The Benefits of Foam Rolling

By: Dr. Bobby Maybee, Middle Path Medicine Chiropractor

October 2013

Foam rolling is a type of soft tissue massage called self myofascial release (SMR), a technique that is used to inhibit overactive muscles. Overactive muscles are the ones in your body that are tight, stiff, and even tender and painful. The individual using the foam roller (a foamy cylinder that is somewhat stiff) places the soft tissue they intend to mobilize onto the roller, and apply direct pressure until the desired effect is achieved. This is a form of stretching that utilizes a concept called autogenic inhibition to improve soft tissue flexibility. It does this by relaxing the tissue being “rolled” with use of direct pressure, much like a deep tissue massage.

This technique is very effective for improving overall mobility and flexibility in the short term. It’s done by rolling the foam roller over specific muscle groups until a tender area is found, and then applying direct pressure on that area for up to a minute until the muscle relaxes.

Foam rollers are used extensively in the fitness and physical therapy world, but until recently had limited research available concerning their effectiveness. Below I’d like to review some recent research on foam rolling, hopefully to emphasize how valuable this tool can be in your home health and wellness care plan.

Generally speaking, recent research has suggested that foam rolling could reduce arterial stiffness, improve arterial function, and improve vascular endothelial function\(^1\). Research also suggests that foam rolling can increase joint range-of-motion (ROM) while not limiting the production of muscular force, and with no negative effects on athletic performance pre-workout\(^2,3\).

The research indicating a decrease in arterial stiffness was a surprise to me, but adds a huge benefit to the necessity of this easy to use home tool. Okamoto et. al in their research\(^4\) concluded that self-myofascial release with a foam roller is able to reduce arterial stiffness, improve arterial function and improve vascular endothelial function in sedentary subjects. They suggest that foam rolling may consequently be a useful tool for improving cardiovascular health in the general population.

The effects on range of motion are known amongst rehab and fitness professionals, and is of course one of the main reasons foam rollers are used. But the effects on range of motion are only temporary, and foam rolling (or any other stretching for that matter) has no long term effects on tissue length or flexibility\(^4\). The research is very clear about this.

As with all manual therapies (massage, chiropractic adjustment, spinal mobilization, foam rolling etc.), there is a ways to go when it comes to research. But it
does exist. Study design for manual therapies is quite difficult when compared to pharmaceutical research study design. But many fields are involved (Chiropractic, Physical Therapy, Osteopathy, Exercise Science/Training, Massage) so the future looks promising for conservative manual care research.

Some suggested applications for use of a foam roller are:

a. Foam rolling pre-workout to improve joint range-of-motion (ROM) without the risk of reducing neuromuscular performance, which can occur with static stretching. (Yes you read that right, too much stretching BEFORE a workout can reduce your performance and even INCREASE injury risk)

b. Athletes could try foam rolling post-workout or post-competition to reduce the deterioration in countermovement jump performance in order to improve their ability to perform again more quickly. This would increase recovery time for athletes in jumping sports. Especially those who have more than one event in a day.

c. Foam rolling post-workout or post-competition to reduce muscle soreness in order to improve their ability to train again more frequently.

d. Foam rolling may acutely reduce arterial stiffness, improve arterial function and improve vascular endothelial function. These findings may indicate that foam rolling is beneficial for cardiovascular health.

A word of caution: foam rolling is no pleasant walk in the park, especially in the beginning. Just like any deep tissue work or mobilization of the body into a new range of motion, you can get sore. You also have to be able to roll your body around on the ground on the foam roller to be successful. People with severe mobility problems may not be good candidates for foam rolling. I have found people will try foam rolling and then quit after one or two times because it makes them sore. It usually will in the beginning. And the worse shape you’re in mobility wise, the more sore you will be most likely feel while foam rolling. If you think being sore is a bad thing (as a professional I can tell you sometimes it’s normal and even necessary), then the foam roller might not be for you. But for the rest of you, the foam roller can be an affordable and exceptional addition to your wellness lifestyle. Foam rollers are available at the Middle Path Medicine Supplement Shop.

If you have more questions about foam rolling, you can ask Dr. Maybee at your free initial consultation! Call Dr. Maybee at Middle Path Medicine: 805-481-3442 or email him at Info@middlepathmedicine.com.

Your Journey to Health and Healing,
Bobby Maybee, DC

References:
3. An acute bout of self-myofascial release increases range of motion without a subsequent decrease in muscle activation or force. MacDonald GZ, Penney MD, Mullaley ME, Cuconato AL, Drake CD, Behm DG, Button DC.