

Anti-Inflammatory / Anti-Aging— Vitamin A, C, D, E and B6; EPA/DHA, Co Q-10, turmeric, quercetin, curcumin, bromelain, cinnamon, cayenne, ginger, Bone Broth, Colostrum

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Strength is the Ideal State

The immune system is perhaps the most important body system when it comes to maintaining health and living a vibrant, active lifestyle and **staying young**. A healthy immune system provides multiple response layers against aggressive environmental factors. The strength of this barrier is influenced by lifestyle habits that can deplete the body's reserves, such as stress, convenient foods, and lack of exercise. Replenishing nutrients essential to healthy immune function can help, as well as ensuring adequate rest, relaxation, recreation, social ties and spiritual well-being (believing in a purpose) —all associated with greater vitality and longevity.

Inflammation — pain, swelling, redness and heat — is a double-edged sword. This immunity-mediated process is crucial when you have an injury. It helps your body fight infection and clear away damaged tissue. While inflammation is a perfectly normal and beneficial process that occurs when your body's white blood cells and chemicals protect you from foreign invaders like bacteria and viruses, it leads to trouble when the inflammatory response gets out of hand. Inflammation can become a chronic condition if your body fails to shut off this reaction, or further perpetuates and activates it when there is no apparent trigger. Inflammation can last for years. It can target a particular area — like your skin, sinuses, prostate, bladder or gums. (Any diagnosis that ends with “-itis” is an inflammatory condition.) Inflammation can become a body-wide condition, and has been identified as the underlying cause of many if not most diseases, including heart disease, type 2 diabetes, cancer, obesity, rheumatoid arthritis and neurological degeneration, including Alzheimer's and Parkinson's diseases. Inflammation is a big threat, which essentially makes it the leading cause of death in the US. That's why it's so important to get it under control.

The bottom line is that chronic, uncontrolled inflammation has been linked to a wide range of health problems which can dramatically affect the quality of your life as you age. The good news is that research has shown that anti-inflammatory focused diets, lifestyle changes and supplements can provide effective relief with virtually no side effects. Before you start taking a NSAID or other potentially dangerous drug to deal with inflammation, why not consider some safe alternatives?

While among the most potent, ounce for ounce, herbs and spices are certainly highly effective but not the only anti-inflammatory ingredients available. A number of foods are well-known for their anti-inflammatory properties, and making sure you're eating a wide variety of them on a regular basis can go a long way toward preventing chronic illness. A specific diet focused on vegetables, fruits, fish, olive oil, nuts and whole grains can reduce inflammation. Nutritional supplements also help, and unlike drugs, they work without full body side effects including but not limited to symptoms like causing stomach ulcers. There are plenty of natural inflammation-fighters. It is important to point out that not only are there foods we can add to our diet to reduce inflammation, but more importantly we need to understand that usually the chronic inflammatory cycle is triggered by not what we lack eating but more what we are already eating. Change is never easy, so let's begin by identifying what to reduce as well.

Adjusting your Current Diet Is Key for Reducing Chronic Inflammation

It's important to realize that dietary components can either *prevent* or *trigger* inflammation from taking root in your body, and processed foods do the latter, courtesy of pro-inflammatory ingredients like high fructose corn syrup, soy, processed vegetable oils (trans fats), and other chemical additives. Besides adding anti-inflammatory foods to your diet, you'll also want to **avoid** the following pro-inflammatory dietary culprits as much as possible:

Refined sugar, processed fructose, and grains.

If your fasting insulin level is three or above, consider dramatically reducing or eliminating grains and sugars until you optimize your insulin level, as insulin resistance this is a primary driver of chronic inflammation. *As a general guideline, I recommend restricting your total fructose intake to 25 grams per day.* If you're insulin or leptin resistant (have high blood pressure, high cholesterol, heart disease, or are overweight), consider cutting that down to 15 grams per day until your insulin/leptin resistance has normalized

Oxidized Cholesterol

Cholesterol that has gone rancid, such as that from overcooked, scrambled eggs.

Foods cooked at high temperatures, especially if cooked with vegetable oil (such as peanut, corn, and soy oil)

Trans Fats

There are two broad types of trans fats found in foods: naturally-occurring and artificial *trans* fats. Naturally-occurring trans fats are produced in the gut of some animals and foods made from these animals (e.g., milk and meat products) may contain small quantities of these fats. Artificial *trans* fats (or *trans* fatty acids) are created in an industrial process that adds hydrogen to liquid vegetable oils to make them more solid.

The primary dietary source for *trans* fats in processed foods is "partially hydrogenated oils." Processed foods such as cookies, chips and other snacks can be high in unhealthy fats, which are linked with inflammation. Opt for fresh fruit instead. Look for them on the

ingredient list on food packages. In November 2013, the U.S. Food and Drug Administration (FDA) made a preliminary determination that partially hydrogenated oils are no longer Generally Recognized as Safe (GRAS) in human food.

Gluten

Gluten is a complex of proteins found in grains such as wheat, barley and rye – triggers a powerful autoimmune response that damages the small intestine and affects its ability to absorb nutrients. This can lead to gastrointestinal symptoms, such as diarrhea, abdominal pain and bloating. Unlike other proteins, we don't digest gluten completely, in some people, the immune system sees gluten as the enemy and will unleash weapons to attack it, causing inflammation in the intestines as well as in other organs and tissues. This can cause serious problems outside the gut, including weight loss, anemia, osteoporosis, infertility and miscarriage, skin rashes, headache, depression, fibromyalgia and joint pain. This is partly due to inflammation and partly due to poor absorption of vital nutrients.

Cut the Salt

There are conflicting reports about just how bad excess salt is for us. We know it causes fluid retention – one of many factors that can lead to high blood pressure and inflammation. Canned goods – vegetables and soups – are often high in sodium, which boosts blood pressure. Look for low sodium options, or go with fresh or frozen vegetables. Also, corticosteroids, often used to treat RA, can cause the body to retain more sodium. So play it safe and hold the salt when possible.

