

INFLAMMATION BUSTERS!

Inflammation: Red hot or silent?

Inflammation is commonly thought of as swelling or pain that occurs in tissue when there is an injury or infection. Yet, inflammation is also a complex process that involves the production of substances that increase blood flow and bring immune cells to areas that require healing. When a cut or bite gets red and “hot”, it is inflamed, and inflammation is a positive, healthy response. It is also a component of many health problems that don’t involve specific injury to an area. Any condition that includes “itis” in its name involves inflammation – gastritis is stomach inflammation; arthritis is inflammation of joints, etc.

Low-level inflammation can occur throughout the body and can lead to tissue damage and increased risk of disease. For example, heart disease is related to chronic, low-grade inflammation in blood vessels. Asthma is related to an inflammatory response in bronchial airways. More studies need to be done, but there is some research that links chronic inflammation to many diseases, such as heart disease, obesity, cancer and Alzheimer’s.

Genetics may predispose someone to more systemic inflammation, but the environment has a strong influence on the process. And, food, an important environmental component, has a tremendous impact on the level of inflammation in the body. The typical “Western” diet significantly contributes to inflammation.

Although some inflammation is necessary for the normal healing process to occur, our current lifestyles are promoting more inflammation than is healthy.

Foods Impact on Inflammation

Every cell membrane in the body contains fatty acids. The most prominent fatty acid is a long chain, omega-6 fatty acid called arachidonic acid (AA). Arachidonic acid can be made in the body from linoleic acid, an omega-6 fatty acid found primarily in vegetable oils. Small amounts of AA can also come directly from food, primarily in animal fats and egg yolks. Long chain omega-3 fatty acids, produced in the body from other omega-3 fatty acids or present in the diet, can also be found in cell membranes. A prominent fatty acid found in cell membranes is eicosapentaenoic acid (EPA). It can be produced from alpha-linolenic acid (ALA), found in flaxseed, flax oil, walnuts, soy foods or consumed in fish, grass-fed animal meats or omega-3 enriched eggs. The typical “Western” diet provides generous amounts of omega-6 fatty acids and often much less omega-3 fatty acids.

Promoting Fatty Acid Balance to Minimize Inflammation

Strategies for reducing inflammation by modifying fat intake are a constant area of study, yet there is significant evidence to recommend a general **decrease** in dietary omega-6 fatty acids and **increase** in omega-3 fatty acids. Strategies for maximizing the anti-inflammatory potential of your diet include:

- **Maximize EPA from food or take fish oil supplements.** The best food sources of EPA are salmon, mackerel, anchovy, herring, lake trout, chunk-light or yellow fin tuna and sardines. Try to consume at least two servings of EPA-rich fish per week or talk with your health care provider about fish oil supplements.
- **Minimize AA from food.** The richest source is visible meat fat, but all animal foods including lean meat, poultry, shellfish and egg yolks, contain this fatty acid. Trim all visible fat from meat and eat smaller servings of these foods infrequently.
- **Minimize linoleic acid, an omega-6 fatty acid, from food.** This is the primary fatty acid in most vegetable oils and can be transformed into AA. Use cold-pressed, preferably organic, canola or extra-virgin olive oil rather than corn, safflower, soybean or sunflower oils.

Increase Anti-Inflammatory Foods	Decrease Pro-Inflammatory Foods
Omega-3:	Omega-6:
Fatty fish (salmon, mackerel, sardines)	Partially hydrogenated vegetable oils
Flax (seeds, meal, oil)	Soybean oil
Canola oil	Sunflower seeds, oil
Soy (organic or non-GMO)	Safflower oil
Pumpkin seeds	Corn oil
Walnuts	Cottonseed oil
Chia seeds	Vegetable oil
Dark leafy green vegetables	Full-fat dairy products
Hemp oil	Animal meats and fat
Omega-3 enriched eggs	Poultry skin
	Butter

Other diet and lifestyle factors to consider reducing inflammation:

Regulate insulin levels. To manage blood sugar levels and insulin production, try and eat something every 3-5 hours throughout the day and include a source of protein and fiber at each meal and snack. Avoid skipping meals and minimize your intake of refined flour and simple sugars.

Increase anti-inflammatory herbs and spices. Herbs and spices are filled with vitamins, minerals, antioxidants and naturally sodium free. A few have also been linked to reducing inflammation in the body, such as ginger, turmeric, rosemary, basil, cayenne, rutin and boswellia.

Follow the Mediterranean diet. A recent study found that participants who followed the Mediterranean diet had lower levels of inflammation. Some key principles of this plan include filling your plate with primarily plant-based foods, such as fruits, vegetables, whole grains, legumes and nuts. Replace butter with healthy fats, such as olive oil and canola oil. Use herbs and spices instead of salt to flavor food, limit red meat to no more than a few times a month and eat fish and poultry at least twice a week.

Reduce stress. Chronic stress can lead to inflammation in the body so it's important to find ways to reduce stress as much as you can and alter how you respond to it. Find healthy ways to manage your stress, such as exercise, meditation, massage, reading, and taking time each day to unplug from electronics and unwind.