

Blood Flow Restriction and Bodybuilding: Do BFR Bands Increase Muscle Mass?

The science of building muscle, especially in the bodybuilding circuit, has dramatically changed during the last decade.

The old school method of go heavy or go home is no longer the only game in town.

Recent studies are discovering that low-impact, low-weight workouts can be equally as effective as heavy training for building muscle mass.

In particular, blood flow restriction training has become a hot conversation topic for gaining mass. Let's take a look at blood flow restriction training, how it works, and what the science has to say about it.

What is Blood Flow Restriction Training?

Blood flow restriction training began as an idea in 1966 while a young Yoshiaki Sato was training. Several years later, after many experiments, Sato developed "kaatsu" training, which translates to "added pressure."

In the Western world, kaatsu training is better known as blood flow restriction training.

Also called occlusion training, this training method restricts blood flow. Specifically, blood flow restriction training will partially restrict the inflow of blood while fully restricting the outflow of blood in the working muscle.

In other words, thanks to BFR bands, blood will have to fight hard to get in, but it won't be able to get out during the working set. [1](#)

What are BFR bands?

Blood flow restrictions bands (BFR bands) are a cuff made of a stretchy and durable material. Higher quality BFR bands will have a loop bracket to ensure the cuff remains tight throughout the exercise. You should be able to keep the band slack in place with the Velcro strap.

Tourniquets can also be used but they tend to be less user-friendly than the modern BFR bands.

How Do BRF Bands Work?

When BFR bands are placed around the upper arm and upper thigh, they successfully restrict arterial blood flow to the muscle groups that are below the cuff. They also completely prevent venous outflow.

The pooling of the blood in the working muscle creates an intense level of metabolic stress.

On the outside, you'll feel the burn and the pump. But on the inside, your muscle is primed for anabolic signaling and protein synthesis – two processes that are critical for muscle growth. [1](#)

How to use BFR Bands

Choose which part of the body you'll be exercising. You can't wear a pair of blood flow restriction bands on both the upper and lower body at the same time.

If you are performing an upper body workout, place the BFR bands around the upper arm just below the lateral deltoid. If you are going to do a lower body workout, place the BFR bands around the upper thigh, just below where your butt meets your thigh.

With the bands in place, it's time to tighten. Think of the tightness scale from 1 to 10 with 1 being completely loose and 10 being no circulation. You'll want to tighten the bands to a 7; however, we recommend starting at a 4 or 5 and gradually increasing the tightness with each set.

Do **not** tighten the bands to a point where it completely cuts off circulation.

Do BFR Bands Work? What Science Says

Studies on blood flow restriction have consistently proven that this type of training can effectively build muscle and muscular strength.

In fact, one study found that blood flow restriction training produced greater muscle growth results than traditional heavy load training.

With that said, heavy load training is still superior when your focus is on building muscular strength.

The tradeoff is that BFR training is low impact while heavy load training puts a great deal of stress on connective tissue.

Aside from those who want to increase muscle mass, BFR training would be recommended for those people who are exercising post-surgery, during rehabilitation, or who are just starting out. [1](#)

Blood Flow Restriction Training Variables

You'll want to pair the BFR bands with a proper training program. Blood flow restriction training variables are different than those of a traditional hypertrophy-focused program.

Studies have found that the following variables are ideal for supporting optimal muscle growth:

Weight Load: You'll use 20% to 40% of your one-repetition maximum. (Yes, you read that right. 20% to 40% only.) For example, if you are performing a bench press and your one-repetition maximum is 200 pounds then you'll only use 40 to 80 pounds during blood flow restriction training.

Sets and Repetitions: Studies found that the ideal sets and reps for BFR training was 4 sets of 30, 15, 15, 15 repetitions.

Rest Break: Between each set, you should rest for no longer than 60 seconds.

What Do You Think of Blood Flow Restriction?

Are you convinced about BFR training? Have a video of yourself using BFR bands during your workout? Tag us on Instagram so we can share it.

References

1. Patterson SD, Hughes L, Warmington S, et al. Blood Flow Restriction Exercise: Considerations of Methodology, Application, and Safety [published correction appears in *Front Physiol.* 2019 Oct 22;10:1332]. *Front Physiol.* 2019;10:533. Published 2019 May 15. doi:10.3389/fphys.2019.00533.