TOP 10 Inflammatory Foods to AVOID

These foods have been linked to obesity, increased risks of numerous diseases and even death in some cases.

1. **Sugar:** Sugar is everywhere. Try and limit processed foods, desserts and snacks with excess sugar. Opt for fruit instead.
2. **Common Cooking Oils:** Safflower, soy, sunflower, corn, and cottonseed. These oils promote inflammation and are made with cheaper ingredients.
3. **Trans Fats:** Trans fats increase bad cholesterol, promote inflammation, obesity and resistance to insulin. They are in fried foods, fast foods, commercially baked goods, such as peanut butter and items prepared with partially hydrogenated oil, margarine and vegetable oil.
4. **Dairy:** While kefir and some yogurts are acceptable, dairy is hard on the body. Milk is a common allergen that can trigger inflammation, stomach problems, skin rashes, hives and even breathing difficulties.
5. **Feedlot-Raised Meat:** Animals who are fed with grains like soy and corn contain high inflammation. These animals also gain excess fat and are injected with hormones and antibiotics. Always opt for organic, free-range meats who have been fed natural diets.
6. **Red and Processed Meat:** Red meat contains a molecule that humans don't naturally produce called Neu5GC. Once you ingest this compound, your body develops antibodies which may trigger constant inflammatory responses. Reduce red meat consumption and replace with poultry, fish and lean cuts of red meat, once a week at most.
7. **Alcohol:** Regular consumption of alcohol causes irritation and inflammation to numerous organs, which can lead to cancer.
8. **Refined Grains:** "Refined" products have no fiber and have a high glycemic index. They are everywhere: white rice, white flour, white bread, pasta, pastries... Try and replace with minimally processed grains.
9. **Artificial Food Additives:** Aspartame and MSG are two common food additives that can trigger inflammation responses. Try and omit completely from the diet.

10. **Fill in the Blank:** Do you constantly have headaches or feel tired? Sometimes, you may develop an allergy to a food and not even know it. Coffee, certain vegetables, cheese... there might be a trigger you aren't even aware of. Try and take a few foods out to see how you feel and slowly incorporate them back in to see if there might be a hidden culprit lurking in your diet!

Replacing processed foods with whole, ideally organic foods will automatically address most of these factors, especially if you eat a large portion of your food raw. Equally important is making sure you're regularly reseeding your gut with beneficial bacteria.

Add in Anti-Inflammatory Foods, Herbs, and Spices

The key to reducing chronic inflammation in your body starts with your diet, and being liberal in your use of high-quality herbs and spices is one simple way to boost the quality of your food. They're an inexpensive "secret weapon" that just about everyone can take advantage of. Spicing up your meals is not enough, however, if processed foods comprise the bulk of your diet.

Herbs and cooking spices contain a wide variety of antioxidants, minerals and vitamins, and help maximize the nutrient density of your meals. Every time you flavor your meals with herbs or spices you are literally "upgrading" your food without adding a single calorie. In fact, on a per gram fresh weight basis, herbs rank even higher in antioxidant activity than fruits and vegetables, which are known to be high in antioxidants.

Spices / Herbs - That Pack a Powerful Anti-Inflammatory Punch

Even at the "everyday" dosage – not megadoses amounts given, three spices were found to be significantly effective at quelling the inflammatory response:

Cloves

Cloves are the unopened pink flower buds of the evergreen clove tree. The buds are picked by hand when they are pink and dried until they turn brown in color. Cloves are about 1/2-inch long and 1/4-inch in diameter and with their tapered stem, they resemble tiny nails. In fact, their English name is actually derived from the Latin word *clavus*, which means nail.

Although cloves have a very hard exterior, their flesh features an oily compound that is essential to their nutritional and flavor profile. Cloves have a warm, sweet and aromatic taste that evokes the sultry tropical climates where they are grown

Clove contains significant amounts of an active component called *eugenol*, which has made it the subject of numerous health studies, including studies on the prevention of toxicity from environmental pollutants like carbon tetrachloride, digestive tract cancers, and joint inflammation.

Eugenol, the primary component of clove's volatile oils, functions as an anti-inflammatory substance. In animal studies, the addition of clove extract to diets already high in anti-inflammatory components (like cod liver oil, with its high omega-3 fatty acid content) brings significant added benefits, and in some studies, further reduces inflammatory symptoms by another 15-30%. Clove also contains a variety of flavonoids, including *kaempferol* and *rhamnetin*, which also contribute to clove's anti-inflammatory (and antioxidant) properties.

Ginger

Ginger has been a popular spice and herbal medicine for thousands of years. It has a long history of use in Asian, Indian, and Arabic herbal traditions. In China, for example, ginger has been used to help digestion and treat stomach upset, diarrhea, and nausea for more than 2,000 years. Ginger has also been used to help treat arthritis, colic, diarrhea, common cold, flu-like symptoms, headaches, and painful menstrual periods and heart conditions.

Certain constituents of ginger, called gingerols, have a strong anti-inflammatory effect. The unique fragrance and flavor of ginger come from its natural oils, the most important of which is gingerol. Gingerol is the main bioactive compound in ginger, responsible for much of its medicinal properties. It has powerful anti-inflammatory and antioxidant effects. They inhibit a number of biochemicals that promote inflammation, including COX and lipoxygenase pathways. Ginger has been shown to reduce pain from both osteoarthritis and rheumatoid arthritis. However, you will need to be patient. It can take up to three months of treatment to get relief.

Turmeric - Curcumin

Curcumin – is a powerful anti-inflammatory supplement that is the active ingredient in the Indian spice turmeric. Turmeric, in turn, has been one of the key players in the millennia-old Ayurvedic medical tradition. Curcumin has been used extensively in the case of fighting cancer, atherosclerosis, arthritis and asthma. It is currently being studied to see if it will combat Alzheimer's – an inflammatory condition of the brain and leading cause of dementia. There is specific research evidence that demonstrated turmeric beats Prozac, ibuprofen and more: such as Lipitor, corticosteroids, Metformin, and a whole host of other anti-inflammatory drugs....all with no-side-effects.

