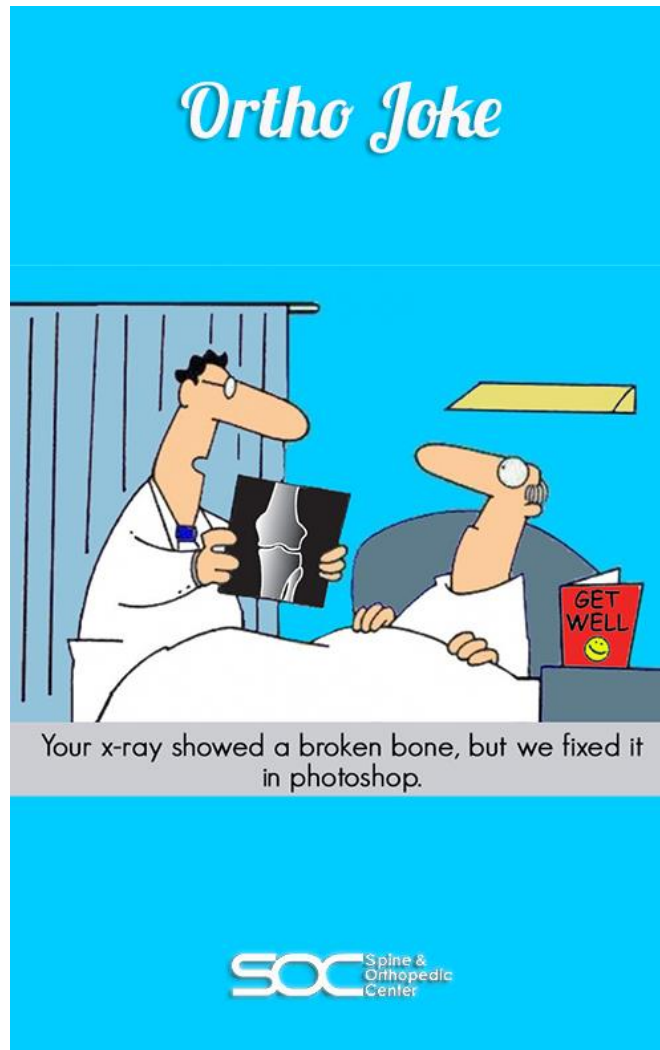


TTIPS VOL. 10/23 – INSIGHTS
- Is Cycling Bad for Your Knees? –



INTRODUCTION

As you know from last week's TTIPS, I recently scheduled a physical exam with a deliberate focus on heart health. I got a "thumbs up" from the cardiologist who remarked that my heart is in good shape and that bicycling helped, "as long as your knees hold out" he said.

Well nearly coincident with the doctor's cautionary remark, I recently rode in an organized charity ride and my left knee was uncharacteristically sore. It got progressively worse during the

ride and I wasn't sure I could finish. So naturally, when I got back, I checked my cleats and my pedal position – the most likely culprits for emerging knee pain. No luck. Back to the drawing board I went. I found the article below helpful and thought you would too if you are concerned at all about the impact of our sport on your knees.

Is Cycling Bad for Your Knees?

By Selene Yeager/Bicycling Magazine.com

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CYCLING IS GREAT FOR YOUR OVERALL HEALTH AND EASY ON YOUR JOINTS—IF YOU DO IT RIGHT.

One big reason people get into cycling is that it's a low-impact sport, meaning it's gentle on your joints. However, it's also extremely repetitive: Your legs rotate at around 4,000 to 5,000-plus revolutions per hour. For some, issues with bike fit or technique compound over time to cause pronounced knee pain, pronounced the most common lower-body complaint in our sport. Research shows that more than 40 percent of recreational riders experience knee pain from overuse at some point or another. So—is cycling bad for your knees?

The short answer is no; cycling is great for your overall health and easy on your joints. The long answer is that there are some common culprits behind the aches and pains in your knees—and how to correct them so you can pedal pain free.

You Go from Zero to 60



The number one way cyclists hurt their knees is suddenly riding longer, faster, and/or harder than they have been. Your connective tissues are not conditioned to bear the load you're putting on them, and your joints get inflamed and pipe up. The solution: increase your riding

mileage or time progressively, by 20 to 25 percent each week (to a point of course; there are only so many hours).

