Dynamic Chiropractic

SPORTS / EXERCISE / FITNESS

The Triathlete: A Challenge for the Chiropractor

Daniel Batchelor, DC

Dear Doctor,

I met you at the recent Tsali Challenge Triathlon in western North Carolina. Congratulations on your performance. I've never met a doctor who was also a top athlete.

If you remember, after the race, I asked you about the lower back, heel and knee pain I felt for a while after running. I learned more in five minutes from you than I have in the past year from my HMO doctor!

Here is a summary of my condition: Last year, after running, I developed pain in my right lower back, outer side of my right knee, and later, underneath my kneecap. I also have what feels like an obstruction in my right foot. I know this foot rolls in too much when I run, and I wear stable shoes to correct it; however, the shoes still appear to wear more on the heel and the inside of the right forefoot than they should.

I also paddle a "sit-on-top" kayak, a hardtail no rear shock mountain bike, and run 35 miles per week, with one day of speed work and one long run of nine miles per week. My training is consistent, but my injuries are beginning to take their toll on my program.

I plan to visit you for an exam, and would like to know, as a fellow athlete - how do you stay injury-free?

Sarah

Stress and Imbalance

The above letter indicates the physical stress of the triathlon. I trained for the Tsali Challenge for six weeks, but still felt "oxygen debt" from start to finish; the kayak portion filled my arms and upper body with blood; and jumping on the mountain bike and working hard on the hills immediately after the run caused further insult to the injuries. It was a difficult yet fun, adrenaline-gushing race!

Back pain is easy to acquire in this sport, and there are several sources: repeatedly lifting a kayak to put it on a vehicle, leg-length discrepancy, IT band syndrome, overpronation, improper biking form, running on uneven terrain, and myriad other activities. After an exam, I prescribe exercises designed to stretch one side of your body and strengthen the other side to restore lost structural symmetry as a result of developed muscle imbalance over time.

Here is an example of a patient treated for an imbalance similar to the one possibly experienced by Sarah:

A man presented with IT band syndrome on his right side, right foot pronation and right heel pain. He had a functional leg-length discrepancy caused by his work posture. At the post office, he constantly lifted using mostly one side of his body. During running in his spare time, his right foot

overpronated and his right kneecap was actually pulled off to the side as a result of a muscle imbalance in his front quadricepts leg muscle. X-rays of his right foot showed a tiny sharp heel spur. We custom designed thin, super-lightweight prescription orthotics for his running shoes to correct the overpronation of his right foot, with a special indentation for the spur that will not only reduce the pressure on it, but prevent it from coming back, once we dissolve the sharpness of the spur with treatment.

The patient's kneecap was taped a special way to allow it to track properly. Quadriceps strengthening exercises were prescribed to improve the strength of his knees and pull his kneecap back into alignment so that the bones' "gears" meshed properly.

Running shoes designed to limit pronation do not always correct excessive pronation, as with orthotics. One patient I saw recently received orthotics from a podiatrist over the past year. He ran more than 600 miles with the orthotics in his shoes. I checked the wear on his running shoes that had the orthotics in them; his right shoe still showed overpronation wear of one foot. Since the inside of the forefoot of his shoe's outersole wore more than it should have, the orthotics needed adjusting. If orthotics are perfectly correct, the wear pattern of a pair of shoes with 600 miles on them should be on the outer heel in the center of the forefoot. We simply had to adjust the orthotics with several degrees of varus wedge to "fine tune" them.

Balance and alignment of your foot and of your tires is critical. The same applies to overpronation or oversupination when it comes to shoes and the runner. It is common to have a patient state, "When I went to the athletic shoe store, the person at the store watched me run and said I don't pronate or supinate." When someone is watching, we always have more perfect form than when we don't think anyone is watching. When you run a few miles, your biomechanics also change. We see this when we go to the track with our running patients to evaluate their form. Everything is perfect for a few miles, but as fatigue or relaxation sets in, form changes. True running form must be evaluated after the body has warmed up and been in motion for at least 15 minutes.

Safe Cycling

As far as the cycling portion of the triathlon is concerned, I ride a full-suspension, carbon-framed mountain bike. I suggested to Sarah that she trade in her front-suspension, hardtail bike for a full-suspension (front and rear shock) bike. Your lower back will be glad you made the change. I chose a bike with an entire frame made of carbon, which is not only lighter (24 pounds for the entire bike), but can absorb much more shock than aluminum. Combined with full suspension, this makes for less impact and joint stress, and more fun out on the trail. The addition of tubeless tires will also reduce further impact stress on the lower back. Tubeless tires are able to hold less air pressure than tube tires. The rider experiences greater traction and more shock absorption, and there is no danger of "pinch" flats with tubeless tires. Higher pressure in your tire will result in a tire that bounces around when it hits rugged terrain; that bouncing around translates into more stress on the lower back.

Heel Spurs

One of the most chronic and painful conditions many runners experience is heel pain. The most common cause is plantar fascitis, the heel spur, common to those with a high or low arch; who run on the forefoot; have a tight Achilles; or suffer from obesity, pronation or supination. Genetics may also play a role, and an increase in distance and/or speed can also be a contributing factor. Some solutions to this condition may or may not be appropriate to the athlete's needs.

- Research shows that steroid injections may temporarily reduce some swelling of the fascia, but that they also weaken the plantar fascia, making it more susceptible to tear and re-

injury.

- Taping is an effective method to decrease the stress on the plantar fascia. A foot can be taped a special way such that the PF is no longer under increased tension. Even with the spur present, I know many runners who have run marathons and experienced no pain simply because the pain was completely eliminated by the taping method. Running a marathon is not recommended unless the spur has been reduced significantly, but sometimes all the runner wants is temporary relief of the spur pain - just enough so he or she can complete the marathon. After the marathon, the runner can concentrate on actual correction of the condition.
- Orthotics? If the patient has a heel spur or overpronates or oversupinates, or has plantar fascia inflammation, he or she needs orthotics.
- Rest? Resting the area does not mean that the patient cannot exercise. A crosstraining program enables the patient to lose as little fitness as possible during this rest phase. The key is to develop a crosstraining program that will not aggravate the area treated.
- Stretching? Over the past 23 years, I have had dozens of patients come into the clinic and say, "I was told by my doctor to stretch my Achilles tendon or stretch my plantar fascia" before the condition was actually asymptomatic. In all cases, stretching will aggravate an existing Achilles tendonitis condition. There is a time to stretch, but not during this critical healing phase.

Preventing Injury

If you race mountain bikes, the question is not if you will get injured, but when. I recently raced in the hardest, most dangerous mountain bike race in the state. As I came over a blind hill, there was a left switchback trail with rocks, loose sand, ruts, a gully, trees and a downed biker at the bottom of the dangerous rocky turn. As my bike was positioned at a 45¼ angle, with the rear tire higher than the front, I barely touched my front brake to slow myself down to avoid the downed biker. At high speed, I flipped over the handlebars and into the trees and rocks, suffering a sprained, bloody knee with contusion, a bruised rib, and three sprained fingers. I treated myself intensely at the clinic for two days and on the third day, biked 20 miles with no pain. With these types of injuries, immediate treatment and cross-training is the key.

With any injury, I recommend you get it treated ASAP, then move on to a different sport that doesn't aggravate that injured body part. If you injure your right knee but can still exercise your left knee, exercising that left knee will actually help the right knee heal dramatically faster. (Perhaps I will explain the physiology in a future article.) The point is, there are many benefits and options when it comes to crosstraining.

Daniel Batchelor, DC
Roswell, Georgia

MARCH 2004