Scientists tell us that turmeric is an anti-inflammatory agent, like Tylenol. And it acts like those latest anti-inflammatory drugs called COX-2 inhibitors: Celecoxib and Vioxx. Both of these medicines have serious side effects. On the other hand, turmeric as a dietary constituent is safe and well tolerated. Scientific studies have also looked at the ability of turmeric (curcumin) to fight cancer. Curcumin kills several types of cancer cells in the laboratory. In animals, curcumin prevents or slows cancer in the skin, breast, liver, stomach, duodenum and colon. *Curcumin also has anti-angiogenic properties; translation: curcumin seriously slows new blood vessel formation in tumors, causes asphyxiation of tumors and thus preventing their growth and metastases.*

Curcumin, may also have special anti-inflammatory properties in the eyes, where a layer of yellow pigment helps to protect the retina – and especially, the macula – from the harmful effects of sunlight. The pigment actually acts as a filter, blocking harmful blue UV light from striking the retina. Curcumin has been proven helpful for chronic anterior uveitis (an inflammation of the front part of the eye) and for macular degeneration.

According to the traditional medical community, 2,000 mg. is the maximum amount of standardized turmeric curcumin you should take per day, yet multiple studies used up to 8,000 mg. without toxicity, if that tells you anything. Cancer would be one situation where more would be used. When cooking with turmeric powder, the University of Maryland recommends up to 3 grams per day.

Three grams is about 1½ teaspoons of ground turmeric powder.

Cinnamon

Cinnamon has antioxidant effects have shown to lower inflammation and reduce oxidative stress in obese individuals (body mass index of 30 or higher). These two effects can help reduce the likelihood of cardiovascular incidence.

Cinnamon can be added to foods such as oatmeal, cereals, toast or coffee. Add 1-2 teaspoon throughout the day.

Cayenne (capsaicin)

Cayenne is similar to cinnamon, cayenne has shown to help with inflammation through its antioxidant effects. Those suffering from arthritis have found relief from supplementing with cayenne. Additionally, cayenne helps reduce the inflammation caused by psoriasis. It can be ingested or used as a topical cream. Powder or seasoning can be used in cooking, begin with ½ teaspoon to assess tolerance. Topical applications contain 0.025% – 0.075% capsaicin and may be applied directly to the affected area up to 4 times a day.

Piperine

Piperine is the key chemical in black pepper. It is similar to capsaicin a chemical in chili and offers many health benefits. Curcumin which is a polyphenol plays the same role in turmeric. Piperine is also used as an analgesic cream that can be applied topically on the skin to relieve pain. Some studies have focused on using piperine as a new way to kill chronic pain – especially neuropathic pain which is untreatable

Milk Thistle

Milk Thistle, when it comes to the liver, the body's major detoxification organ as well as its energy production house for carbohydrate metabolism, the bioflavonoid milk thistle (silymarin) is known as one of the most effective anti-inflammatory compounds that targets liver cells specifically. If your liver is not tip top either in its detoxification or metabolism roles, you are at risk for a host of conditions ranging from allergies, immune dysfunction and lethargy. These can cascade into more serious conditions including hormone imbalance, cirrhosis and cancer. Milk thistle can help ease the effects of liver inflammation (hepatitis) and may slow liver damage from cirrhosis. Milk thistle is the anti-inflammatory supplement of choice when it comes to the liver.

Boswellia

Boswellia is also known as frankincense and valued even in Biblical times, is an effective anti-inflammatory supplement *especially* for osteoarthritic joint and muscle pain including that associated with fibromyalgia.

Licorice root is one of the most widely used herbs linked to helping ulcers, canker sores, acid reflux and eczema among other conditions and, for these reasons, is a stellar anti-inflammatory supplement.

Jamaican allspice

Apple pie spice mixture

Oregano

Pumpkin pie spice mixture

Marjoram

Sage

Thyme **Gourmet Italian spice**

TEA

Matcha tea is the most nutrient-rich green tea and comes in the form of a stone-ground unfermented powder. The best Matcha comes from Japan and has up to 17 times the antioxidants of wild blueberries, and seven times more than dark chocolate.

Tulsi tea is another tea loaded with anti-inflammatory antioxidants and other micronutrients that support immune function and heart health.

Top Anti-Inflammatory Foods / Food Components

While there is no specific “diet” that people should follow, researchers have identified certain foods that can help control inflammation. Many of them are found in the so-called Mediterranean diet, which emphasizes fish, vegetables and olive oil, among other staples.

The following foods and nutrients deserve special mention for their ability to reduce the inflammatory responses in your body:

1. Good Fat

The human body can make most of the types of fats it needs from other fats or raw materials. That isn't the case for omega-3 fatty acids (also called omega-3 fats and n-3 fats). These are *essential* fats—the body can't make them from scratch but must get them from food. Foods high in Omega-3 include fish, vegetable oils, nuts (especially walnuts), flax seeds, flaxseed oil, and leafy vegetables. Omega 3-FA are an integral part of cell membranes throughout the body and affect the function of the cell receptors in these membranes. They provide the starting point for making hormones that regulate blood clotting, contraction and relaxation of artery walls, and inflammation. They also bind to receptors in cells that regulate genetic function. Likely due to these effects, omega-3 fats have been shown to help prevent heart disease and stroke, may help control lupus, eczema, and rheumatoid arthritis, and may play protective roles in cancer and other conditions.

Omega 3 Fish Oil

Fish oil is rich in omega-3 fatty acids, which decrease the body's production of a long list of pro-inflammatory biochemicals, including the same ones targeted by most NSAIDs — cyclooxygenase (COX 1 and 2). It also helps to reduce levels of inflammatory interleukins, specifically interleukin-1, a marker of chronic inflammation and C-Reactive Protein. In studies, people with rheumatoid arthritis who took fish oil were able to reduce their dosage of anti-inflammatory drugs. They also reported less pain and stiffness.