“Where you need to be most careful is not so much ramping up over a week, but on an individual ride,” says Hunter Allen, founder of the Peaks Coaching Group and co-author of *Training and Racing with a Power Meter*. of “If your longest long ride is 40 miles, don’t go 80 next week. Instead go 50, then 60 the next week, then 75, maybe 80.”

Be similarly prudent when adding intervals, sprints, and hills. Don’t go from nothing to hill repeats and three sets of Tabatas. And always give yourself a proper warm-up, so your muscles and connective tissues are warm and your synovial fluids (your joints’ natural lubrication) are flowing before you toss down the hammer.

You’re Sitting in the Wrong Place



Poor saddle fit can result in stress, pain, and injury. To perform a quick check, place your pedals in the 6-o’clock and 12-o’clock positions and rest your heel on the lower pedal, says pro cyclist Sara Bresnick, also a fit specialist and owner of Pedal Power Training Solutions in Medford, Massachusetts. “Your leg should be straight, which equates to a 20- to 25-degree knee bend when clipped in,” she says. When both feet are positioned parallel to the floor (3 o’clock and 9 o’clock), the forward knee should be over the ball of your foot.

“As a quick rule of thumb, if the front of your knee hurts, try raising the saddle a bit or moving it back in relation to the handlebars. If the back of your knee hurts, try lowering the saddle a bit or moving it forward a bit in relation to the handlebars,” Bresnick says. “Remember, even moving millimeters can make a big impact, so don’t move your settings too much at one time.” If your knees (or anything else for that matter) hurt despite following a smart riding schedule, have your bike fit dialed by a professional.

You Do the Monster Mash



Pushing heavy gears at a low cadence—below 60 to 75 rpm—places a high load through the patella (kneecap) with each pedal stroke. Use your gears to lower the load and increase your cadence to spin above 80 rpm. Bonus: Spinning faster in lower gears has been shown to improve your endurance.

You've Let Your Core Go Soft (and Weak)



What does your core have to do with your knees? Pretty much everything. Your core, which includes your hips and glutes, forms the platform from which you push off when you're pedaling. It also keeps you stable in the saddle. When it fatigues, your pedaling mechanics break down.

In one study of 15 competitive cyclists, researchers found that the riders' legs moved significantly more from side to side, placing more stress on the knee joints and paving the way

for pain, following a core-fatiguing workout than when they pedaled with fresh, rested core muscles. Work those core muscles regularly to keep 'em strong and fatigue resistant.

Your Range of Motion Is MIA (Missing in Action)



We can debate the merits of stretching for cyclists 'til we're blue in the face, but it's indisputable that if you have poor range of motion, your pedaling may end up causing pain as your kneecap is unable to track in a healthy fashion. Stretching and foam rolling all your major leg muscles can help keep pain at bay. Regular massage will also help break up adhesions and prevent muscles from getting knotted and "stuck."

Your Cleats Need Tweaking



Your foot position has a direct effect on your knees, so it's essential that your cleats are placed properly. Position your cleats so the ball of your foot is directly over (or even a bit behind, if you're prone to knee pain) the pedal axle. Your cleat angles should be aligned with the natural

angle of your heels, since unnaturally toeing in or out can stress your knees. When adjusting pedal float, more is not better, cautions Bresnick. “Too much float allows the knees to toggle all over the place,” she says, which not only wastes watts, but stresses your joints. Aim for a sweet spot of about 4.5 degrees of float.

You’re Squatting All Wrong



Proper squat form is a topic of ongoing debate. But one thing everyone agrees on is that it’s bad to lean forward and/or put weight on your toes.

“It’s vital that your feet remain flat on the floor—don’t lift your heels—and that you keep your weight over the base of your foot,” says Harvey Newton, a former USA Cycling strength and conditioning advisor, and the creator of the Strength Training for Cyclists System. What’s more, partial squats can result in greater stress on the knee than a full squat. “So restricting range of motion may cause, rather than prevent, knee problems,” Newton says.

About the Author

Selene Yeager/“The Fit Chick”

Selene Yeager is a top-selling professional health and fitness writer who lives what she writes as a NASM certified personal trainer, USA Cycling certified coach, Pn1 certified nutrition coach, pro licensed off road racer, and All-American Ironman triathlete.

That all for now. See you next time. Until then,
Make Every Ride Epic,

Darryl