

# OPTIMAL HEALTH UNIVERSITY™

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## How to Prevent Bicycling Injuries

*Bicycling — whether it be on the open road, on a stationary bike, or in spinning classes — is a phenomenal way to get into shape and stay that way. Unfortunately, the sport may also up the risk of a myriad of injuries.*

*That's why professional cyclists turn to chiropractic care to ward off cycling-related injuries, and maximize performance. You don't have to be a professional to reap the cycling-friendly advantages of chiropractic care. Recreational cyclists also benefit from chiropractic's unique approach to preventing sports-related injuries. Your doctor at Hickory Chiropractic Clinic encourages patients to review safety information and learn how chiropractic care can help thwart — and even prevent — bicycling injuries.*



### Neck and Back Pain

Bicycling-related neck and back pain is sparked by a cyclist's body position while riding, which typically involves overextension of the neck coupled with a hunched lower back.

Both of these postures may result in misalignment of spinal bones (vertebrae), in turn spawning a common condition known as **vertebral subluxation**. These dysfunctional segments in the spine are linked with headaches, backaches, ear infections and a variety of other maladies. In addition, vertebral subluxations can spark carpal tunnel syndrome, a disorder that is exacerbated by gripping handlebars for extended periods of time. Your doctor at Hickory Chiro-

practic Clinic corrects vertebral subluxations with safe and gentle maneuvers called **chiropractic adjustments**.

Cyclists may cut their risk of developing bike-related neck and back pain with regularly scheduled chiropractic care. Additional prevention strategies recommended by your doctor at Hickory Chiropractic Clinic include the following:

- 🚲 Stretching exercises
- 🚲 Shortening the handlebar reach
- 🚲 Adjusting the tip of the saddle angle slightly upward (10 to 15 degrees)
- 🚲 Regularly changing hand and arm position on the handlebars
- 🚲 Keeping elbows slightly flexed while riding

### Hip and Knee Pain

Cycling-related knee pain is commonly incited by incorrect foot position, which may result from positioning the saddle too far forward or too low. Research reveals that correction of the bicycle set-up, strengthening and stretching adjacent muscles — including the hamstrings — and use of ice is usually sufficient to keep cyclists knee-pain free (*Am Fam Physician* 2001;63:2007-14).

Not surprisingly, suboptimal saddle positioning may trigger misalignment in the hips and spine. Because misalignment in the spine may disrupt the alignment of the hips, and in turn the legs, vertebral subluxations may also instigate hip and knee agony.

### Ulnar Neuropathy

If you are the kind of cyclist who rolls down the road with a death-grip on the handlebars, your doctor at Hickory Chiropractic Clinic urges you to loosen up!

Why? Because studies show that long-distance cycling may promote physiologic changes in the deep branch of the ulnar nerve, consequently provoking symptoms associated with carpal tunnel syndrome and other disorders (*Am J Sports Med* 2005;33:1224-30).



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“Ulnar neuropathy, characterized by tingling, numbness and weakness in the hands is common in serious cyclists after several days of riding.” (*Sports Med* 1991;11:52-70.)

Experts suggest keeping handlebars at least one to two inches below the top of the saddle (up to four inches for tall cyclists). The distance between handlebars should be the shoulder width of the rider: the exception being mountain bicycles, where this distance should be slightly wider (*Am Fam Physician* 2001;63:2007-14).

Wearing cycling gloves can also provide padding to help prevent nerve compression and protect hands from “road rash.”

### Additional Prevention Tips

Minimize injury and maximize the health benefits of bicycling with the following prevention tips:

#### Focus on Fit

One size does *not* fit all when it comes to bicycles.

Frame size, saddle position, reach distance to the handlebars and handlebar height must all be considered. “The human body functions most effectively in a narrow range of pedal resistance to effort. Riding at too much pedal resistance is a major cause of overuse problems in cyclists. Overuse injuries are lower using lower gear ratios at a higher [pace].” (*Sports Med* 1991;11:52-70.)

The proper clearance between the frame and crotch (while standing astride the frame of the bicycle) should be one to two inches for sports/touring bicycles and three to six inches for mountain bicycles. Saddle height can be determined by measuring the rider’s inseam (wearing cycling shoes) from floor to crotch and multiplying by 1.09 (*Am Fam Physician* 2001;63:2007-14).

#### Fancy Feet

While cycling, always keep feet in a

neutral position — not pointing upwards or downwards. And make sure the ball of the foot rests over the axis of the pedal (*Am Fam Physician* 2001;63:2007-14).

Also consider investing in specialty cycling shoes.

#### Be A Helmet-head

Head injuries occur in 22 to 47 percent of injured bicyclists and are responsible for over 60 percent of all bicycle-related deaths and the majority of long-term disabilities (*Am Fam Physician* 2001;63:2007-14). That’s why it is essential to always wear a snugly fastened safety helmet.



#### Avoid Loose Clothing

When it comes to biking, forget fashion and think safety first. Leave jeans with frayed cuffs in the closet and opt for pants that are close fitting from knee to ankle to avoid entanglement with bike chains and spokes. And, opt for shoes with Velcro® straps, rather than laces.

It’s also wise to avoid potentially dangerous accessories, such as long scarves (*J Coll Physicians Surg Pak* 2006;16:152-3).

#### Know the Facts

When it comes to bike injuries, mountain-bike enthusiasts have the highest risk of injury. Specifically, of 1,037 patients identified in a Canadian study as having injuries related to biking, 399 were mountain bikers. “There was a threefold increase in the incidence of mountain biking injuries over a 10-

year period,” noted researchers, who also concluded that young males were most commonly affected (*J Trauma* 2006;60:312-8).

Orthopedic injuries were most common (46.5 percent) — such as contusions, sprains and fractures to the hand, wrist, lower arm, shoulder, ankle and lower leg — followed by those to the head (12.2 percent) and spine (12 percent).

On the other end of the spectrum are non-traumatic injuries (unrelated to accidents) including damage to the knees, neck, shoulders and hands. Doctors also see considerable muscle, nerve and spine damage among patients who ride bikes.

#### Be Proactive

- 🚲 Maintain a regular tune-up schedule for your bicycle
- 🚲 Choose a padded seat and padded biking shorts
- 🚲 Opt for traffic-free bike paths whenever possible
- 🚲 Leave headsets at home when biking on the road to remain aware of possible dangers

### The Chiropractic Approach to Preventing Sports Injuries

The chiropractic approach to preventing sports injuries aims to eliminate possible risk factors before the onset of pain. When injury does occur, chiropractic care allows cyclists get back in peddling shape swiftly.

Want to learn more about how chiropractic can help keep you in top cycling form? Schedule an appointment today for a chiropractic evaluation.

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