Omega 3s – fish oil is an excellent anti-inflammatory source, which can help a host of health issues including cardiovascular disease, diabetes, asthma, cystitis, hepatitis, pancreatitis, prostatitis, dermatitis and cancer. Many experts are convinced that it is not only the amount of Omega 3 fatty acids you ingest but your ratio of Omega 6 to Omega 3s consumed that can have an important effect on fighting inflammation. You can get

your Omega 3s naturally by eating 3 to 4 ounces of oily cold water fish like *salmon*, *sardines* or *tuna* three times a week, although remember to avoid too much mercury with certain species. If you can't get enough Omega 3s from diet alone or you have a specific health condition that requires extra, supplementing fish oil containing both EPA and DPA components of Omega 3 fatty acids is the ticket

The general recommendation is between 1-3 g/day. The supplement should be 30% EPA/DHA.

Flax Seed Oil

If you are vegan, *cold pressed flax oil* or *raw ground flax seeds* along with *pumpkin* or *hemp seed oils* are a good source of Omega 3 oils.

For some reason, flax seed seems to especially target the skin. In zoos, it's given to hippos, elephants and rhinos to help keep their massive hides healthy. Some of the fat in flax seed oil converts to EPA and DHA, the same active components in fish oil. Flax seed oil can be a good addition to fish oil, especially if you are on a low-fat diet or have dermatitis — dry, scaly, itchy skin.

Mono-Unsaturated Oil

The discovery that monounsaturated fat could be healthful came from the Seven Countries Study during the 1960s. It revealed that people in Greece and other parts of the Mediterranean region enjoyed a low rate of heart disease despite a high-fat diet. The main fat in their diet, though, was not the saturated animal fat common in countries with higher rates of heart disease. It was olive oil, which contains mainly monounsaturated fat. This finding produced a surge of interest in olive oil and the "Mediterranean diet," a style of eating regarded as a healthful choice today. Good sources of monounsaturated fats are olive oil, peanut oil, canola oil, avocados, and most nuts, as well as high-oleic safflower and sunflower oils.

Olive oil contains heart-healthy monounsaturated fat, antioxidants and oleocanthal, a compound that can lower inflammation and pain. How much: Two to three tablespoons per day for cooking or in salad dressings or other dishes. Best sources: Extra virgin olive oil is less refined and processed. It retains more nutrients than standard varieties.

Nuts are full of inflammation-fighting monounsaturated fat, protein and filling fiber, too – a bonus if you're trying to lose a few pounds. How much: Eat 1.5 ounces of nuts daily (about a handful) Best sources: Walnuts, pine nuts, pistachios and almonds

2. Antioxidants

Immune cells cause oxidative damage as they fight infection, and ongoing oxidative damage drives chronic inflammation. Reducing oxidative damage can help control inflammation. Antioxidants like **vitamin C**, **vitamin E** and **selenium** all help to control oxidative damage by neutralizing "free radicals," the molecular renegades that cause oxidative damage and can start a chain reaction that keeps it going.

Vitamin A (Beta Carotene) -- plays an important role in vision, immune function, and maintenance of mucus forming cells, bone growth, reproduction, cell division and differentiation. Vitamin A is an antioxidant that combats intestinal free. A diet lacking in this vitamin has been linked with inflammation of the intestines -colitis, lungs and skin. Vitamin A is also responsible for the proper growth and maturation of respiratory tissues and mucous. Supplementation can help fight against respiratory infections and also may help with tissue repair after asthma attacks.

The National Institute of Health recommends 3000 IU of beta carotene for adult men and 2310 IU for women.

Vitamin C -- is a water soluble vitamin that has a strong role as an anti-inflammatory supplement. Controversy continues about how much Vitamin C you need in normal circumstances. Nevertheless, there is consensus that your need for Vitamin C increases substantially in the face of physical or emotional stress, whether arising from infection, toxins, injury or exercise. The main thing to remember when using Vitamin C as an anti-inflammatory supplement is that your body doesn't store it and supplies can run low, if you don't replenish regularly with sufficient Vitamin C rich foods or supplements. Vitamin C is the cornerstone of any anti-oxidant anti-inflammatory supplement program, because of its role in recycling anti-oxidants including Vitamin E, glutathione, lipoic acid and others.

Vitamin E -- is a powerful antioxidant and anti-inflammatory supplement that has been used to combat atherosclerosis, heart disease, symptoms of diabetes, skin conditions, and systemic inflammation among other conditions. It is a fat soluble vitamin, so is useful in maintaining healthy cell membrane, which is important for effective intercellular communication including nerve conduction. The most effective supplement form of Vitamin E is alpha-tocopherol, which is also the most common form in the Western diet and is found in *olives, corn oil, wheat germ, sunflower* and *sesame seeds* and their *unrefined oils* as well as *beans, tuna, and peas* among others plant foods. When buying alpha-tocopherol supplements, ensure you get the natural bio-identical version, namely, d-alpha tocopherol, as opposed to the synthetic version identified with the preface a "dl" -- many supplements contain the latter.

1200 IU's have shown to decrease serum levels of CRP in individuals with adult onset diabetes, type II diabetes and those with elevated levels of CRP.

Vitamin D -- plays a crucial role in support and function of bone, cardiovascular, immune, and neurological health by regulating the absorption of Calcium and Phosphorus. Calcium is necessary for muscular contraction.

Deficiency in vitamin D has been associated with inflammatory diseases such as rheumatoid arthritis, lupus, and inflammatory bowel disease. The absence of vitamin D promotes a pro-inflammatory environment. When supplemented, vitamin D binds to a specific site on DNA and interferes with the inflammatory response.

An intake of 2000 IU/day for 9 months was shown to increase serum levels of anti-inflammatory markers and prevent increases of pro-inflammatory markers.

Vitamin B6-- (pyridoxine) is needed for more than 100 enzymes and is essential for protein and carbohydrate metabolism and the synthesis of hormones, insulin, red and white blood cells.

Low levels of circulating B6 is associated with higher levels of CRP's. Additionally, deficiency is also linked with rheumatoid arthritis, an autoimmune disease that causes inflammation within the joints. CRP levels have been shown to drop with increased intake of B6, also, individuals who have higher amounts of circulating B6 have lower levels of CRP's.

