



## Staying Limber with Rolling; Is Worth the Pain?

By Dr. Delia Roberts

Muscle and joint pain is inevitable and universal. Whether you are 18 or 80, work at a desk, in a truck or machine, or spend your days carrying a saw, shovel or hiking through the woods, those aches and pains are sure to catch up with you sometime. And while it's impossible to diagnose the cause of the pain without a great deal more information, the technique known as rolling or myofascial release can help relax tension in the tissues and relieve pain. Here's how it works, and how to use this simple and inexpensive method to keep you moving, day in and day out.

### The Tissues Involved; Muscle, Nerve, Fascia and Others

Muscle is the tissue that actively shortens to cause movement. It can also contract under load to resist gravity pulling a weight downward, like when you walk down hill or lower a heavy object to the ground. Sometimes, if the load is greater than what you are used to, (heavier, faster movement, longer duration or even in an unusual direction), small tears occur in the structure of the contracting fibers. In addition, when muscle gets tired, waste products accumulate and in both these situations the chemical signals cause local shortening. Whatever the reason, irritated muscle will contract in a protective reflex and this can cause mini-cramps that can be quite painful. These areas have come to be known as "trigger points".

The pain isn't always directly over the trigger point, sometimes the contracting muscle puts pressure on a nerve making the pain radiate and feel like its coming from an area that can be quite far away from the source.

Besides muscle and nerve, pain can arise from other tissues. The shortened muscle can change the way load is distributed across tendons and into the joint, irritating other structures. Additionally, the fascia that surrounds muscle and tendon is lubricated

by fluid that changes with dehydration and the altered chemical composition in muscle tissue with temperature, fatigue and the build up of waste products. When this happens pressures and the lubricating quality of the liquid change, causing painful "adhesions" between the muscle and fascia. Muscle can also have tiny direct connections with the surrounding fascia, so when the muscle shortens it can tug on the fascia and increase the stiffness of this tissue.

### Releasing Trigger Points

To date, research into the effectiveness of injections, dry needling and pressure (from rolling, balls, other tools or by hand) hasn't shown that any one method is better than another. What it does show though, is that manual pressure of any type for around 30 – 60 seconds, applied several times during a warm up, can reduce pain and improve range of motion, and sometimes will improve work performance. The amount of pressure exerted doesn't have to be really painful to be effective either, and the effects seem to last for about 30 minutes.

It's also interesting that there are a number of studies that show that rolling one area on one leg can reduce pain sensitivity and improve range of motion in other areas of the same leg, and even in the opposite leg. This finding suggests that at least part of the positive effects of rolling are due to central nerve action, as opposed to increased blood flow, relaxing of a muscle spasm, changing the characteristics of the lubricating fluid or the actual breaking up of adhesions in the treated area.

### Staying Pain Free

Now that we understand more about how rolling works, you can put it to use to help deal with muscle and joint pain, or even just fatigue and stiffness. Choose your device based on price, convenience and how it fits your body. For example, for only a few dollars you can purchase a lacrosse ball. If



that's too hard, try a tennis ball, if that's too small try a baseball. Spiky massage balls are also inexpensive and come in a variety of sizes and range from firm to soft. For those hard to reach spots in your upper back, put your ball or a couple of balls, in an old knee sock and toss it over your shoulder. Balls have the added convenience in that you don't have to get down on the ground as you do with a foam roller. They work great against a high seat back, or under your butt or leg while seated.

Roll the areas that feel tired, tight or are painful, keeping in mind that you can back off if it hurts too much. Work each area for up to a minute a couple of times a day. Add a bit of rolling into your warm up, keep a couple of balls in your truck to use while you are waiting to load/unload and consider making it part of your going to bed routine. Spending a few minutes rolling can be a way to relax, which will help you get a better sleep!

As with everything, it takes a bit of effort to see results. But regular rolling is a relaxing way to maintain your range of motion and prevent small problems from getting bigger. Even rolling out a tender spot can provide so much relief that the short term pain really is worth the long term gain. 🍏