

Why Exercise Can Cause a Headache by Lyle Henry, Migraine Research Director



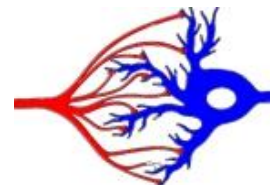
Headaches can follow a strenuous workout and usually occur within an hour or two. As a migraine researcher I wanted to find the reason why. That is to say I was not satisfied with the common answers of dehydration or lack of magnesium.

In order to answer the question of why exercise can cause a headache we must first look at what is taking place in the body during a workout. Simply stated, exercise is muscles in motion and when muscles are used in a repetitive motion they need a higher level of blood flowing to them. Muscles have the ability to generate and secrete a chemical called nitric oxide, which is a messenger molecule that tells the blood vessels to expand to increase the amount of blood flow to the muscles.

While a person is working out, the nitric oxide is used efficiently in the arms and legs to expand the blood vessels to provide more blood to the muscles; however, after the workout has ended, the body has an abundance of nitric oxide, which is no longer needed by the muscles, and there is little or no reuptake mechanism for the body to get rid of the unneeded nitric oxide. You may have noticed that your blood vessels are more visible after a workout.

High levels of nitric oxide in the body can be the cause of headaches. To illustrate how effective nitric oxide is in expanding blood vessels and to begin to explain the reason this causes the side effect of a headache, we can look at the use of nitroglycerin for heart attacks which invokes this same principle that has the side effect of a horrific headache. When nitroglycerin (same ingredient used for dynamite) enters the body, it quickly turns into nitric oxide, which in turn rapidly expands the blood vessels to ease pressure on the on the heart. This is like using a larger straw versus a smaller one. The reason for the headache that follows is basically the same mechanism in play that invokes a migraine headache.

In order to understand this better, we need to look at what happens in the head to cause the pain of a [typical migraine](#) headache. It all revolves around a long nerve that is located on the outside of the brain starting in the temporal lobe area and running forward on each side and then branching out to go behind the eyes and meet at the [sinus cavity](#), while another branch runs down the jaw line. This nerve, called the trigeminal nerve, is intertwined with tiny hair-like blood vessels.



Just as the blood vessels in the arms and legs expand because of the presence of nitric oxide, so do the tiny blood vessels surrounding the nerve endings expand. The tissue of the muscles can accommodate the expanding blood vessels, but since there is little additional room in the head, the expanding blood vessels in this area put pressure on the nerve endings with a pinch-like effect and that is what is felt as the [pain of a headache](#).

Protein drinks and other supplements that are often used to enhance the effects of exercise can make matters worse, because these may contain ingredients that increase the amount of nitric oxide in the body. Many people who eat yogurt as a healthy treat after exercise may not realize that it contains acidophilus which changes to nitric oxide in the body. For more information on this subject see [migraine triggers](#) at www.Tuliv.com.

Migraine Prevention: We have found that slow warm-ups may be helpful in preventing headaches associated with workouts. If you have a history of migraines beyond that of having only post-workout headaches, you may want to try the all natural [Tuliv Migraine Defense product](#) designed to help prevent migraines. Most of our clients who use Migraine Defense for the prevention of migraines report that headaches associated with workouts subsided and became much more manageable.

Naturally, one of the most important things to do to avoid headaches is to become aware of those things that may trigger an attack, especially anything that elevates the level of nitric oxide in the body, and avoid these things.

If you have any questions about this article or migraine prevention, please call 1-866-367-5953 or email to Questions@Tuliv.com.