

What Causes Muscle Cramps

There's nothing more painful and frustrating for athletes and fitness enthusiasts than muscle cramps. The workout is going great and at the worst possible time a muscle starts to spasm and then knots up. You slow down, letting the cramp ease up, but as soon as you increase the effort it comes back. The hope of a super workout is gone.

There are several theories as to what events precede a cramp but no one truly knows what causes them. One of the most popular explanations is that cramps are a result of dehydration or electrolyte imbalance. The argument makes sense but the research does not always support it.

For very long events (over four hours), more information is available. Long duration cramps have been linked to hyponatremia, a condition of overdrinking and low sodium levels. Drinking a sodium containing sports drink or eating some salty food may decrease the incidence of cramps and reduce the chance of incurring life-threatening hyponatremia.

If dehydration or electrolyte imbalance is not the problem then there are several biomechanical theories worth mentioning. One contends that poor posture may cause cramping. Another involves the Golgi Tendon apparatus which monitors stretch and strain on tendons to help prevent muscle injuries. Uncoordinated movement patterns can cause the Golgi Tendon to relax the muscle in trouble and contract it's antagonist muscle causing cramping. Improving biomechanics, strengthening muscles that cramp with their antagonist muscle and regular stretching may constitute a good preventive program.

Some research has shown that muscle cramps occur in exercisers who have the highest level of ammonia release during training. This means they are using protein as fuel instead of needed carbohydrates. Increasing carbohydrate stores before your workout and ingesting some for replacement during the workout could prevent cramping from high ammonia levels.

If you cramp during your workout or race there's no really graceful way out. It will most likely affect your overall performance. You do, however, have a couple of options. One is to alternatively stretch and relax the cramped muscle while you keep moving. The other is to reduce the intensity and pace, which are not popular choices, during a hard workout or a race.

There's also those diehards who refuse to slow down, grit their teeth and just take the pain.

About the Author

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Source: <http://www.healthcrazed.com>