100 mg /day for 12 weeks was shown to decrease to suppress pro-inflammatory cytokines in individuals suffering from rheumatoid arthritis.

Fruits and vegetables are packed with antioxidants, which support the immune system – the body’s natural defense system – and may help fight inflammation. Best sources: Colorful foods such as blueberries, blackberries, cherries, strawberries, spinach, kale and broccoli

Leafy Vegetable Dark leafy greens -- such as kale, spinach, collard greens and Swiss chard contain powerful antioxidants, flavonoids, carotenoids, and vitamin C—all of which help protect against cellular damage. **Kelp:** High in fiber, this brown algae extract helps control liver and lung cancer, douses inflammation, and is anti-tumor and anti-oxidative. Kombu, wakame and arame are good sources. Ideally, opt for organic locally grown veggies that are in season, and consider eating a fair amount of them raw. Juicing is an excellent way to get more greens into your diet.

Cruciferous Vegetables: Broccoli, brussel sprouts, kale and cauliflower are all loaded with antioxidants. Naturally detoxifying, they can help rid the body of possible harmful compounds.

Sweet Potato: A great source of complex carbs, fiber, beta-carotene, manganese and vitamin B6 and C, these potatoes actually help heal inflammation in the body.

Beans have several antioxidant and anti-inflammatory compounds. They’re a low-cost source of fiber, protein, folic acid and minerals such as magnesium, iron, zinc and potassium.

Blueberries -- rate very high in antioxidant capacity compared to other fruits and vegetables. They are also lower in sugar than many other fruits. Blueberries not only reduce inflammation, but they can protect the brain from aging and prevent diseases, such as cancer and dementia. Aim for organic berries, as pesticides are hard to wash away due to their size.

3. Quercetin

Flavonoids, such as quercetin, are antioxidants. They scavenge particles in the body known as free radicals which damage cell membranes, tamper with DNA, and even cause cell death. Antioxidants can neutralize free radicals. They may reduce or even help prevent some of the damage free radicals cause. Quercetin may help protect against heart disease and cancer. Quercetin can also help stabilize the cells that release histamine in the body and thereby have an anti-inflammatory and antihistamine effect.

The anti-inflammatory effects of quercetin seem to come from its ability to dampen the production and activity of pro-inflammatory biochemicals such as leukotrienes and prostaglandins, and to block the release of histamine, the biochemical that causes allergic symptoms like runny nose and itchy eyes. Quercetin also seems to help symptoms of irritable bowel syndrome and chronic, nonbacterial prostatitis.

Fruits and vegetables are the primary dietary sources of quercetin, particularly citrus fruits, apples, onions, parsley, sage, tea, and red wine. Olive oil, grapes, dark cherries, and dark berries such as blueberries, blackberries, and bilberries are also high in quercetin and other flavonoids.

4. Bromelain

This protein-dissolving enzyme is obtained from the stem and fruit of the pineapple. Bromelain seems to exert its anti-inflammatory effect by altering leukocyte migration and activation. Leukocytes are white blood cells that help fight infection but can also perpetuate inflammation. Bromelain is good for an acute injury or inflammation caused by ongoing injury, such as osteoarthritis, with its ongoing injury to joint cartilage.

5. Resveratrol

Resveratrol is a polyphenolic compound naturally found in peanuts, grapes, red wine, and some berries. Some evidence suggests that resveratrol is a more potent anti-inflammatory agent than NSAIDs such as aspirin, ibuprofen, or indomethacin. Injections of resveratrol into the joints of animals decreases inflammation and reduces cartilage destruction. Like ginger and fish oil, resveratrol inhibits a number of inflammation-producing biochemicals, including COX-1 and COX-2. It also seems to have a regulating effect on certain immune cells. It may reduce T cell proliferation. T cells are involved in some autoimmune diseases, including rheumatoid arthritis. It also affects cells called granulocytes, which are associated with the inflammation produced in chronic obstructive pulmonary disease.

6. Alpha Lipoic Acid

Alpha lipoic acid is a coenzyme that has lots of talents, including antioxidant and anti-inflammatory protection. It is both fat and water soluble, and can regenerate other important antioxidants like vitamins E, C and glutathione. It provides anti-inflammatory protection in blood vessels and in the fatty tissues of the brain and nerves. It's a must for anyone with diabetes, neuritis or neuropathy, since it also improves glucose metabolism and blood flow in nerves.

7. Zinc

Many people take zinc to boost their immunity, but recent research shows that zinc may also be a natural inflammation fighter. Popping zinc regularly can help reduce inflammation and has also been shown to offer immune support. Researchers at Wayne State University in Detroit, tested whether zinc supplementation decreases oxidative stress. They found that consuming 25 mg three times a day for three months decreased TNF-alpha, a cytokine that amplifies inflammation.

8. Co-enzyme Q10

Co-Q10 (ubiquinone) is an anti-inflammatory molecule with a wide range of benefits. These include conditions as diverse as gum inflammation, heart disease, high blood pressure, angina, poor sperm motility, immune decline and protection of LDL, the good cholesterol, from oxidation. Because of its effects on cellular energy within the mitochondria itself, Q10 is taken to improve athletic performance and improve energy. While produced in small amounts in the liver, Q10 often is deficient because of the many co-factors needed for Q10 to function decline with age as well as lifestyle factors like alcohol intake. It follows Q10 is a top anti-inflammatory supplement that is available widely. The best supplement form for Q10 is a gel form of at least 30 mg per day with 90 mg ideal.

9. Fiber

Fiber lowers C-reactive protein (CRP), a substance in the blood that indicates inflammation. Getting fiber from foods lowers CRP levels more than taking fiber supplements. Foods that have carotenoids, the antioxidants that give carrots, peppers and some fruits their color, are quite good at lowering CRP.

