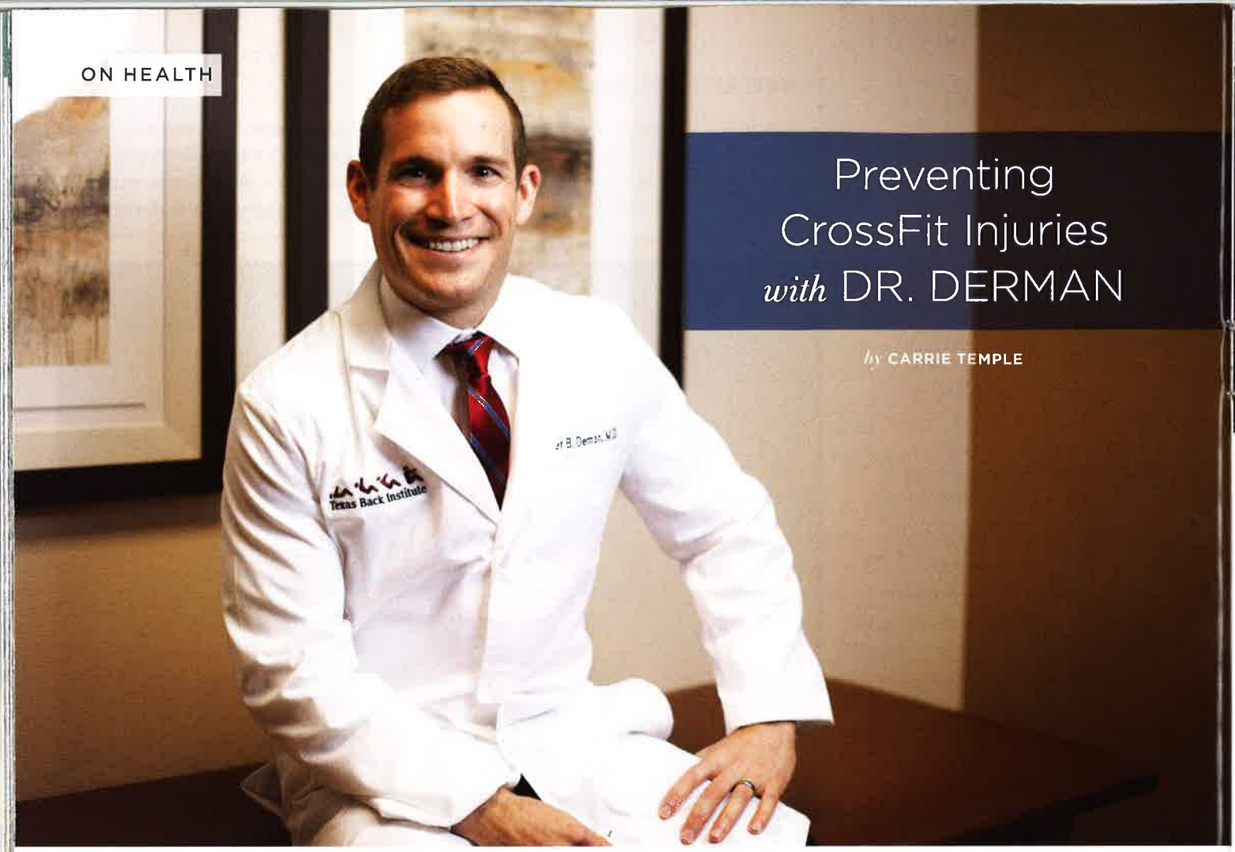

Preventing CrossFit Injuries *with* DR. DERMAN

by CARRIE TEMPLE

Dr. Peter Derman, a spine surgeon at the Texas Back Institute, is well versed in the world of CrossFit and its associated injuries. A former All-American gymnast at Stanford University and current CrossFit enthusiast, Dr. Derman shared some expert tips on how to safely reap the benefits of this intense workout program.

What are some tips for preventing CrossFit injuries?

Find the right box. Seek out a location with a philosophy of fitness and wellness. Coaches and fellow gymgoers should be focused on progressive skill and strength acquisition rather than simply a "no pain, no gain" mentality, which can result in burnout and injury.

Check your ego at the door. CrossFit fosters a communal environment that motivates athletes to push their limits, which can produce remarkable results when harnessed appropriately. However, don't get so carried away that you put your health at risk. Remember the reason you started CrossFit in the first place – to get fit and have fun doing it.

Core is key. A strong core is essential for stabilizing the spine and pelvis. Strengthening these muscles can offload the spine itself and reduce the risk of strains, sprains, and disc herniations. But a 6-pack is only part of the equation – the paraspinal and other trunk muscles are just as important and should not be neglected.

Form, form, form. This cannot be overstated. Poor form places the spine in a compromised position and radically increases the forces imparted across it. Never compromise form, even as you fatigue and reach the point of exhaustion. This requires focus and is why CrossFit is as much a mental as a physical sport.

