

Muscle Cramps

Cramps are painful, spasmodic, involuntary contractions of skeletal muscle that occur during or immediately after exercise. Athletes usually get cramping at or near the end of a bout of intense or prolonged exercise, and have distress and pain, a hard contracted muscle, and visible twitching over the muscle belly. If bad enough, muscle cramps can finish an athlete from competition for the day. The muscles most prone to cramping are those that span two joints. Important risk factors include muscle fatigue, shorter daily stretching time, irregular stretching habits, older age, longer history of exercise, and sweating early, heavily and caking with salt.

Although there are many causes of muscle cramps, muscle fatigue, salt loss (sodium loss), and dehydration all play a role in muscle cramping. Sodium is important not only to maintain blood volume but also to help nerves fire and muscles work, so a lack of sodium and fluid may make muscles "irritable". A lack of sodium short-circuits the nerves and muscles as muscles contract and relax. The result can be muscle cramping. Under such conditions, a stress such as movement may cause the muscle to contract and twitch uncontrollably. (The amounts of potassium, calcium and magnesium lost in sweat are low compared to the amounts of sodium and chloride. Potassium, magnesium and calcium are easily replaced by the diet, so a lack of these is rare.) There are some reports that certain dietary supplements such as creatine might increase the risk of muscle cramps. If cramps suddenly occur without a prior history, see a doctor to rule out more serious causes like diabetes, nerve diseases, metabolic diseases or circulation problems.

Prevention

Prevention of cramps is best done by protecting the muscle from developing early fatigue and by doing the following:

- A balanced diet containing some salty foods and proper hydration is the best prevention. Some foods rich in sodium include tomato juice, canned baked beans, dill pickles, pretzels, canned soups and cheese pizza.
- Be in good condition before the wrestling season starts.
- Stretch and warm up properly before competition and workouts.

Treatment

When cramps strike during a workout or competition, take immediate action with stretching, massage and recovery. Because cramps are often related to heavy exercise, stretching and non-weight-bearing movement often help. Rubbing the area may help decrease pain and increase blood flow. Get rest and re-hydration with fluids containing electrolytes, especially sodium. It may be necessary to reduce the exercise intensity and duration. Sometimes the application of heat helps.

After checking with a doctor to rule out serious causes, wrestlers who get severe muscle cramps or who are "salty sweaters" might want to add some salt to meals. Try adding ¼ teaspoon of salt to a 16 to 20 ounce beverage or by adding an extra shake of the salt shaker at lunch. Salty snacks or an extra tap of the saltshaker will help. Remember, a simple shake of the saltshaker has a lot of sodium in it! Drinking certain sports drinks is also a good way to replace sodium. Athletes should not use salt tablets, unless specifically directed by their trainer or doctor.

DO:

- Drink plenty of fluids to stay hydrated throughout the day and during exercise.
- Get good nutritional recovery (particularly for salt).
- Rest your muscles after hard training.
- Passively stretch the affected muscle groups: start by holding the muscle in a stretched position until

spasm stops and a return to normal muscle length does not cause a cramp.

- Stay at a comfortable temperature.
- Go to the medical care facility at the sports event if cramps are severe.

DON'T:

- Don't take nutritional or dietary supplements.
- Don't use super-salty sources like pickle juice, mustard or antacids as quick "fixes". These are not proven to work and they usually provide too much salt and not enough fluid.

CALL YOUR DOCTOR IF:

- You experience recurrent acute muscle cramps.
- You do not pass any urine or pass very dark urine in the first 24 hours after the cramping.
- You have generalized severe cramping (in non-exercising muscle groups) or have localized cramping accompanied by confusion, sleepiness, coma or other problems. These may be signs of a serious medical condition that may require immediate hospitalization.

This handout should not be considered complete nor a substitute for evaluation and treatment by a physician. Always consult your doctor first.