



## PERSONALIZED BLOOD FLOW RESTRICTION REHABILITATION

Sudbury School of Fitness: Real Life Health would like to inform you of a new treatment available for patients called Personalized Blood Flow Restriction Rehabilitation. This cutting edge rehabilitation technique results in strength gains and muscle hypertrophy using a Class 1 medical tourniquet system (FDA approved device).

### WHY BLOOD FLOW RESTRICTION REHAB?

American College of Sports Medicine (ACSM) guidelines states that during resistance training clients must use weight of at least 60% of 1 repetition maximum (RM) to improve strength and hypertrophy. **However, for our injured and recovering populations this may not be an option.**

Blood Flow Restriction (BFR) rehabilitation **can induce a strength and hypertrophy response in individuals by exercising at 20% of 1 Repetition Maximum.** Research is showing that the increase in metabolic by products from anaerobic metabolism seems to play as powerful a role in muscle physiology as the mechanical load itself.

We have found this method of rehabilitation to be beneficial in maintaining strength and muscle size post injury with low level exercise and to build sufficient strength without having to heavily load the injured muscles and/or joints. It has been an adjunct to transition clients and bridge the gap between rehabilitation and performance.

**Blood Flow Restriction therapy** with low level exercise has similar effects as strength training such as:

- **290% increase** in growth hormone compared to baseline
- **Increased** collagen synthesis
- **140% increase** in satellite cell proliferation 10 days post training
- **41.5% increase** in muscle protein synthesis
- Similar **increases in strength and muscle cross sectional area** compared with High Intensity Training (80% 1RM)

### SAFETY

The Personalized Tourniquet System for BFR from Delfi Medical is a Class 1, FDA approved device. With each application the cuff will test the patients' blood pressure and regulate the cuff pressure to maintain blood flow throughout the exercise protocol. BFR therapy has also been found to be a safe alternative to high intensity exercise. Research has not shown any increased risk of thrombus formation from using a tourniquet, cardiac output was maintained throughout the exercise session, and they have found no change and even some improvement in arterial compliance.

### CONDITIONS IT MAY HELP

Blood Flow Restriction Therapy is helpful in the treatment of post surgical patients (ACL repair, total knee/hip replacement), muscle atrophy, rotator cuff injuries, knee/elbow tendinopathies, acute and chronic wrist conditions and many other conditions.

For more information regarding blood flow restriction rehabilitation you can visit

[www.owensrecoveryscience.com](http://www.owensrecoveryscience.com)

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