

SOCCER RECOVERY: BOUNCE BACK FASTER AFTER GAMES

By Dr. Don Kirkendall

For Active.com

10/24/2003

A soccer game can take a lot out of you. When the final whistle blows, you are tired and sore, as expected. But there are things you can do to bounce back quickly from games. If you do them, you will have plenty of energy and less leftover muscle soreness by the time you practice again. If you don't do them, you might stay sluggish and tender a lot longer.

Nutrition tips

Nutrition is an important part of recovery. Nutritional recovery has three components:

1. Rehydrate

During games, you sweat, and when you sweat, you lose two important substances that your body needs: water and selected minerals called electrolytes (the stuff that makes sweat taste salty).

After games, you need to put these substances back into your body, in a little greater amount than what you lost, sooner rather than later. Until you rehydrate, your body will have a hard time keeping cool and you may be prone to cramps and other problems.

Drinking water is just a start because it does not contain electrolytes. You're better off drinking a sports drink that has both water and electrolytes. Try to drink at least 12 ounces of sports drink in the first half-hour after the game ends. If it's a hot day, you may need to drink even more.

The goal is to drink 1.5 pints for every pound of weight lost over the next 24 hours, before the next workout. Your urine should be no darker than diluted lemonade.

2. Re-energize

You also burn a lot of energy fuel during games. The main energy fuel used in high-intensity sports like soccer is carbohydrate, which is stored in your muscles, liver, and blood. The human body cannot store very much carbohydrate. In a hard game, you can easily burn most of the carbohydrate fuels in your body.

It's important to quickly replace this carbohydrate. Until you do, you will not have much energy. Most sports drinks contain carbohydrates, so a convenient way to put energy back into your body is to get it from the same place you get your water and electrolytes.

You can also get carbohydrate from foods like fruits, breads, starches and certain vegetables. Muscles refill with carbohydrate the fastest immediately after exercise. Don't wait even as little as two hours after exercise to start, as the rate of refilling becomes slower.

3. Rebuild

Your muscles are mostly made of proteins. During games, some muscle protein can be damaged; this is a main reason your legs feel sore and weak after games. The good news is that your body is able to build new muscle proteins at two to three times the normal rate after hard exercise. All you need to do is supply the building blocks -- protein -- to do the job in the first couple hours after the game is over.

Most sports drinks do not contain protein, but some of the new ones are adding it. Using a sport drink with protein is a good way to go because of the convenience. You can get the water, electrolytes, carbohydrate, and protein you need for recovery all from one source. You can also get protein from foods like meat and cheese, but these foods also tend to be high in fat. When you eat a lot of fat after hard exercise, or even too much protein, it takes longer for the nutrients to get through your system to your muscles. This slows down the whole recovery process.

So a sport drink that contains protein is a better choice for post-game nutrition. It contains everything your body needs to bounce back fast, and without anything unneeded to get in the way.

Get a head start on recovery

Using a sport drink with protein during games is also a good idea for two reasons. First, it will delay fatigue so you can play harder, longer. In one experiment, athletes who drank a sports drink with protein were able to exercise 24% longer than athletes who drank a regular sports drink with no protein.

Second, the protein in the drink will reduce the amount of muscle protein breakdown that happens during the game, so there is less rebuilding to be done afterward.

Other tips

While your muscles are still warm after a game, stretch your muscles. This will keep your blood flowing, helping to deliver nutrients to your muscles and to clear away built-up wastes. You can start drinking your sports drink while you stretch. Later in the day, you can massage your legs using your thumbs, and this will also help with blood flow.

After you play a game, try not to do anything too strenuous for the rest of the day. Your body requires rest in order to rehydrate, re-energize, and rebuild the muscles. At the very least, be sure to get plenty of sleep that night. During sleep, your body releases hormones that help your muscles rebuild.

The recovery checklist

After every game:

- Stretch while your muscles are still warm
 - Drink at least 12 oz. of a sports drink containing protein
 - Monitor your urine color
 - Take it easy
 - Get a good night's sleep
-

Donald Kirkendall has a Ph.D. in Exercise Physiology, and is on the faculty in the Department of Orthopaedics at the University of North Carolina. He is a Fellow in the American College of Sports Medicine. He has coached soccer for ages U10 through college, and is on the USSF Medical Advisory Committee. He's edited seven books in exercise science and sports medicine, and has published numerous articles on soccer and sports sciences.