



Inflammation Might Complicate Health & Weight

There may be more to losing weight than the amount of calories you consume. Other dynamics may be at play. Research suggests many stem from inflammation. Reducing inflammation is not only essential, but also a good first step to long-term weight loss. How exactly does inflammation prevent the body from losing weight? Let's break down the connection, plus five ways to prevent inflammation from stifling your weight-loss goals.

Inflammation is a Normal Body Response to Promote Healing -- Inflammation is a sign the immune system is fighting infection. The infection may be related to germs, wounds, allergens, toxins or other causes. Typically, we think of signs of inflammation as redness, swelling and pain; sometimes inflammation can happen within our bodies. Someone with bronchitis has a lung infection. The lungs may become inflamed as the immune system is working to fight that infection. However, research has found a link between inflammation and increased risk for chronic diseases. Studies suggest heart disease, Type 2 diabetes and obesity might be due to chronic inflammation.

Inflammation and Body Weight -- When inflammation is present, even those with the most disciplined eating and exercise habits may find they can make little progress losing weight. The reason stems largely from changes seen when the body gains weight or is carrying excess weight, many of which are cyclical and build on one another. Here's a brief look at how inflammation and weight are connected.

Inflammation increases with weight gain. Weight gain is associated with increased inflammation in the body. A [2019 study](#) found levels of a key inflammatory marker in the blood known as C-reactive protein (CRP) increased as weight increased. This inflammation appears to be triggered by hormonal and metabolic changes and remains until excess weight is lost.

Inflammation and weight gain leads to insulin resistance. Inflammation in the body can lead to [insulin resistance](#). This is due to inflammatory compounds that impair the way insulin works. This leads to higher glucose levels, as well as fat accumulation in the liver which further contributes to insulin resistance. They may fuel one another, causing a vicious cycle: weight gain causes more insulin resistance, and insulin resistance leads to more weight gain.

Weight gain triggers leptin resistance. Leptin is a key hormone that tells the brain when to eat, when to stop eating and when to speed up or slow down metabolism. However, research suggests leptin functioning is [altered](#) with weight gain and inflammation. The effect is that the brain doesn't get proper feedback, so leptin levels remain low which triggers appetite to increase and metabolism to slow (as if the body were starving) making weight loss pursuits even harder.

The inflammatory combination of weight gain, insulin resistance and leptin resistance build on each other, but may also be exacerbated by things like stress, lack of sleep, eating processed foods and a sedentary lifestyle. Looking at these inflammatory effects associated with weight gain, it's easy to see why simply monitoring calories-in versus calories-out just doesn't work for everyone.

How to Reduce Inflammation to Lose Weight -- Whether you're carrying an extra 10 pounds of body fat or an extra 60 pounds, you're likely experiencing some level of inflammation, which makes the body irritated and stressed. In a situation like this, the body's primary focus is survival and healing, not weight loss. To lose weight, it's key to reduce inflammation and other potential irritants to help the body get back to more "normal" operating conditions. So, how do you reduce inflammation to lose weight? Here are five things to do.

Skip processed foods and added sugars.

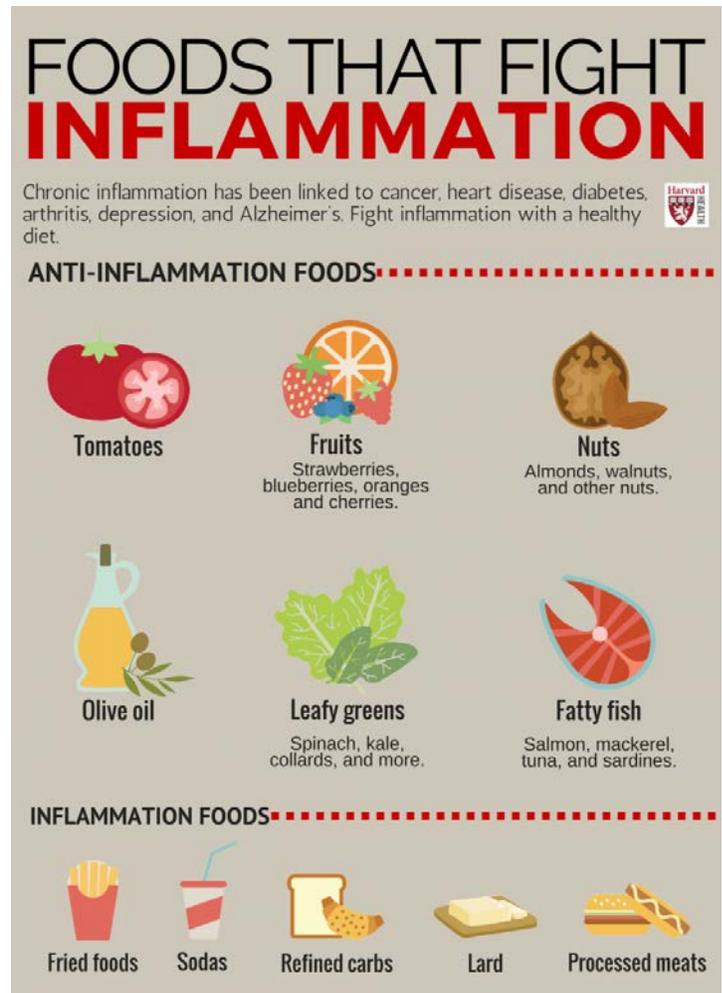
Chemicals, additives, coloring, added sugars, and other compounds in processed foods are all potential sources of irritation. Avoiding these ingredients by choosing more whole foods and minimally processed food products is key to reducing inflammation to lose weight. When purchasing a packaged product, take a look at the ingredients list. Are the ingredients listed what you might use if making the food from a recipe at home? If the answer is yes, then this is likely a minimally processed product and a good choice. If not, try to opt for something else.

