

## Foam Rolling 101

You have presumably seen people at the gym with a peculiar cylinder-looking object they roll up and down different parts of their bodies. You've possibly also seen them grimacing as they go about their routine. And you've probably thought to yourself, nope, nope, nope. My body is a sanctuary, and I will not subject it to torture, right? Well, that's called foam rolling, and guess what? It's good for you, and I'm going to tell you exactly why.



### What is foam rolling?

Foam rolling or self-myofascial release is self-massage professional athletes, runners, and lifters have been using for years to release muscular tightness and trigger points. Foam rolling works by massaging the fascia, a sheet of connective tissue that surrounds every muscle fiber, organ, nerve fiber, and bone in the body.

Fascia comprises three different layers:

- Layer one wraps around every individual muscle fiber or cell.
- Layer two wraps around bundles of muscle fibers called fasciculi.
- Layer three wraps around the entire muscle body.

All these layers of fascia attach to tendons and bones, which help you perform movements such as running, jumping, cycling, and more.

So, where do trigger points and adhesions come in?

Adhesions all start with a knot. Knots are created when your body tries to fix micro-tears in your muscle fibers. Instead of creating a smooth surface, your body forms a patch that's like a bird's nest. Because of the knot, your fascia cannot move freely, it gets stuck and creates adhesions. This shortens the muscle, which leads to reduced mobility and pain. Trigger points also develop like knots; however, they refer the pain to another part of your body. For example, a trigger point at the base of your skull will refer the pain to the front of your head. The most common causes of trigger points are repetitive movements, poor posture, trauma, and muscle overuse.

How does foam rolling benefit you?

### **1. It reduces tightness**

When you foam roll, you are moving the muscles, which makes them more pliable and therefore helps to separate and relax the fibers. The muscles physically don't change, it is more of a neurological response. Whaaaaat? Yes, our brains are rather wonderful (except of course when you're trying to remember where you put your keys?!??) So how does your brain help to reduce tightness in your muscles?

The pressure from foam rolling stimulates receptors in your nervous system, which unlocks or releases the tight tissues. Essentially, your brain is telling your muscles to loosen up. This leads to a decreased tightness in your muscles.

How does this help you?

Tight muscles prevent you from performing exercises correctly and could cause pain even when you aren't lifting. Foam rolling helps to reduce the tightness,

which will improve your movement and may reduce the pain related to muscle tightness.

## **2. It helps with recovery**

A study in the Journal of Athletic Training suggests that foam rolling after a workout can help to reduce DOMS (delayed onset of muscle soreness). DOMS is usually at its highest on day 2 after training. Foam rolling is beneficial because it reduces muscle soreness, which then leads to better performance in subsequent workouts. If you have ever had a leg session where your legs were so sore afterward that sitting down on the toilet was as daunting as climbing Kilimanjaro, then you'd understand why it's such great news for lifters.

How does this help you?

If you use foam rolling as a recovery method, you will recover from heavy lifting sessions better. This means you won't have to skip sessions because you're too sore to move.

## **3. It improves range of motion**

The International Journal of Sports Physical Therapy found that foam rolling promotes short-term increases in range of motion. They reported that if you foam roll regularly, you could improve muscle flexibility.

How does it help you?

Full range of motion is imperative for muscle growth. If you cannot perform your exercises with a full range of motion, you're leaving "gains" on the table. Although occasionally performing exercises without a full range of motion could be beneficial.

Note that all these studies were conducted with a few participants and are not conclusive. Research has not yet caught up with the foam rolling trend to provide definitive evidence on the effects of foam rolling. However, foam rolling is still recommended due to what researchers have observed foam rolling can do in clinical settings.

What does foam rolling not do?

**It does not break down scar tissue**

There have been some claims that foam rolling can help break down scar tissue. This is not true or even remotely possible.

The term soft tissue is deceiving because the tissues aren't soft at all. Soft tissues are very strong, and it is difficult to alter the shape or structure of these tissues. There are multiple layers of skin and, for most people, a reasonable amount of fat covering the soft tissues. It is impossible to break through all these layers to alter a tissue that isn't as soft as its name implies.

### **It does not help much with mobility**

There have also been claims that foam rolling helps with mobility. And as with everything in fitness, the actual effect of foam rolling has been overstated. Many people have sold foam rolling as your one-stop shop to better mobility. This is simply not true. Mobility involves much more than just your soft tissues.

Soft tissues are only a small part of mobility. Joints play the most significant role in your mobility and functionality, and foam rolling will do nothing for your joints.

### Why does foam rolling work?

Researchers are still conducting studies on the effects of foam rolling, and most of the current studies available were performed with a small group of participants. Therefore, the current evidence is not final. However, researchers have some theories about why foam rolling works.

Theory 1: The mechanical pressure and heat caused by the rolling causes the fluid by the joints to become runnier, which decreases the resistance that would be caused by friction.

Theory 2: By applying pressure along the direction of the muscular pull, you are aligning the collagen fibers into a more uniform direction. This leads to increased lymphatic drainage and less resistance.

Theory 3: When you stretch a muscle for 15-30 seconds, the muscle eventually relaxes, which allows a greater range of motion. The direct pressure from foam rolling shows the same response as stretching by relaxing the muscle enough to increase the range of motion.

### When is the best time to roll?

Some coaches and trainers use foam rolling as a warmup for their clients however, foam rolling works best after a workout as a recovery method.

### **Why is it so useful as a recovery method?**

- It helps to drive blood into the muscles: Your body needs blood in the muscles to recover because blood delivers nutrients to your damaged muscles.
- It helps to clear out metabolic waste (lactic acid): During weight training, your body requires more oxygen than what is available. The lack of oxygen in your body triggers the production of lactic acid, as your body must use glucose as fuel for energy production. Lactic acid causes that burning sensation during training.
- It helps to clear out lymphatic pooling: Lymphatic pooling is a natural result of exercise, and it is the pooling of blood and the fluid that surrounds your cells. Although increased blood flow to your muscles is beneficial, too much pooling could hamper recovery.

These are all necessary for recovery to occur.

Foam rolling is a great tool to decrease tightness, encourage recovery, and improve your range of motion. However, it should not be used in isolation. It is essential to develop a good stretching routine that can be paired with foam rolling to get the best results.