10. Garlic

Garlic has been treasured for its medicinal properties for centuries. It's also one of the most heavily researched plant foods around. Over 170 studies show it benefitting more than 150 different conditions. Garlic exerts its benefits on multiple levels, offering anti-bacterial, anti-viral, anti-fungal, and antioxidant properties. It's thought that much of garlic's therapeutic effect comes from its sulfur-containing compounds, such as allicin. Research has revealed that as allicin digests in your body it produces sulfenic acid, a compound that reacts faster with dangerous free radicals than any other known compound.

Ancient Remedies & Newer popular trends - Validity in Good Anti-aging outcomes

Turmeric Golden Paste

Golden paste is an ancient food remedy that is basic to create. It is simply adding three natural strong anti-inflammatory spices and foods (***Turmeric, crushed black pepper and good oil***) that compound or accentuate their individual effect with their interaction and combination.

Why does this work... **Curcumin** is the active ingredient in turmeric and responsible for its golden color, but it gets metabolized before absorbed by the body. **Piperine** (the heat in crushed black pepper) helps make curcumin more bio-available as it temporarily slows the liver from removing it from the blood. We know that the bio-availability, serum levels, and levels of absorption of curcumin all improved dramatically when both are present. One study found that when even 2 g. (a good dose) of curcumin was ingested, serum levels stayed very low. However, when 20 mg. piperine was added to curcumin the bio-availability increased by 2000%! And it doesn't take much. Even just a little pinch of pepper – 1/20th of a teaspoon – can significantly boost levels.

Turmeric is fat-soluble, when something is fat-soluble, that means it dissolves in fat. With fat, the active component in turmeric, curcumin, can be directly absorbed into the bloodstream through the lymphatic system thereby partially bypassing the liver.

In order to make the most of turmeric, you must take it with a bit of fat – good fat: **un-refined Coconut oil or cold pressed Olive oil.**

What Is Needed For Making Turmeric Golden Paste:

1/2 cup turmeric powder (125 mls) – Use organic powder.

1 cup water (250 mls) or a bit more to get desired paste consistency

1/3 cup (70 ml) cold pressed Olive or un-refined Coconut oil
1 1/2 teaspoons freshly finely ground black pepper (7.5 mls)

Quick & Easy Directions

- **Add turmeric** to water in a pan.
- **Heat gently** along with stirring. Do this till you get a thick paste, approximately **6 to 10 min.**
- Adjust thickness by adding some water or adding a bit more turmeric.
- **AT THE END** of cooking, add the **freshly ground pepper and oil.**
- **Stir well a whisk** is ideal to incorporate and ensure that all ingredients are mixed properly.
- Allow it to cool.

- Bottle in clean jar with tight-fitting lid and refrigerate it for up to 2 weeks, maximum.
- Freeze a portion if you think you have too much to use within two weeks.

7 Easy and Fabulous Ways To Use Turmeric Golden Paste

Use ¼ teaspoon of Turmeric Golden Paste twice daily w food. I must warn you that you may not like the taste of golden paste (many do not) but do not worry. It can be taken in various ways such as – added to smoothies, curries, salads etc, just to name a few.

1. **Take half a baby spoonful (~ 1/4 to 1/2 teaspoon) and chase it with water...all done!** It's one very popular way if you don't like the taste (over quickly, no fuss or bother) and my favorite to spread it out through the day. Best to take smaller quantities 3-4 times per day, especially if battling chronic neuro-degenerative, cardiovascular, pulmonary, metabolic, autoimmune diseases, or cancer.
2. **Turmeric honey.** Adding raw honey to paste enhances its already existing health benefits. Just mix the paste with honey (to desired taste) and that's it!
3. **Add to warm or cold milk.** Golden turmeric milk is one of the most popular ways to take turmeric daily. Turmeric milk is extremely popular in Asian countries. With a dairy allergy, I use almond milk or make my own coconut milk as dairy is inflammatory and congestive.
4. **Add to meat dishes and hot soups.** Simply add a dollop of golden paste. 'Hide' it in dishes with other stronger flavors.
5. **Add to smoothies.** There's no limit to innovations you can do here. Experiment. Add turmeric golden paste to all kinds of smoothies.
6. **Add it to rice.** Turmeric golden paste can easily be added to rice. You can add 1 or more teaspoons after you have cooked the rice while still warm which enables smooth mixing.
7. **Turmeric tea.** You can add 1/4 teaspoon turmeric golden paste to a hot cup of already-brewed tea, add honey, maybe a splash of almond milk, and your quick turmeric tea is ready. The taste and texture may not seem like a "normal tea" as it has black pepper and oils ... but it is tasty; (optional) Add in 1/8th to 1/4th teaspoon Ginger powder. Squeeze in a bit of fresh lemon or lime to brighten the flavor.

Bone Broth

Bone broth is more than stock, it is more than a soup base. *Bone broth is one of the most nourishing foods you can make for yourself.* **Bone broth is anti-inflammatory, anti-aging, and a detoxifier. It alleviates joint pain, heals and seals our gut and is incredible for hair, skin and nails.**

- **It detoxifies your body.** Bone broth is rich in amino acids. AA are the building blocks of protein. Bone broth high in *glycine* and *proline*, aids your liver in removing toxins from your body.
- **It heals your gut.** When broth is cooled, it congeals due to the presence of gelatin. **We need gelatin in our diets to heal and seal our guts.** Helps your digestive system by battling problems like —constipation, diarrhea, and gas. The gelatin and other nutrients in bone broth help to heal the gut, curing digestive problems and facilitate weight loss.
- **It supplies you with easy to absorb essential minerals.** Including Calcium, magnesium, and phosphorus, silicon, sulphur and trace minerals.
- **It aids digestion.** Bone broth is *hydrophilic*—it attracts and holds liquids, like digestive juices. This is another reason why it helps you digest food more efficiently.
- **It heals your joints.** Bone broth gives you a generous supply of the broken down material from cartilage and tendons: glucosamine, chondroitin, and other *glycosaminoglycans* (GAGs) that help heal your joints. GAGs also help your body lay down collagen where it's needed.
- **It's anti-inflammatory.** When you heal that inflammation with nutrients like those concentrated in bone broth—including anti-inflammatory proline, glycine, and arginine.
- **It's packed with collagen.** Collagen helps your body burn fat and form lean muscle mass, shaping your arms, legs, and core.
- **It fills you up—without adding pounds.** Bone broth and bone-broth soups are rich, complex, hearty, and soul-satisfying. It has virtually zero carbs and few calories, so you can indulge even when you're fasting. -- Your weight starts to fall off.

