

ASK THE BIKE FITTER with special guest Amy Schultz

P.A. of Los Angeles asks “When I cycle, the front of my knee hurts. It hurts to ride. Can you help?”

- 1) Pain in the front of the knee is often associated with the overuse of the quadriceps muscles during cycling. Cyclists that are "quad dominant" may experience knee pain due to the shear forces these muscles may place at the knee. It is important to engage your hamstring and gluteus muscles during the pedal stroke to avoid over-using your quads. An easy way to ensure you are using all of your upper leg muscles correctly throughout the pedal stroke is to think about "pulling through" the pedal stroke from 4 to 9 o'clock instead of just pushing straight down (3 to 6 o'clock). In addition to the "pull through" method, make sure your knees are not diving in towards the midline at the top of the pedal stroke. Your knees should remain aligned in a straight line facing forward throughout the entire pedal stroke. Also, make sure to stretch your hamstrings and quads to ensure proper muscle length to increase power and decrease risk of injury. Studies have shown that it takes at least 30 sec of sustained stretching in order for a muscle to relax where after it can then be stretched. An increase in cadence in an easier gear can also decrease the shearing force applied through the knee (decreasing knee pain) without negatively affecting power output.
- 2) From a bike fit point of view, you might be sitting too low in the saddle thereby over flexing the knee. Looks like it's time for a bike fit!

J.B. of San Diego asks “When I ride, my hands go numb. Is this normal?”

When placing excessive compression forces on hands when riding, circulation can be cut off and nerves can become pinched - both leading to the numbness experienced. What can lead to this excessive compression? An extended reach to the handlebars may be a factor. Cyclists who feel like they are reaching too far forward may place more weight through their hands, as well as extend their wrists, pinching nerves that send out sensation information. A lack of core engagement can also lead to hand numbness. When cyclists are not engaging their core muscles, they are overusing their arms in order to "prop up" their upper body weight. This places more weight through the hands, leading to numbness.

Quick fix - Adjust the distance to the handlebars. When your hands are on the hoods, your elbows should be slightly bent and your forearms should be perpendicular to your torso. Engage your core to take the weight out of your hands. Play with how much your abs and back muscles are working with how much force you feel through your hands. Muscle soreness may occur due to the use of these muscles in a way they are not used to working. *Remember - muscle soreness is okay but sharp shooting pain is not. If you feel a sharp shooting pain at any time, do not perform the activity due to risk of injury. If symptoms persist, consult your physician for further recommendations.

Bike Fit fix – As mentioned above, your distance to the handlebars might be too long. A shorter stem might just be the solution. There are several tests that a good bike fitter can perform to verify correct stem length. If you are experiencing this problem, please schedule an appointment with your bike fitter.

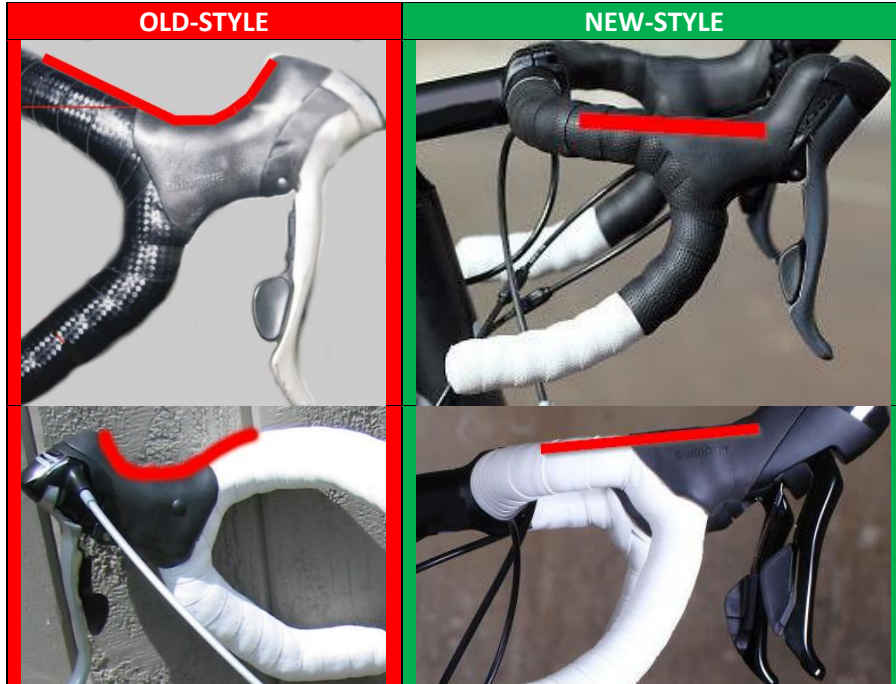
T.T. of Long Beach asks “My hands don’t go numb but my wrists hurt during and after my ride.”

Most cyclists place their hands on the tops of the hoods, so let's discuss from this point of view. Note that there are several things going on here (**See pictures below**).

- 1) Older-style handlebars vs newer-style handlebars and older-style levers vs newer-style levers. When viewed from the side, older-style handlebars and levers form a “V-notch” which causes a pressure point on the bottom of the wrist where it lies against this “V”.

Newer-style handlebars are shaped differently so that they form a flat transition to the levers. Newer-style levers are also shaped flatter to alleviate all pressure points.

- 2) Incorrectly positioned brake levers. Even with newer-style levers, positioned too high or too low, they can again create this “V-notch”. For maximum comfort it is important to position the levers so that they form a flat transition from the bars.
- 3) Incorrect handlebar positioning. If you have moved to the newer-style bars and levers and still have wrist pain, it could be that the handlebars are twisted too far up or too far down which will place an un-natural bend on your wrists. When holding the hoods, have someone adjust the bars by loosening the stem cap and twisting the bars either up or down so that the center of your wrists (and top of hands) are directly in-line with your forearms. This simple adjustment ensures that there is no pressure on your wrists.



If you have a question for our Bike Fitter, please submit it to victor@socalbicyclist.com or visit <https://socalbicyclist.com/contact>

Amy Schultz is an avid cyclist and runner. She graduated from San Diego State University with a Bachelor's degree in Kinesiology and is currently working on her Doctorate of Physical Therapy at the University of California San Francisco/San Francisco State University. While attending SDSU, she raced for the San Diego based SPY|GIANT cycling team, competed in NCAA D1 track and field, and currently, as time permits, she races for the Monster Media Racing team. She's been competitive in half-Ironman's and loves the road race portion of stage races. Amy enjoys swimming, surfing, climbing and anything outdoors in her free time. Besides staying active, Amy has a passion for working with patients presenting with complex injuries, and helping athletes achieve their goals in sport through physical rehabilitation. Amy has worked with countless professional athletes in the past at multiple clinics. She is bike fit certified, performance biomechanics of running certified, functional movement taping certified, and has co-authored the eBook - [Stretching & Core Strengthening for the Cyclist and Triathlete](#). Please contact bikefitnesscoaching@gmail.com if you would like to get in contact with Amy.