

Delayed Onset Muscle Soreness (D.O.M.S.)



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Your Guide to [Sports Medicine](#).
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Pain after exercise

What Is Delayed Onset Muscle Soreness?

Delayed onset muscle soreness (DOMS) after a workout is quite common and quite annoying, particularly if you are just beginning an exercise program or changing activities. For the new exerciser who wakes up one day and goes a three mile walk, followed by push-ups and sit-ups, there is bound to be some muscle pain and soreness the next day or two. This is a normal response to unusual exertion and is part of an adaptation process that leads to greater stamina and strength as the muscles recover and build. The soreness is generally at its worst within the first 2 days following the activity and subsides over the next few days.

Delayed onset muscle soreness occurs hours after the exercise is over. This is much different than the acute pain of a pulled or [strained](#) muscle. A muscle tear, is felt as an abrupt, sudden, acute pain that occurs during activity that is often accompanied by swelling or bruises.

What Causes Delayed Onset Muscle Soreness?

DOMS is thought to be a result of microscopic tearing of the muscle fibers. The amount of tearing (and soreness) depends on how hard and how long you exercise and what type of exercise you do. Activities that require muscles to forcefully contract while they are lengthening, ([eccentric](#) contractions), seem to cause the most soreness. You use eccentric contractions when you descend stairs, run downhill, lower a weight, or perform the downward motion of squats and push-ups. In addition to muscle tearing, swelling can occur in and around a muscle, which can also cause soreness hours later.

What Is the Treatment for Delayed Onset Muscle Soreness?

- Wait. Soreness will go away in 3 to 7 days with no special treatment.
- Avoid any vigorous activity that increases pain.
- Do some easy low-impact aerobic exercise - this will increase blood flow to the affected muscles, which may help diminish soreness.
- Use the [R.I.C.E.](#) treatment plan
- Use gentle stretching on the affected area
- Gently massage the affected muscles,

- Try using a nonsteroidal [anti-inflammatory](#) medications to reduce the soreness temporarily, though they won't actually speed healing.
- There is some evidence that vitamin C may decrease soreness.
- Allow the soreness to subside thoroughly before performing any vigorous exercise.
- Don't forget to stretch and warm up before your targeted activity.
- ** If your pain persists longer than about 7 days or increases despite these measures, consult your physician.
- Learn something from the experience! Use prevention first.

Can I Prevent Delayed Onset Muscle Soreness?

While DOMS is common and annoying, it is not a necessary part of getting into shape. There are many things you can do to prevent, avoid and shorten DOMS. Here are a few tips:

- Warm up thoroughly before activity
- Cool down completely after exercise
- Perform easy stretching before
- Perform thorough flexibility exercises after exercise, while the muscles are warm
- Start with easy to moderate activity and build up your intensity over time
- Avoid making sudden major changes in the type of exercise you do
- Avoid making sudden major changes in the amount of time that you exercise