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**Muscle Strains**

**What is a muscle strain?**

A strain is a stretch or tear of a muscle or tendon. Tendons are strong bands of tissue that attach muscles to bones. People commonly call muscle strains "pulled muscles."

**How does it occur?**

The usual cause of muscle strain is forceful contraction (tightening) of the muscle during an activity. For example, it might happen when you run, jump, throw, or lift a heavy object.

**What are the symptoms?**

* You may feel a burning or a popping at the time of the injury.
* The injured muscle hurts.
* It is hard to use the injured muscle.
* The injured area may be swollen or bruised.

**How is it diagnosed?**

Your healthcare provider will examine the injured area and find that it is tender.

**How is it treated?**

The general rule for treating strains is R-I-C-E:

* **R**est: At first you will need to avoid activities that cause pain. If you have a leg strain you may need crutches.
* **I**ce packs: Put an ice pack, gel pack, or package of frozen vegetables, wrapped in a cloth on the area every 3 to 4 hours, for up to 20 minutes at a time. You could also do ice massage. To do this, first freeze water in a Styrofoam cup, then peel the top of the cup away to expose the ice. Hold the bottom of the cup and rub the ice over the area for 5 to 10 minutes. Do this 3 to 5 times a day. This is especially useful for strains you have had for more than a few days.
* **C**ompression: Wrap an elastic bandage around your strained muscle to reduce swelling.
* **E**levation: Raise the injured muscle above your heart when you sit or lie down.

Also:

* Depending on which muscle you have strained, you may be given crutches, a brace, or a sling.
* Take an anti-inflammatory medicine such as ibuprofen, or other medicine as directed by your provider. Nonsteroidal anti-inflammatory medicines (NSAIDs) may cause stomach bleeding and other problems. These risks increase with age. Read the label and take as directed. Unless recommended by your healthcare provider, do not take for more than 10 days.
* Follow your provider's instructions for doing exercises to help you recover.

**How can it be prevented?**

The best way to prevent strains is to warm up properly and stretch your muscles before exercise. The stronger and more flexible your muscles are, the less likely they will be strained.

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[References](http://www.merckmedicus.com/pp/us/hcp/hcp_patient_resource_allhandouts_content_search.jsp?pg=/ppdocs/us/common/crs/aha/aha_mstrains_sma_refs.htm)
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