

Foam Rolling: Pre, Post or During Exercise?

Introduction

10 years ago, you'd look in a gym and see a 20-36 inch cylindrical piece of foam and go "What in the blue hell is that?". Today, you look in the gym and see nearly every Tom, Dick and Harry seems to be rolling around and using them (incorrectly).

Why is it then that foam rollers have gained popularity in the past few years, just like my best friend Jimaz did when he threw sheep poo at our mate in college? The reason being the change in peoples attitudes towards recovery.

Foam rolling is a technique that helps soften and lengthen (release) fascia, which results in the breakdown of scar tissue and adhesions between the skin, muscle and bones. Meaning people have discovered a way to help massage themselves, instead of hiring a physical therapist. However, this is classed as a poor man's massage therapist, which is just like buying Mr Juice, which is a cheap mans Ribena.

Therefore, as practically applying foam rolling could be considered less than comprehensive. This present article will aim to discover where the equipment can be specifically applied in a training prescription, too fully optimise performance.

Foam Roller



A foam roller is a cylindrical tube consisting of various lengths, sizes and circumferences, which are completely or partially made of foam. The equipment is applied the same way whatever shape or size, and is typically placed underneath a body part with the weight directly exerting the pressure. No, it's not that long woggle you remember from the swimming pool.

The popularity has recently expanded and marketing have evolved the standard design by attaching pressure points, or manufactured a higher density product. Harder material foam rollers are assumed more beneficial for optimising muscle function, in comparison to the standard design. However, more scientific evidence is needed across a wider range of muscles. Although, it is noted that larger, heavily-muscled people do better with a very high density roller whereas, leaner, younger athletes should begin with the less dense designs.

The technique used on foam rollers is referred to as self-induced myofascial release, which involves small undulations on the proximal portion of the muscle belly and works towards the distal end. More specifically, this means using gentle, sustained pressure on the soft tissues while applying traction to the fascia. The nice thing about using a foam roller is that it can be easily sustained on a daily basis.

Benefits of Foam Rolling Before Exercise

Loads of coaches prefer to use the foam rollers before every workout. This is on the basis that it can increase the volume of training and decrease dysfunctions resulting from microtrauma. How long a person rolls is individualised but safe recommendation allow 5 to 10 minutes. Personally I like to follow the book *Becoming a Supple Leopard's* recommendation of allowing at least two mins per limb to get any sort of physiological adaptations.

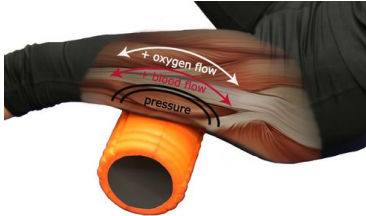


The reasoning I do not like doing short bouts of rolling is on the basis of studies that included timings such as 30 seconds. This timing has had no effect on agility, isometric squat force, vertical jump height and sprinting performance. All aspects that are widely used within a gym programme. Although insignificant, the studies did display that perception of fatigue was less within the group that included foam rolling vs the ones that didn't. Therefore, suggesting that foam rolling does have potential to enhance performance prior to working out without impairing strength, which is a problem associated with pre-workout stretching. Professionals such as Mike Boyle have been using this technique before workouts on many athletes for years on end.

Benefits of Foam Rolling Post Exercise

As mentioned a foam roller could be considered an integral component towards reducing the occurrence of injuries. Research states that it can stimulate fibroblasts, remove metabolic waste and promote full recovery. Thus, explaining why fitness professionals have implemented SMR to aid the process of soft-tissue healing for a number of years. That is why there is no harm using it after training if you are feeling sore.

The acute effects during SMR have been examined with subjects measured before and after on adductors, hamstrings, quadriceps, iliotibial band and trapezius. The results displayed a reduction in arterial stiffness and an increase in the amount of plasma nitric oxide concentrations. This is important because arterial stiffness is detrimental, since it makes the heart work considerably greater to pump blood. Whereas the increased nitric oxide can assist numerous bodily functions such as regulation of blood flow, mitochondrial respiration, muscle contractility and calcium homeostasis.



Benefits of Foam Rolling in between Exercise

A published article has explained that instead of resting passively in between sets, the implementation of foam rolling should be used. This is recommended as it can help movement, recovery and performance, which could offer a new training method. However, there is limited evidence available that supports the claim foam rolling can benefit in between sets.

Another study highlights that range of motion can increase by 10% after two minute bouts of foam rolling. This could be considered beneficial during a max strength workout, as you need to have 3-5 min rest periods between sets. Although, let's be honest you foam rolling in-front of a squat rack for that amount of time is going to cause chaos for the bodybuilder meat head behind you.

Additionally, if you are looking at specific movement patterns where the ability to achieve full depth is restricted (i.e squat). Foam rolling in-between may help you achieve that extra movement.

All this being said, there needs to be more evidence in-between sets before everyone starts jumping on this hype train.

Conclusion

Take Away Points

- Foam Rolling does have a vital role in specific training regimes.
- Can be used pre exercise since it can improve range of motion without prohibiting neuromuscular performance.
- Can be used post exercise as it may benefit the removal of metabolic waste products and reduce the risk of injury.
- The implementation in between sets offers no scientific significant evidence, apart from the potential increase of range of motion.