Bone broth is made by simmering animal bones (usually chicken, turkey or beef, sometimes fish) for a long time (8-24-48 hours) in order to extract maximum flavor and goodness. The longer you simmer, the more minerals and nutrients leach from the bones, literally the bones crumble when finished. You make bone broth using **pasture-raised game, beef, lamb and wild fish**. The best part: bone broth is highly digestible and easily absorbed in this form, so your body truly reaps the full benefits.

One word of caution: **Do not use factory-farmed meat for your bone broth.** Toxins, antibiotics and hormones are stored in the fat and bones of animals and will leach out during a slow cooking process like this and you will be doing the opposite of what you are going for as you ingest the toxic load.

Over time we continue to loose key nutrients that our body desperately needs.

Our modern diets have traded in organ meats, fermented foods (which contain probiotics) and naturally occurring gelatin instead for dry, muscle meats (think boneless chicken breasts), processed foods and sugar. Factors like toxic environments, antibiotic use, stress, lack of sleep, drugs and alcohol also play a huge role in messing up our gut. Eighty-five percent of our immunity lies in our gut and we wonder why our population is so sick? We have lost good, vital bacteria in our intestines and as a result are paralyzed by digestive issues, food sensitivities, autoimmune disease and a host of other illnesses. Bone broth is very powerful to assist and balance the gut environment.

Bone Broth



Best Supplement You Could Ever Take

What Is Needed For Making Bone Broth:

- Carcass from a chicken/turkey/duck OR 3-4 lbs beef/soup bones, preferably a mix of marrow bones and bones with a little meat on them, such as oxtail, neck, short ribs, or knuckle bones (cut in half by a butcher)
- 2 tbsp. apple cider vinegar
- 2 carrots unpeeled roughly chopped, cut into 2-inch pieces
- 3-4 stalks celery chopped, cut into 2-inch pieces
- 1 medium leek, end trimmed, cut into 2-inch pieces
- 2 onions, quartered
- 1 garlic head, halved crosswise
- 2 bay leaves
- 1 bunch parsley
- 10 cracked black pepper corns
- Sea salt – to taste
- Choice of herbs: thyme, rosemary, bay leaf

- 1 raw ginger root, sliced or minced

Quick & Easy Directions

1. Place bones (neck, feet, and joints) in a large, stainless stock pot - get a better flavor and more gelatin in a stock pot
2. Add 2 Tbsp. of apple cider vinegar to the bones.
3. Cover the bones with water and let sit for **30 minutes** (soaking in ACV leaches the minerals from the bones).
4. Add in your veggie scraps (carrots, celery, celery, leeks, onions, even onion peels, parsley and any other veggies and herbs).
TIP: Save scraps from juicing or cutting veggies for other meals -throw 'em in the freezer... ...and now the scraps are ready to go!
5. Add in bonus anti-inflammatory healing properties (slice or mince raw ginger, turmeric and garlic).
6. Add sea salt & cracked black pepper to taste (you can do this now or later after it's been simmering for a day).
7. Bring to a boil and then reduce heat to low, cover and simmer.
8. Simmer uncovered for a few hours and skim the top, then let the broth simmer for 12-24-48 hrs. Until the bones fall apart. If needed and desired leave bone broth on the stove overnight. (If you're making fish stock, it only takes 3-5 hours)
9. Strain the broth into a bowl using a strainer or double layer of cheesecloth, strain stock and discard the solids (vegetables, herbs, etc.)
10. Ladle it into 32 oz. mason jars leaving room at the top
11. Place in fridge (uncovered) for several hours to until the fat rises to the top, can last up to a week or more in the fridge if you keep the fat on the top
12. Scrape off fat with a spoon and discard or use later for sautéing vegetables.
13. Freeze - broth lasts for **6 months in the freezer**. Keep a 32 oz. jar in the fridge to use for the week and freeze the rest.
14. ***TIP: Fill an ice cube tray with stock for easy individual use in soups, stews or just a quick warm Bone Broth cup.**

If you don't want to make it – try this sie: <http://grasslandbeef.com/beef-marrow-bone-stock-broth-large-5-lb-pail>

Bone Broth Uses

Base for soups
Replace water with bone broth and cook your grains, beans and lentils
Tons of sauces
Mashed potatoes
Mashed cauliflower
Gravy
Stir-fry
Use bone broth instead of oil for cooking
Steam veggies in
Ratatouille
Eggs

Veggies

DRINK IT... Bone broth and coffee mug. Sip on 4-8 oz. every day or whenever you want it throughout the week.

Anti-Aging Benefits of Bovine Colostrum

Colostrum has powerful anti-aging growth factors that can help you **take years off your biological clock**. It is a safe **potent, full-spectrum, Anti-Aging** supplement. Watch your **skin thicken, your muscle mass increase, your joints feel youthful again, your balance improve**, and more!

Colostrum is the specific first diet of mammalian newborns. It is secreted before breast milk. Bovine colostrum contains hundreds of thousands of components, only which a few hundred have been identified and studied, that enhance the human body's functioning by two primary mechanisms. First, the numerous immune factors and natural antibiotics in colostrum provide strong support for optimal immune system performance. Second, colostrum's growth factors offer a broad-spectrum boost for optimal health and tissue healing.

Its high content of bioactive growth factors is generating interest among doctors. Growth factors play key regulatory roles in cell growth, replication, and differentiation. Growth factors support communication between the immune, nervous and hormonal systems. Colostrum is a rich source of a particularly important growth factor, insulin like growth factor-I (IGF-I), which acts as a second messenger for growth hormone. Human Growth Hormone (hGH) is responsible for many effects on growth, physical development, immunity, and metabolism. It exerts anabolic effects throughout the body favoring the tissues, bones and muscles.