Incorporate anti-inflammatory produce and fats. While getting rid of irritants, it's also just as important to refuel with [foods that contain compounds that have anti-inflammatory effects](#) like antioxidants, phytochemicals and omega-3 fatty acids. Good sources of these are vegetables, fruits, nuts, seeds, fish and healthy fats, such as plant-based oils, nuts and avocados. Load up on leafy greens and cruciferous veggies like cauliflower and broccoli; snack on berries and nuts; incorporate fatty fish like salmon into your menu two times per week and use moderate amounts of healthy oils like extra-virgin olive oil.

Go to bed on time. Did you know many health professionals now consider [sleep just as important to weight loss](#) as diet and activity? Adult bodies need approximately 7 to 8 hours of continuous sleep most nights to rest, repair and recharge for the next day. Sure, caffeine may help energy levels temporarily, but the effects of inadequate sleep go a lot further. Routinely not getting enough sleep (6 hours or less) leaves the body without the resources it needs to function properly, [creating new inflammation](#) and aggravating existing inflammation.

Incorporate gut-friendly foods. Strengthening the gut's microbe barrier is essential to [reducing inflammation](#) because it can prevent future irritants from slipping through the intestinal wall into the bloodstream. To do this, try to incorporate foods every day that are fermented or contain active live bacteria cultures such as yogurt, sauerkraut, kombucha, miso or kimchi.

Chill out. As much as we want to focus strictly on food and exercise for weight loss, mental and psychological health is just as important because low-grade inflammation won't go away if stress



levels run continuously high. Finding a way to escape that stress—such as doing yoga, meditating or [walking for 10 minutes a day](#)—provides quick relief psychologically and anti-inflammatory effects physiologically. If stress is too much of a daily problem, learning how to manage and cope when it does occur is key for not triggering new inflammation or aggravating existing inflammation.

Rewards of an Improved Lifestyle - An anti-inflammatory diet, along with exercise and good sleep, may provide many benefits:

- Improvement of symptoms of [arthritis](#), inflammatory bowel syndrome, lupus, and other autoimmune disorders
- Decreased risk of obesity, heart disease, diabetes, depression, cancer, and other diseases
- Reduction in inflammatory markers in your blood
- Better blood sugar, cholesterol, and [triglyceride](#) levels
- Improvement in energy and mood

Source: Adapted from: Carolyn Williams, PhD, RD, November 04, 2019:

<http://www.eatingwell.com/article/2058068/inflammation-might-be-the-reason-youre-not-losing-weight-here-are-5-things-you-can-do-about-it/>; and other resources listed below.

Additional Resources:

Foods that Fight Inflammation <https://www.health.harvard.edu/staying-healthy/foods-that-fight-inflammation>



What is an Anti-Inflammatory diet? <https://www.eatright.org/health/wellness/preventing-illness/what-is-an-anti-inflammatory-diet>

Anti-Inflammatory Diet: Road to Good Health? <https://www.webmd.com/diet/anti-inflammatory-diet-road-to-good-health#1>

The Secret Behind the Weight Gain-Inflammation Connection <https://blog.myfitnesspal.com/the-weight-gain-inflammation-connection/>

Anti-Inflammatory Diet 101: How to Reduce Inflammation Naturally
<https://www.healthline.com/nutrition/anti-inflammatory-diet-101>



AHW Lesson Activities

Effects of Inflammation

“Applying the Lesson”

Choose one of the following activities to apply what you learned about your health and your healthy goal setting. Write a short paragraph (3 to 5 sentences) to describe what you did and learned from the activity selected. Report your Applying the Lesson results by Online form, email, fax or hard copy to your county Extension Office.

Option 1: What are some concerns and questions you have about your health and inflammation? Have you talked with your healthcare provider?

Option 2: From the lesson content and resources, what steps might you take to change your diet or lifestyle to reduce chronic inflammation?

Option 3: If you have gut health or digestive health issues, check out these two sites and let us know what your “take home message” is concerning your health.

Understanding Gut Health <http://liveeatplay.colostate.edu/eat/healthy-diet/gut-health/gut-health.php#.XhYRYPx7m70>

Digestive Disorders http://liveeatplay.colostate.edu/eat/disease-mgmt/digestive-disorders/index.php#.XhYRi_x7m70