



## INFLAMMATION 101

By Andrew Beauchesne

### **What Is Inflammation?**

Inflammation is a protective response of the body to clear infections, repair tissues, and heal itself after injury. Signs of inflammation include redness and warmth from increased blood flow; swelling from increased blood vessel permeability; pain; and loss of function. A common example of inflammation occurs after spraining an ankle. When injured, the ankle may swell up and become red, warm, and painful. The inflammatory process is necessary for efficient healing and restoration of function.

### **Types of Inflammation**

Inflammation can be divided into two broad categories: acute and chronic. Acute inflammation is characterized by rapid onset and resolution, such as a sprained ankle or strep throat. For example, when you get strep throat, one of the first responses of the body is acute inflammation. Inflammatory mediators in the body promote increased blood flow and vessel permeability, which helps get specialized immune cells to the site of infection. As the body clears the infectious agent, the inflammation subsides.

Chronic inflammation is more persistent, lasting several weeks, months, or even years. Chronic inflammation can follow acute inflammation, such as when infections are difficult to clear, or it can begin slowly over time. This smoldering inflammatory process is what we see in many chronic diseases, such as atherosclerosis or some autoimmune conditions. If inflammation sticks around for too long, it can cause damage to the body, scarring of tissues, chronic pain, and overall dysfunction.

### **The Cause of Inflammation**

Inflammation has a number of causes: infectious agents, such as bacteria, viruses, and parasites; tissue injury and damage; disease processes, such as autoimmune conditions; and toxins and pollutants, such as alcohol, tobacco products, medications, and air pollution.

## **What Does Inflammation Have to Do With Diet?**

Inflammation is at the root of many chronic diseases, and diet plays an important role in this process. In a [2013 systematic review](#) of 46 individual studies, German researchers looked at blood levels of a marker of inflammation called C-reactive protein (CRP). CRP is often used by doctors to get a sense of the level of inflammation occurring in the body and to help determine the risk of cardiovascular problems, such as a heart attack. The researchers found that CRP was consistently elevated in meat-based “Western” patterns of eating and decreased in diets rich in fruits and vegetables. In a [2015 interventional study](#) published in *Complementary Therapies in Medicine*, researchers put over 600 people on a whole-food, plant-based diet and saw CRP levels plummet, along with total cholesterol, blood pressure, and BMI.

Taken together, the studies suggest eating a healthy diet can reduce inflammation in the body. But the question remains: Does a plant-based diet directly reduce inflammation, or does eating plants just not inflame the body in the first place? The answer might be both. Whole plant foods are loaded with phytonutrients, many of which have anti-inflammatory properties and may help the body to heal more quickly and put the brakes on inflammation. However, plant-based diets also lack or are low in many inflammatory triggers. Animal products contain high amounts of fat, a [likely cause of inflammation](#). However, plant foods are low in fat, so eating these foods doesn't cause a huge inflammatory reaction. Plant-based diets are also [lower in toxins](#) such as industrial pollutants, which would otherwise cause damage to tissues in the body and trigger inflammation. Lastly, plant-based diets have a low bacterial load. Many bacteria produce toxins called lipopolysaccharides that get released when the bacterium dies. Animal products are a breeding ground for bacteria and their pro-inflammatory bacterial toxins. By choosing plants, we reduce the amount of bacteria, pollutants, and other pro-inflammatory components in our diet, and can, therefore, avoid the reactive inflammatory response that is so characteristic of animal-based foods.

*Ready to get started? Check out [Forks Meal Planner](#), FOK's easy weekly meal-planning tool to keep you on a healthy plant-based path.*