

Wonder why your muscles get sore days later?

We can help!

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Wonder why your muscles get sore a day or two after a workout or new activity? Wonder what you can do to help the healing process? Delayed onset muscle soreness (DOMS) is a common phenomenon when beginning a new exercise routine or new activity. The exact cause of the muscle soreness is not known, although there are many theories out there. We once believed this was due to a build-up of a metabolic by-product called lactic acid that is released in the muscle tissue when we burn calories to do work. If you think of your body's muscles like the engine in a car, lactic acid is like the exhaust produced by the motor burning gas. We've since realized that lactic acid isn't the exact cause of DOMS, it may contribute somehow but is not the sole cause.

A second and more widely accepted theory is that an inflammatory response



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produced by the body to muscle damage is the cause of DOMS. When we perform a more stressful activity or new activity at an intensity greater than what our muscles are used to performing we are actually damaging our muscles in the form of micro tears. The body recognizes this damage and it results in an inflammatory response by the body. We know this occurs as this is the physiological basis for building muscle strength; we essentially tear the weakest muscle fibres when we stress them more than they are conditioned to withstand, our body then rebuilds those muscle fibres with larger, stronger fibres so we can withstand more workload. This is the concept behind strength training for stronger and/or larger muscles.

Now, the problem that many of us encounter is that we don't respect the progressive overload principle when getting started or increasing the amount of effort for our workouts and activities. Starting an activity slowly and steadily increasing our effort will help limit the amount of DOMS we experience. When we jump in two feet first and go full out, we can experience extreme DOMS and

may even end up with an injury. Also, there are many things we can do to help prevent and minimize the severity of DOMS we may experience if we do realize that we may have overdone our workouts or activities. Here are a few suggestions:

1. Warming up properly before beginning new or strenuous exercise or activities can help reduce the severity of DOMS.

2. Completing a very thorough stretching routine following the activity and several times over the day or two after the activity.

3. Soaking in an Epsom salt bath can help reduce muscle soreness. The exact mechanism is not clear but Epsom salt is a great source of magnesium and is believed to help reduce inflammation, flush muscles of toxins, relax tight and cramping muscles along with many other benefits. (One to two cups of Epsom salt in a hot bath.)

4. Drinking plenty of water and/or a sport drink to balance the body's

fluids, vitamins, minerals, sugars.

5. Completing a very light level of activity the day or two following the activity that requires the use of the same muscle groups that are sore can help to reduce the soreness more quickly.

6. Get adequate rest and sleep following the activity to allow the body time to heal as most of our healing happens during our sleep cycle.

7. Try to eat well balanced meals regularly so the body has the building blocks it needs to heal and repair any damage to muscles.

8. If your symptoms remain severe for more than 72 hours after activity you may want to see a health professional (kinesiologist/physiotherapist/massage therapist/physician) to get some ideas of what may be wrong and what more you should be doing. Rule out an injury that may not heal effectively on its own.



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