

# Soreness

Generally post exercise (such as pitching) causes soreness. The soreness is generally at its worst within the first 2 days following the activity and subsides over the next few days.

This soreness is called D.O.M.S or Delayed Onset Muscle Soreness (DOMS) and after a workout is quite common and particularly if you are just beginning an exercise program or changing activities or if you haven't pitched for awhile.

You may have had some muscle stiffness and weakness. Feels a bit like bruising. Rest assured, 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.

## Causes of DOMS

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") 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.

## Preventing DOMS

There are many things you can do to prevent, avoid and shorten DOMS. Here are a few tips:

1. Warm up thoroughly before activity and cool down completely afterward.
2. Easy stretching before and after exercise.
3. Start with easy to moderate activity and build up your intensity over time.
4. Avoid making sudden major changes in the type of exercise you do.
5. Avoid making sudden major changes in the amount of time that you exercise.

Too Late! You are Already Sore.

### Here's How To Deal:

1. Wait, Soreness will go away in 3 to 7 days with no special treatment.
2. Avoid any vigorous activity that increases pain.

3. Do some easy low-impact aerobic exercise - this will increase blood flow to the affected muscles, which may help diminish soreness.
4. Use the RICE principle (rest, ice, compression, elevation)
5. Use gentle stretching on the affected area
6. Gently massage the affected muscles
7. Try using a nonsteroidal anti-inflammatory medications (aspirin or ibuprofen) to reduce the soreness temporarily, though they won't actually speed healing.
8. There is some evidence that vitamin C may decrease soreness.
9. Allow the soreness to subside thoroughly before performing any vigorous exercise.
10. Don't forget to stretch and warm up before your targeted activity.
11. If your pain persists longer than about 7 days or increases despite these measures, consult your physician.
12. Learn something from the experience! Use prevention first.

## Now Lactic Acid

Generally lactic acid prevents you from continuing to exercise. It makes you stop that active. Ever felt that burning sensation when performing an exercise like a push-up. You can go and go and go then that's it you can't go any more.

It's a by-product of exercise. As a result of exercise. Particularly, it's a by-product of anaerobic glycolysis. Which is in part, a part of the energy systems we have to use. It's as a result of the production of energy for fuel for our muscles especially when we use sugars as the fuel and it is broken down to leave lactic acid. Lactic acid is generally produced as a result of quick high intensity exercise such as running 100 metres. Lactic acid can be used as fuel by the heart, but excessive lactic acid slows contraction in skeletal muscles and is thought to cause muscle soreness if not flushed out of the body.

And hence the link....

Therefore you can't avoid lactic acid build-up (you can only delay it). What you can do is avoid the adverse effects of D.O.M.S

Hope this helps

Dean Lawler