



Muscle Cramp

Have you ever experienced a "charley horse"? If yes, you probably still remember the sudden, tight and intense pain caused by a muscle locked in spasm.

A cramp is an involuntary and forcibly contracted muscle that does not relax. Cramps can affect any muscle under your voluntary control (skeletal muscle). Muscles that span two joints are most prone to cramping. Cramps can involve part or all of a muscle, or several muscles in a group.

The most commonly affected muscle groups are:

- Back of lower leg/calf (gastrocnemius)
- Back of thigh (hamstrings)
- Front of thigh (quadriceps)

Cramps in the feet, hands, arms, abdomen, and along the rib cage are also very common.

Who Gets Cramps

Just about everyone will experience a muscle cramp sometime in life. It can happen while you play tennis or golf, bowl, swim, or do any exercise. It can also happen while you sit, walk, or even just sleep. Sometimes the slightest movement that shortens a muscle can trigger a cramp.

Some people are predisposed to muscle cramps and get them regularly with any physical exertion.

Those at greatest risk for cramps and other ailments related to excess heat include infants and young children, people over age 65, and those who are ill, overweight, overexert during work or exercise, or take drugs or certain medications.

Muscle cramps are very common among endurance athletes (i.e., marathon runners and triathletes) and older people who perform strenuous physical activities.

- Athletes are more likely to get cramps in the preseason when the body is not conditioned and therefore more subject to fatigue. Cramps often develop near the end of intense or prolonged exercise, or 4-6 hours later.
- Older people are more susceptible to muscle cramps due to normal muscle loss (atrophy) that begins in the mid-40s and accelerates with inactivity. As you age, your muscles cannot work as hard or as quickly as they used to. The body also loses some of its sense of thirst and its ability to sense and respond to changes in temperature.

Cause

Although the exact cause of muscle cramps is unknown (idiopathic), some researchers believe inadequate stretching and muscle fatigue leads to abnormalities in mechanisms that control muscle contraction. Other factors may also be involved, including poor conditioning, exercising or working in intense heat, dehydration and depletion of salt and minerals (electrolytes).

Stretching and Muscle Fatigue

Muscles are bundles of fibers that contract and expand to produce movement. A regular program of stretching lengthens muscle fibers so they can contract and tighten more vigorously when you exercise. When your body is poorly conditioned, you are more likely to experience muscle fatigue, which can alter spinal neural reflex activity. Overexertion depletes a muscle's oxygen supply, leading to build up of waste product and spasm. When a cramp begins, the spinal cord stimulates the muscle to keep contracting.

Heat, Dehydration, and Electrolyte Depletion

Muscle cramps are more likely when you exercise in hot weather because sweat drains your body's fluids, salt and minerals (i.e., potassium, magnesium and calcium). Loss of these nutrients may also cause a muscle to spasm.

Prevention

To avoid future cramps, work toward better overall fitness. Do regular flexibility exercises before and after you work out to stretch muscle groups most prone to cramping.

Warm Up. Always warm up before stretching.

Calf Muscle Stretch. In a standing lunge with both feet pointed forward, straighten the rear leg. (Repeat with opposite leg.)

Hamstring Muscle Stretch. Sit with one leg folded in and the other straight out, foot upright and toes and ankle relaxed. Lean forward slightly, touch foot of straightened leg. (Repeat with opposite leg.)

Quadriceps Muscle Stretch. While standing, hold top of foot with opposite hand and gently pull heel toward buttocks. (Repeat with opposite leg.)

Hold each stretch briefly, then release. Never stretch to the point of pain.

Symptoms

Muscle cramps range in intensity from a slight tic to agonizing pain. A cramping muscle may feel hard to the touch and/or appear visibly distorted or twitch beneath the skin. A cramp can last a few seconds to 15 minutes or longer. It might recur multiple times before it goes away.

Diagnosis

Although most muscle cramps are benign, sometimes they can indicate a serious medical condition.

See your doctor if cramps are severe, happen frequently, respond poorly to simple treatments, or are not related to obvious causes like strenuous exercise. You could have problems with circulation, nerves, metabolism, hormones, medications, or nutrition.

Muscle cramps may be a part of many conditions that range from minor to severe, such as Lou Gehrig's disease (amyotrophic lateral sclerosis), spinal nerve irritation or compression (radiculopathy), hardening of the arteries, narrowing of the spinal canal (stenosis), thyroid disease, chronic infections, and cirrhosis of the liver.

Give the doctor your medical history including details about allergies, illnesses, injuries, surgeries, and medications.

How long have you experienced cramps? Is there a family history of the problem? Do your cramps occur only after exercise, or do they happen while at rest? Does stretching relieve the cramps? Do you have muscle weakness or other symptoms? Your doctor may want to take a routine blood test to rule out diseases.

Treatment

Cramps usually go away on their own without seeing a doctor.

- Stop doing whatever activity triggered the cramp.
- Gently stretch and massage the cramping muscle, holding it in stretched position until the cramp stops.
- Apply heat to tense/tight muscles, or cold to sore/tender muscles.