Aging is generally accepted as a normal and inevitable part of the human experience. And, the quest for longevity is almost equally normal and inevitable. We are more determined than ever to avoid the physical and mental ravages of modern diseases and to enhance quality of life. Bovine colostrum is re-emerging as a pre-eminent anti-aging supplement for its overall health benefits and reported use in specific medical conditions.

The hallmark signs of aging include decreased muscle and bone mass and a loss of skin elasticity, which are manifested as loss of muscle tone, sagging skin, and wrinkles. This is the result of the body tapering off its production of growth hormone following maturity (around age 20). Although this is normal, it doesn't necessarily have to be. The immune and growth factors in bovine colostrum, Insulin-like Growth Factor (IGF-1 and IGF-2) have regenerative effects which extend to nearly all structural cells of the body, promoting healing and the anti-aging effect of growth and repair of DNA and RNA.

DEFENSE AGAINST AGE-RELATED NEUROCOGNITIVE DECLINE & ALZHEIMER'S DISEASE

Components of bovine colostrum play a role in mitigating age-related depression, cognitive decline and dementia, especially Alzheimer's Disease. Serotonin levels decline with age, and tryptophan levels affect the brain's ability to synthesize serotonin. Increasing dietary intake of tryptophan relieves depression and stress in people highly vulnerable to stress. Colostrum increases tryptophan which in turn, increases brain serotonin activity, reduces cortisol concentration, improves coping ability, and improves mood under stress.

Chronic stress, a contributing factor for low brain serotonin levels, is associated with poor memory performance. Colostrum's protective effect against age-related diseases, including neurocognitive disorders, is also due to the ability to boost glutathione levels.

IMPROVED GLUCOSE TOLERANCE/INSULIN SENSITIVITY & TYPE 2 DIABETES PREVENTION

Components of bovine colostrum have been shown to play a role in improving glucose tolerance, boosting insulin sensitivity and even reducing the risk of Type 2 diabetes. Diabetes is a major aging disease characterized by significant cellular damage caused by generation of reactive oxygen species. In most cases, a high-fat diet, excessive weight gain, and obesity lead to an increase risk of Type 2 diabetes and non-alcoholic fatty liver disease. Research shows that risk reduction can be achieved by colostrum supplementation alone, which appears to increase metabolism. Even with no additional intervention, both glucose tolerance and insulin sensitivity were improved; body weight was lower and lean body mass was higher.

INHIBITION OF CANCER CELL DEVELOPMENT

Cancer cells are continuously created and destroyed in the human body, and cancer only truly manifests when a weakened immune system allows the cancerous cells to multiply out of control, spread and destroy other healthy tissues. The diverse combination of immune and growth factors in colostrum when used in conjunction with primary cancer treatment can protect against invading pathogens and toxins as well as inhibit the spread of cancer cells. Chemotherapy may be more effective when bovine colostrum is taken regularly. Colostrum makes human cancers more sensitive to chemotherapy agents.

Another anti-cancer benefit is attributed to the high content of cystine/cysteine and gamma-glutamylcysteine which are used to synthesize glutathione. Glutathione is well-known for its capacity to destroy reactive oxygen species or detoxifies carcinogens.

MODULATION OF CARDIOVASCULAR DISEASE ORIGINS AND CARDIOPROTECTION

Research suggests that atherosclerosis and cardiovascular disease are linked to altered immunity, such that when cardiac and vascular tissue are damaged, the immune system does further damage by creating antibodies. Growth factors promote repair and regeneration of cardiac cells as well as regenerating new coronary blood vessels for collateral circulation. Colostrum also has an antihypertensive effect showing promise as blood-pressure regulators. Some research suggests it helps modulate platelet binding.

OPTIMIZATION OF IMMUNE SYSTEM FUNCTION

Bovine colostrum contains hundreds of thousands of antibodies, so many that we should consider the cow a “walking pharmaceutical factory”. Colostrum maintains 40 times more antibodies than raw milk. The immune-enhancing constituents in bovine colostrum quickly and effectively modulate a full range of immune functions, including destruction of pathogens and elimination of toxins. Colostrum has been shown to contain specific antibodies to more than nineteen specific disease-causing pathogens including; E. coli, salmonella, candida, streptococcus, staphylococcus, H. pylori, cryptosporidium, and rotavirus.

Colostrum helps regulate the thymus gland; it can stimulate a weakened immune system and/or balance an overactive immune system, as is the case of many allergies and autoimmune diseases.

A key factor of the immune system is the chemicals that are involved in cell-to-cell communication, antiviral and anti-tumor activity and regulation and intensity of immune responses. Colostrum supplementation results in higher levels of white blood cells, lymphocytes, and cytokines, all of which lead to greater immune responsiveness and reduced infection severity.

PROTECTION OF GASTROINTESTINAL TISSUE AND OPTIMIZATION OF INTESTINAL FLORA

Components of bovine colostrum have been shown to play a role in improving intestinal permeability, or leaky gut syndrome, and irritable bowel syndrome which are caused by exposure to bacteria, viruses, yeast, parasites, and toxins. Colostrum is capable of preventing diarrhea caused by enterotoxigenic Escherichia coli, among nineteen other common bacterial strains, in humans. Dietary components acting as prebiotics can improve the balance and proliferation of beneficial intestinal flora by providing substrates.

ARTHRITIS RELIEF / PREVENTION

Arthritis, characterized by inflammation in the joints and the resulting pain, is a mild autoimmune disease. The immune system continues to attack antigens, long after this immune response is no longer necessary. The Proline-rich Polypeptides (PRPs) in bovine colostrum halt the out-of-proportion inflammatory response by slowing production of T-cells and lymphocytes, which are stimulated by antigens and mitogens. Colostrum is a rich source of Methyl Sulfonyl Methane (MSM) and along with growth factors to stimulate tissue regeneration, cartilage and connective tissue rebuilding is possible.

Where to purchase: http://www.bulkcolostrum.com/Immune_Tree_Colostrum_Kilo.html