Recovery. Overtraining can lead to decreased performance and elevated risk of injury. Your muscles sustain minor damage during routine workouts and respond by rebuilding in stronger configurations and increased size. The exact amount of rest needed between workouts depends on many factors, including baseline fitness level, age, workout duration, and exercise intensity. Ice, heat, massage, and appropriate nutrition may help speed recovery.

If you do sustain an injury, do not make matters worse by training through it. Rest and seek a medical opinion if your symptoms are severe or persistent

To best avoid a back injury, what are some effective pre- and post-workout stretches that a CrossFitter can do?

Despite the traditional teaching that pre-workout stretching is necessary to avoid injury, the scientific literature on the subject is somewhat limited. There is some evidence to suggest that stretching before working out reduces the risk of muscle strains but has no impact on the development of overuse injuries. Aggressively stretching while still "cold" may actually cause soft tissue injuries. It is therefore advisable to structure your workout session as follows: 1) warm-up, 2) stretch, 3) WOD, 4) stretch. The post-workout stretch is a great way to boost overall flexibility while your muscles are warm and pliable. Prone extensions, cat-camels, bridges, and seated twists can help keep your spine mobile and nimble. Attention to hamstring flexibility is also key to maintaining a healthy back as tightness in these muscles may transfer more stress to the lumbar spine during bending and lifting activities.

What are some ways for CrossFitters to identify the difference between the pain of muscle fatigue and that of an actual injury?

Muscle fatigue during a tough workout builds with increasing reps and can resemble a burning sensation. Once you stop exerting that muscle group, the "burn" should resolve within minutes. Sudden and sharp pain while exercising is cause for concern, and you should rest until symptoms resolve. Ice, heat, and non-steroidal anti-inflammatory medications can be helpful for persistent aches and pains. However, consult with a doctor before taking medications if you have any underlying health issues. If symptoms are severe or if they don't steadily improve with time, it is best to seek the opinion of a medical professional.

Debilitating back pain with sciatica may represent a disc herniation and is something that should prompt more rapid medical attention, especially if you are experiencing weakness in your legs. If you develop numbness about your genitals, inability to urinate, or loss of bladder control in the setting of back and/or leg symptoms, this could represent critical nerve compression and necessitates an immediate trip to the emergency room to reduce the chance of permanent nerve damage.

Does cold winter weather or summer heat play a role in CrossFit injuries?

It is important to adequately warm up before workouts to prevent muscle, tendon, and ligament injuries. This is especially relevant in the winter months when cold temperatures cause peripheral blood vessels to constrict. Doing some light aerobic activity before jumping into the intense stuff increases circulation and helps reduce the chance of injury to your back and elsewhere.

On the flip side, warm weather can take a toll as well. Heat stroke, a dangerous elevation in body temperature, is most common in the summer months. Symptoms include confusion, nausea, vomiting, flushed skin, headache, and rapid breathing. If someone at the gym exhibits these warning signs, immediately get them to a cool, shaded environment, and call 911. Even if it doesn't produce heat stroke, overheating in the setting of dehydration and physical exertion can lead to severe muscle breakdown, which can damage your kidneys... so be safe, and avoid Uncle Rhabdo! Adequate hydration, appropriate attire, and attention to your body's cues can help prevent these scenarios.

Are there any foods, beverages, or supplements that can help a CrossFitter recover more quickly after a workout?

Post-exercise nutrition is key to speeding recovery and maximizing the benefits of your workout. Because powering through Fran or Murph results in depletion of your body's glycogen stores and even break down of muscle proteins, eating the right nutrients afterward can help your body recover more rapidly. Aim to consume 0.14-0.23 grams of protein and 0.5-0.7 grams of carbohydrates per pound of body weight (1:3 ratio) within 45 minutes of completing your workout. This allows you to take advantage of your body's enhanced ability to rebuild glycogen and protein immediately after exertion. Also, don't forget to hydrate. Water is sufficient after a typical workout, but a sodium-containing beverage is advisable to maintain proper electrolyte balance when exercising indoors for more than two hours or in the heat for over an hour.

ABOUT DR. DERMAN

Dr. Peter Derman, a spine surgeon at the Texas Back Institute, graduated with honors from Stanford University, where he majored in Biological Sciences. He received his medical degree from the Perelman School of Medicine at the University of Pennsylvania and concurrently obtained a Masters of Business administration from the Wharton School of Business. Dr. Derman completed his residency at the Hospital for Special Surgery in New York City and underwent further fellowship training in spine surgery at Rush University Medical Center in Chicago, Illinois.

Dr. Derman is passionate about minimally invasive surgical techniques and getting patients back to the activities they enjoy. Beyond helping patients, he conducts medical research to better medicine for future generations. Dr. Derman enjoys spending his personal time with his wife and son, staying fit, sailing, and brewing craft beer.