer due to their polyphenols, compounds that can boost the immune system, and omega 3 fatty acids, which cut off cancer cells' energy supplies.

The humble walnut, in particular, contains multiple nutrients, notably flavonoids, ellagic acid and alpha-linolenic acid, which combine to create a 'synergistic' effect that kicks cancer's butt. However, most nuts and seeds lower cholesterol levels and risks of heart disease, thanks to their polyunsaturated and monounsaturated fats. They also provide protein, antioxidant vitamins, minerals, and alpha-linolenic acid, an anti-inflammatory omega-3 fatty acid that helps minimize certain types of arthritis.<sup>49</sup>



Snacking on nuts daily provides you with magnesium and vitamin E, other great allies in keeping inflammation under control. Eating these nutrients reduces your levels of inflammation-causing molecules and boosts the production of the anti-inflammatory protein adiponectin.

Each type of nut brings its own benefits. Walnuts relax blood vessels to ease the stress on the heart which lowers blood pressure. High-fiber almonds fill you up more and help control your weight. Meanwhile, pistachios lower 'bad' cholesterol and are high in potassium, vitamins A and E, and lutein – a compound also found in dark, leafy vegetables.

Aim to eat about an ounce of unsalted nuts daily. You can munch on a handful as a snack or toss them into any dish that could benefit from a little crunchiness.



### **GREEN TEA**

Tea comes from the Camellia sinensis plant and contains a myriad of health-boosting amino acids, alkaloids, organic compounds, and polyphenols. Most of the attributed benefits of tea are largely due to the abundance of polyphenols and their antioxidant properties.<sup>50</sup>



Green tea is best known for health benefits arising from its anti-oxidative and anti-inflammatory properties. It contains the polyphenol epigallocatechin gallate which mitigates cell damage, hunts down free radicals, and calms inflammatory reactions in the body.<sup>51</sup>

This tea is also rich in quercetin, a potent antioxidant, and anti-inflammatory that helps to promote the production of the antioxidants that drastically lower inflammation in the body. Scientists have found that green tea has anti-cancer effects, especially in cases of breast cancer.<sup>52</sup>

Matcha green tea has as much as 10 times the amount of antioxidant compounds as standard brewed green tea since seeking it out as a brewed tea or a powder that you can add to smoothies and other dishes.

### **OLIVE OIL**

Both olives and olive oil contain magical anti-inflammatory compounds such as antioxidants, macronutrients, and monounsaturated fatty acids. Olive oil has vital polyphenols and its phenolic compounds have shown positive effects on plasma lipoproteins, oxidative damage, inflammatory markers, and antimicrobial activity.

Studies also show that olive oil can increase a protein hormone that regulates blood sugar levels. It also has great doses of Vitamins E and K, plus oleocanthal, which has been shown to work similarly to ibuprofen, a common anti-inflammatory drug. The amount of oleocanthal in 3.4 tablespoons (50 ml) of extra virgin olive oil offers a similar effect as 10 percent of the adult dosage of ibuprofen.

Meanwhile, additional research also suggests that oleic acid, olive oil's main fatty acid, can reduce levels of important inflammatory markers. Yet another study indicates that its antioxidants inhibit some genes and proteins that produce inflammation.

Drizzle olive oil on salads, vegetables, and any dish where you traditionally use another type of oil. It is best ingested without being heated, to maintain its healing properties.





### DARK CHOCOLATE

Yes, we saved the best for last! You've committed to eating more healthy vegetables, trying some new fermented foods, and dining on more fish. You deserve a treat that feels like an indulgence. Dark chocolate and its powdered cousin cocoa have lots of flavanols, which are responsible for their anti-inflammatory effects. They maintain the endothelial cells that line your arteries so they stay healthy and lower your risk for heart disease.<sup>53</sup> In one study, smokers experienced significant improvements in endothelial function within two hours of eating chocolate high in flavonols.



Regularly eating a few ounces of dark chocolate daily may help reduce your blood pressure, thanks to the stimulation of nitric oxide production. Nitric oxide makes blood vessels dilate to improve blood flow. If you find that hard to believe, look to a 2015 study that investigated the effects of chocolate consumption in 60 people with type 2 diabetes and high blood pressure. By eating 25 grams of dark chocolate daily for eight weeks, the participants experienced significantly lower blood pressure than those who ate white chocolate instead. A further study two years later found this effect to be more pronounced in older adults and people with an initial higher risk of cardiovascular disease.

Dark chocolate's polyphenols and theobromine may lower levels of so-called 'bad' cholesterol in the body and increase levels of 'good' cholesterol. Just make sure to choose dark chocolate that contains at least 70% cocoa — or more! — to reap these anti-inflammatory benefits.

### **CONCLUSION**

There are so many tasty and healthy foods out there still to explore, especially if you are in a position where you need to refine your eating habits to reduce inflammation. Take some time to try new foods or cook them in a new way -- with garlic and olive oil, for example. Embrace new tastes and see how it feels. It's time to give up on those comfort foods that are rich in fats and stripped-out grains that don't do your heart and joints any good.

The more you grow, the more you learn about your ability to adapt to new approaches. Perhaps you have had to give up a certain sport that you loved. Maybe you have discovered that yoga brings you more peace than you ever imagined. It is that type of discovery that keeps you feeling young and energized.

Your diet should bring the same passion and commitment. It is so key to your ability to live a full life and do the things you love. Enjoy this adventure. Once you've tried all these foods, it's time to expand your shopping list to discover more. The most important element is to know what effects food has on the only body to have and to make the most of it.



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