

Fighting Inflammation

by Estee Hong

What is inflammation?

Inflammation can take many forms. The process of inflammation is familiar to us as what happens when a part of our body becomes swollen, red, and warm to touch. Inflammation is common: most adults have experienced it in some form or another, which can be uncomfortable and painful. Inflammation is one of the body's common defense mechanisms that accelerates the healing of wounds and infections. However, inflammation that occurs without injury or infection is undesirable, especially if it is severe or lasts for a long period of time (chronic). Chronic inflammation may also result from other health conditions such as various hormonal and metabolic syndromes, inflammatory bowel disease, and arthritis.

Consequences of inflammation

Many studies point to an association between cardiovascular disease and inflammation. Fat can form inside blood vessels and trigger inflammation [\(1\)](#). When this happens, blood vessels will start to narrow, reducing blood flow and increasing one's risk of stroke. Inflammation may contribute to an increased risk of stroke, as well as increased damage from stroke, or ischaemic injury. Immediately after a stroke, more damage can occur to brain cells if one's body is highly inflamed. Inflammation is one factor that can cause increased pressure in the brain, cell death, and nerve cell impairment [\(2\)](#). Additionally, a recent study in 2016 also found inflammation may be also tied to depression [\(3\)](#).

Dietary changes to fight inflammation

A diet high in antioxidants, minerals, and omega 3 (an essential fatty acid) is most beneficial to reduce inflammation [\(4,5\)](#). While positive lifestyles changes such as quitting smoking and increasing physical activity can increase overall health, the impact of these changes, will be reduced if accompanied by an unhealthy diet. Therapeutic strategies and techniques that target inflammation may have wide ranging benefits beyond stroke prevention and recovery. Future

blog posts will go further in detail explaining the role of antioxidants, minerals, and essential fatty acids.

Here is a list of foods to avoid and foods to adopt into your diet:

Depending on your eating habits, cutting certain food items out of your daily diet can be difficult. Slow, gradual changes will be most impactful. Instead of completely eliminating sugar from your diet in one day, slowly reduce how much sugar you use in cooking and to sweeten drinks.

Substitutions can also be made for some items, such as consuming plant-based dairy and lean, unprocessed white meats rather than cow's milk and processed meats.

Sources

1. Denes A, Thornton P, Rothwell NJ, Allan SM. Inflammation and brain injury: acute cerebral ischaemia, peripheral and central inflammation. *Brain Behav. Immun.* 2010;24:708–723.
2. Morganti-Kossmann MC, Rancan M, Stahel PF, Kossmann T. Inflammatory response in acute traumatic brain injury: a double-edged sword. *Curr. Opin. Crit. Care.* 2002;8:101–105.
3. Miller AH, Raison CL. The role of inflammation in depression: from evolutionary imperative to modern treatment target. *Nat. Rev. Immunol.* 2016;16:22–34.
4. Simopoulos AP. Omega-3 Fatty Acids in Inflammation and Autoimmune Diseases. *J. Am. Coll. Nutr.* 2002;21:495–505.
5. Aquilani R, Sessarego P, Iadarola P, Barbieri A, Boschi F. Nutrition for brain recovery after ischemic stroke: an added value to rehabilitation. *Nutr. Clin. Pract.* 2011;26:339–345.
6. Spreadbury I. Comparison with ancestral diets suggests dense acellular carbohydrates promote an inflammatory microbiota, and may be the primary dietary cause of leptin resistance and obesity. *Diabetes Metab. Syndr. Obes.* 2012;5:175–189.
7. Lucendo AJ, Arias Á, González-Cervera J, Yagüe-Compadre JL, Guagnozzi D, Angueira T, et al. Empiric 6-food elimination diet induced and maintained prolonged remission in patients with adult eosinophilic esophagitis: a prospective study on the food cause of the disease. *J. Allergy Clin. Immunol.* 2013;131:797–804.

8. Oliveira A, Rodríguez-Artalejo F, Lopes C. Alcohol intake and systemic markers of inflammation--shape of the association according to sex and body mass index. *Alcohol Alcohol.* 2010;45:119–125.

9. Jungbauer A, Medjakovic S. Anti-inflammatory properties of culinary herbs and spices that ameliorate the effects of metabolic syndrome. *Maturitas.* 2012;71:227–239.