



Blood Flow Restriction Therapy

What is BFR?

Blood Flow Restriction (BFR) therapy is a rehabilitation tool available at all of our locations. It is a safe and effective modality to assist in treating various medical conditions that result in pain and or muscle loss.

BFR training:

- Involves the use of a pneumatic cuff to restrict oxygen to exercising muscles.
- Has been found to yield hypertrophy responses comparable to that observed with heavy-load resistance training, which is typically not tolerated in a rehab setting.
- Is hypothesized that an ischemic and hypoxic muscular environment is generated during BFR to cause high levels of metabolic stress, alongside mechanical tension when BFR is used in tandem with exercise.

What types of diagnoses can benefit from BFR?

BFR can be intended for any condition that does not allow the person to tolerate vigorous exercise due to pain or weakness. It facilitates an increase in strength and muscle growth, while allowing a much lighter weight to be used. