

Cyclists: Keep Neck and Upper Back Pain at Bay

By Ron Fritzke, D.C.

Neck and upper back pain are common in cycling due to the body's positioning during riding. It's probably no secret to you that neck and upper back injuries are one of the most common overuse injuries seen in the world of cycling. Even novice riders who travel short distances can experience neck and upper back pain. So why is this?

There may be several reasons why cyclists have upper back and neck problems when riding. This article will cover those reasons and look at ways to prevent pain and injuries to the upper back, neck, and arms from ever occurring when cycling.

Aches, Pains, and a Proper Bike Fit

Whether you cycle for pleasure on short rides or you are a serious rider who logs many miles daily, you should be comfortable on your bike. If you have pain in your upper back and/or neck, your bicycle probably doesn't fit you properly.

In the cycling position, the neck is extended and the back flexed for prolonged periods. Riding in drop handlebars for long periods increases the load on the arms and shoulders as well as hyper-extension of the neck. This leads to muscle fatigue and pain. If the virtual top tube length (top tube plus stem length) is too long for the rider, hyper-extension of the neck is further increased. Again, this leads to muscle fatigue and pain.

You can eliminate most discomfort by making adjustments. A good bike fit can also improve your comfort, pedaling efficiency, and aerodynamics. You'll likely enjoy the ride more and probably ride faster. I encourage you to visit your local bike shop. They'll most likely have someone that knows a lot about proper bike fitting and they'll be glad to help you out.

Here are some tips on getting a better bike fit if you're having neck and upper back problems:

- Make sure the bike you are riding isn't too long
- If the bike is too long and a new frame or bike is out of the question, shorten the reach by getting a shorter stem. Don't go much shorter than 100 mm or your bike may ride squirrely and give you problems.
- Raise the handle bars so that you're riding more upright.
- When you're in your handlebar drops, choose a bar with a shallow drop.

In addition to a good bike fit, it is equally important for the helmet to have a proper fit and placement on your head. If the helmet is worn too far forward, neck problems can occur

because riders tend to force their head too far back to see. This defeats the purpose of the helmet, safety, and we end up causing ourselves unnecessary pain.

Most bike shops will check a bike's fit and helmet positioning for free. This could mean pain free for free!

Good Fit, Check. I Still Have Neck Pain Though.

This boils down to an overuse injury. When a cyclist logs many hours of riding, there is repetitive sub-maximal loading on the upper back and neck which leads to damage.

Let's take a look at what is happening when the neck is bent in an upward position for a prolonged period of time. I'll also share some ways to alleviate the problems caused by this position. When a muscle has a sustained contraction for a long period of time, the circulation of blood into that muscle becomes compromised. This is because the muscle that is contracting is putting pressure on blood vessels.

If the contraction is strong enough and long enough, the blood supply to those muscles is greatly reduced. The muscles in that area are starved of precious oxygen and nutrients while being asked to perform with a continual workload. This isn't a good combination. If the upper back and neck muscles are under duress for too long, you could have painful muscle spasms and trigger points.

Trigger points are small rubbery knots that form in muscle and adjacent muscle sheaths (fascia), which send pain signals to the brain and contribute to a pain-spasm-pain cycle. Trigger points are frequently caused by direct blunt trauma, such as happens with some football injuries, or by repetitive micro-trauma, as is seen in overuse cycling injuries. There are effective treatments for trigger points but they're outside the scope of this article.

Instead, let's discuss what can be done so trigger points never become a concern to begin with.

Get Those Muscles in Motion

Now that you have a basic understanding of trigger points and the problems they cause, you may be more likely to follow a prescribed regiment of stretches and exercises.

Most cyclists tend to have a sustained contraction in their upper back/neck region while riding. This translates into inadequate circulation (and oxygen and nutrients) to the upper back and neck region. A sustained contraction means your muscles are under continuous load and not moving (i.e. they not alternating between a contracted and relaxed state, which is desirable).

So what can be done to improve the circulation to the neck and upper back region? You probably already know that stretching is worthwhile for avoiding muscle related injuries. In addition to stretching the neck and upper back muscles, you can also benefit from these two exercises: elbow presses and reverse shoulder shrugs.

Elbow presses are a blood pumping exercise which gets an ample blood supply to the upper back and neck. This will counter the sustained sub-maximal contraction that cinches down on the muscle's small arteries which occur with long bike rides. To perform elbow presses, bring your elbows out away from the body at the shoulder level. Then pull your elbows back as far as you can, causing the muscles around your shoulder blades and upper back to contract before you bring the elbows back to the starting point. It is recommended to perform reps until you get a mild burning sensation.

Reverse shoulder shrugs are also great because they make the muscles in the neck and upper back alternate between full contraction and full relaxation. Reverse shoulder shrugs are performed by shrugging your shoulders upward toward your ears and then back down toward the ground and behind you.

Be sure to perform reverse shoulder shrugs (shrugging down and back) rather than regular forward shoulder shrugs. Forward shoulder shrugs have a forward rotation which makes the back hunch forward into a chimp-like posture. This prevents the muscles of the upper back from contracting enough to accomplish the desired "contract, relax, contract, relax" movement pattern. This exercise, when done properly, gets the ideal periodic pumping of blood into the muscles of the upper back and neck.

As an avid cyclist, I've added both of these exercises to my workout routine and my riding comfort and performance have improved steadily. I do, however, recommend that you use common sense when planning any shoulder exercises. Consult a professional, especially if you have had any past shoulder injuries.

In addition, there are some basic neck movements that may help neck range of motion and circulation in the neck. Here are the ones that I recommend:

- flexion (chin to chest)
- extension (head up)
- right and left rotation (chin pointing toward the point of the shoulder)
- right and left lateral flexion (ear to the shoulder).

My Arms and Hands Sometimes Hurt and Tingle, What's up With That?

Cyclists can also fall prey to another common problem that occurs in the upper back and neck area. It's known as Thoracic Outlet Syndrome or TOS for short.

TOS is a condition in which the blood vessels or nerves are compressed, usually by overlying muscles, as the blood vessels or nerves pass from the neck region into the arm. This can cause pain, numbness, and weakness in the arms and hands. Typically athletes in strength sports like football and baseball are most susceptible but cyclists also experience thoracic outlet syndrome-type symptoms.

The difference is that cyclists are more likely to suffer from muscle tightness or spasm at the base of the neck. Again, muscle movement and stretching are effective in relieving TOS related discomfort.

Riding with Pain Doesn't Have to Be

In general, we should take care of our bodies. As cyclists, I believe we need to be more diligent in that care. The shape of our bike puts our body in a posture that is unnatural and makes us more susceptible to injury. If we don't pay attention to our body, we are likely to face neck, upper back, and arm problems. First, it is important to get a properly fitted bike that gives as comfortable a ride as possible. A helmet that fits and is worn properly is also a big plus.

Additionally, keep muscles in the upper back/neck region limber and with the ability to perform in a full range of motion. By stretching and following the exercises in this article, you can help keep your upper back and neck muscles loose, relaxed, and ensure that they are performing while receiving adequate circulation. You'll also be taking preventative measures to stave off cycling related strains, pains, and, injuries.

This will translate into better performance and rides that are comfortably enjoyable for many, many miles. So get out there and ride your bike!

About the Author

Ron Fritzke, D.C. currently serves as the chiropractor for the College of Siskiyou's sports medicine team. He has also maintained a private practice in Mount Shasta, California for 22 years. He is a former marathon runner who sports a personal best of 2 hours and 17 minutes. His current sport of choice is cycling. He competes in bike races and writes about cycling related topics such as [bicycle shoes](#), [bike jerseys](#), and [bicycle trainers](#) on his website, <http://www.cycling-review.com>