

Nutrition To Fight Inflammation

By Lara Rondinelli-Hamilton, RD, LDN, CDE

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Did you know that the foods you eat may either increase or decrease inflammation in your body? Unfortunately, the American diet is full of many inflammatory foods that may be negatively affecting your health. Many people can feel physical improvements in symptoms with healthy diet changes.

Let’s start with foods that can promote inflammation. These foods include sugar, refined starch, processed foods, red/processed meats, some oil and *possibly* gluten, dairy and nightshades for some. The Nurse’s Health Study¹ found that a “Westernized diet,” high in sweets, desserts, French fries and refined grains resulted in higher inflammatory markers. Refined starch and processed foods such as white bread, pretzels, crackers, cereals, donuts and cookies are not only inflammatory, but they are also unhealthy foods that offer little nutritional value while supplying excess sugar, fat, and calories. Red and processed meats are associated with higher inflammatory markers in studies. These foods include beef, ham, lunchmeats, bratwurst and hotdogs. In addition, these meats are high in saturated fats that are known to have negative effects on cholesterol levels. Red and processed meats are also associated with higher rates of colon and other cancers, providing another reason to limit these foods. Certain oils that are higher in omega-6 fatty acids could increase the inflammatory process and exacerbate inflammatory diseases. Oils that are higher in omega-6 fatty acids include safflower, corn, cottonseed, sesame and peanut oils.

Moving on to foods that can POSSIBLY increase inflammation – dairy. Dairy foods include milk, cheese, and yogurt. Diets high in meat and dairy are also high in arachidonic acid, which is a precursor to the pro-inflammatory prostaglandins. Diets lows in arachidonic acid have been shown to improve clinical signs of inflammation in rheumatoid arthritis patients. Dairy alternatives can include yogurt made from coconut, flax, or almond milk.

Another *potentially* inflammatory food source is gluten. Gluten is a protein found in wheat, rye, barley, and oats. Celiac disease is an autoimmune disease where gluten is the trigger and causes damage and inflammation to the small intestines. People with celiac disease are also at increased risk for other autoimmune diseases. If someone suspects that gluten may be causing symptoms, they should discuss getting screened for



celiac disease with their doctor PRIOR to starting a gluten-free diet. Screening for celiac disease involves a simple blood test. If the celiac screen is found to be positive, a biopsy will be recommended. If the celiac screen is negative, but a suspicion of gluten sensitivity persist, a person would work with a Registered Dietitian and try a gluten-free diet to see if it helps with any symptoms. It has been proposed that people with immune-related diseases are more gluten sensitive.

Although not research proven, nightshades are another class of foods that *may* cause inflammation in a small group of people. Nightshades include peppers, tomatoes, eggplant, and potatoes. These foods should not be restricted initially, but rather would be a consideration if a person was following an anti-inflammatory diet with no reduction in symptoms.

Certain foods can help decrease inflammation and it’s recommended these be consumed by those with inflammatory diseases. Vegetables are superfoods and contain vitamins, minerals, and phytonutrients. Tens of thousands of phytonutrients have been identified and researchers speculate that there are likely many more they haven’t yet discovered in the foods we eat. Phytonutrients help decrease inflammation, improve the health of our cells, strengthen the immune system, promote healthy gut bacteria, and improve the nervous system.

Eating a variety of vegetables is the key! Leafy greens are high in phytonutrients and include spinach, kale, bok choy, arugula, mustard greens, and dark lettuces. Leafy greens provide vitamin K, C, and folate.

Colored vegetables such as peppers, tomatoes, beets, carrots and red cabbage contain antioxidants that help stop free radicals from damaging cells. Studies prove that antioxidants are protective against cancer, dementia and cardiovascular disease. The dark color of these vegetables represent the antioxidant and phytonutrient content.

Cruciferous vegetables are high in sulfur-compounds, which may play an important role in disease prevention, by triggering antioxidants and anti-inflammatory responses and contributing to the maintenance of cell balance. These vegetables include cauliflower, broccoli, cabbage, and Brussel sprouts. Other sulfur-rich vegetables include leeks, garlic, mushrooms, radishes and onions. Sulfur-rich foods nourish the cell and mitochondria (powerhouse of the cell) and help the body get rid of toxins. Sulfur is involved in protein synthesis and the creation of collagen, which makes up our connective tissue and helps strengthen the joint. Sulfur also helps strengthen the line of the blood vessels, basically keeping our blood vessels healthy.

Now, what quantity of vegetables should you eat? For people with chronic disease battling inflammation, it is recommended to consume 8-9 cups of vegetables per day. This sounds like a lot, but it can be done! Here are some tips to help you reach your goal. You might also work with a Registered Dietitian to give you realistic recommendations on incorporating more vegetables into your daily diet.

How to eat more veggies?

- Raw, with Hummus or Guacamole
- Roasted
- Steamed
- In Salads
- In Veggie-Based Meals
- In Veggie-Based Smoothies

Other anti-inflammatory food sources include omega-3 fatty acids, found in fatty fish such as salmon, anchovies, herring, Pacific mackerel (not King,) sardines, trout, as well as in flax seeds. Omega-3 fatty acids contain eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA.) Increased cell content of EPA and DHA, along with decreased content of arachidonic acid (which is found in processed oils, nuts, and refined grains) results in improvements in eicosanoids, which are anti-inflammatory. By reducing the intake of arachidonic acid foods and increasing intake of omega-3 fatty acids, EPA and DHA can be altered and improve the inflammatory process. Both animal and clinical studies support the use of omega-3 fatty acids in reducing symptoms of immune mediated diseases such as RA, inflammatory bowel disease, and others. The

dosage for the studies varies.

The American Heart Association recommends eating fish (particularly fatty fish) at least two times a week. Each serving is 3.5 ounce cooked or about ¾ cup of flaked fish. Fish oil supplements may also be an option. Ask your doctor or dietitian about dosage for a fish oil supplement. The FDA does not recommend consuming more than 2 grams EPA & DHA daily.

Healthy eating can be powerful and it is something everyone can try. Working with a Registered Dietitian may be helpful as they can look at your full medical history, complete a nutrition assessment, give you nutrition recommendations, and provide meal plan ideas and tips to reach your goals.

Get started today by trying this Veggie-Based Smoothie!



Starter Smoothie Recipe

- 2-3 large handful leafy greens (start with spinach)
- 1-2 carrots, sliced
- 1/2 banana
- 1 cup frozen fruit (mango, pineapple, berries)
- 2 Tbsp flaxseed
- Water, almond or coconut milk (fill blender about half full)
- Blend for 1-2 minutes

Lara Rondinelli-Hamilton, RD, LDN, CDE is a registered dietitian and certified diabetes educator with over 20 years of experience counseling people with weight loss, diabetes, high cholesterol, autoimmune disease and general wellness. She has appeared on several radio and television programs promoting healthy eating including ABC Chicago news, WGN Channel 9 news, and NBC Chicago news. Lara is the co-author of the American Diabetes Association's The Diabetes Cookbook: 300 Recipes for Healthy Living Powered by the Diabetes Food Hub, Healthy Calendar Diabetic Cooking, The Healthy Carb Diabetes Cookbook and Gluten-Free Recipes for People with Diabetes (2004, 2012, 2013, 2018). Lara is owner of Revival Wellness, LLC (www.revival-wellness.com), a nutrition and wellness company, where she provides private nutrition consulting.

Citations:

1) Edward Yu, MSC, Eric Rimm, ScD, Lu Qi, MD, PhD, Kathryn Rexrode, MD, MPH, Christine M. Albert, MD, MPH, Qi Sun, MD, ScD, Walter C. Willett, MD, DrPH, Frank B. Hu, MD, PhD, and JoAnn E. Manson, MD, DrPH (2016) Diet, Lifestyle, Biomarkers, Genetic Factors, and Risk of Cardiovascular Disease in the Nurses' Health Studies. *American Journal of Public Health*, 106(9), 1616-1623.

