



Fight the fire

The right exercise and diet can reduce chronic inflammation.

BY JENNIFER JAMACK

AN ALARMING NUMBER OF AMERICANS SUFFER FROM chronic inflammatory diseases. But most people who are impacted are unsure of the steps needed to properly address the condition. They continue to experience pain, which at times leads to further injury.

Inflammation is a vital part of the body's immune response. It is the body's attempt to heal itself after an injury; defend itself against foreign invaders, such as viruses and bacteria; and repair damaged tissue.¹ Recently, researchers at the University of California San Diego School of Medicine found how just one session of moderate exercise can act as an anti-inflammatory therapy. The findings have encouraging implications for chronic diseases like arthritis,

fibromyalgia and obesity.¹

The study from the University of California also found that one session of about 20 minutes of moderate treadmill exercise resulted in a 5 percent decrease in the number of stimulated immune cells producing tumor necrosis factor (TNF), a key regulator of local systemic inflammation that helps boost immune responses.¹ According to Suzi Hong, PhD, at UC San Diego, patients with chronic inflammatory diseases should always consult with their physician regarding the appropriate treatment plan, but knowing that exercise is anti-inflammatory is an exciting step forward in possibilities.

Exercising and inflammation

Daily physical activity has many benefits, such as controlling weight,

strengthening the muscles, and reducing the risk of certain diseases. And regular participation in moderate-intensity exercise may enhance certain aspects of the immune system in addition to its anti-inflammatory properties. These effects are believed to reduce infection and lower the risk of cardiovascular disease.²

Regular exercise tends to lower markers of systemic inflammation.² Over-exercising, however, can create increased markers of chronic inflammation. When you over-train, you can become systemically inflamed in the process. The stress remains, and the inflammation will not subside. Popular exercise routines like CrossFit or heavy lifting can become problematic for many people and create a negative inflammatory response.

To some extent, a certain amount

Week	Saturday	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday
1	Light Exercise 30 minutes	Light Circuit 15/20/15	Moderate Exercise 30 Minutes	Rest	Moderate Exercise 30 minutes	Light Circuit 15/20/15	Rest
2	Light Exercise 30 minutes	Light Circuit 15/20/15	Moderate Exercise 30 Minutes	Rest	Moderate Exercise 30 minutes	Light Circuit 15/20/15	Rest
3	Light Exercise 30 minutes	Moderate Circuit 15/30/15	Moderate Exercise 30 Minutes	Rest	Vigorous Exercise 15 minutes	Light Circuit 15/20/15	Rest
4	Light Exercise 30 minutes	Moderate Circuit 15/30/15	Moderate Exercise 30 Minutes	Rest	Vigorous Exercise 15 minutes	Moderate Circuit 15/30/15	Rest
5	Light Exercise 30 minutes	Vigorous Circuit 15/45/15	Moderate Exercise 30 Minutes	Rest	Vigorous Exercise 20 minutes	Moderate Circuit 15/30/15	Rest
6+	Light Exercise 30 minutes	Vigorous Circuit 15/45/15	Moderate Exercise 30 Minutes	Rest	Vigorous Exercise 20 minutes	Vigorous Circuit 15/45/15	Rest

of inflammation is necessary for your training if you are trying to get specific results from your workouts. Increased stamina, strength, focus and endurance are some of the benefits of the body producing inflammation and reenergizing its tissues to deal with future training sessions.

Think of training as a machine, or an output-versus-input type of mechanism. Once it begins to turn into a chronic inflammatory response during your training sessions, your body is overworked. This is extremely common for triathletes, marathon runners and others training for competitions. These events could triple the amount of training a person does per day and cause additional stress on the body, which could potentially result in an injury.

The inflammatory response is dependent on two factors; namely, the extent of actual physical damage and the degree of muscle vascularization at the time of injury.² Once an injury occurs, depending on the severity, it might take months to reduce the inflammation.

The right combination

So, what is the right mixture of exercise to avoid chronic inflammation? According to the Gene Smart anti-inflammatory diet and exercise program, working out four to five times a week with three days of

aerobic exercise (walking, running, using the elliptical) and two days of circuit training or weight training can make the connection between exercise and inflammation, and it can significantly reduce inflammatory messengers and whole-body inflammation.³


Observational studies reveal that you are nearly 50 percent less likely to have elevated levels of the inflammatory messenger C-reactive protein (CRP) if you exercise regularly compared to being sedentary.³ The good news is if you are exercising to achieve weight loss, you can still lose weight and also reduce whole-body inflammation by following this plan.

Note the workout regime has a good mixture of activities and rest periods so that your body has time to take a break in between vigorous exercise days. Following a plan that focuses on reducing inflammation may be a great suggestion to patients who have high levels of CRP.

Getting your heartbeat to 50 to 75 percent of its maximum rate for up to 30 minutes can help get you moving in the right direction.³ And knowing the benefits of exercise can help you motivate yourself to stick to a set plan.

Adding an anti-inflammatory diet can also be beneficial to increasing one's struggles with inflammation. Here are 10 tips from Mind, Body, and Health that are specific to an anti-inflammatory diet:⁴

- ▶ Consume at least 25 grams of fiber every day.
- ▶ Eat a minimum of four and 1/2 cups of fruits and vegetables every day.
- ▶ Eat four servings of both alliums and crucifers every week.
- ▶ Limit saturated fat to 10 percent of your daily calories.
- ▶ Consume foods rich in omega-3 fatty acids.
- ▶ Eat fish at least three times a week.
- ▶ Use oils that contain healthy fats.
- ▶ Eat healthy snacks twice a day.
- ▶ Avoid processed foods and refined sugars.
- ▶ Eliminate all trans fats.

Limiting certain foods containing high amounts of omega 6 is a good start, as they tend to be pro-inflammatory.³ There are supplements that contain the right polyphenols and omegas to help live a more fulfilling life. Remember, exercise does not have to be intense to be effective. 



JENNIFER JAMACK is a graduate of the University of Rhode Island with a Bachelors of Arts in mass communications and a minor in psychology. She

has five years of marketing experience, and is a published author and digital content creator. Currently a social media manager, her passion is writing and research. She can be contacted on LinkedIn.

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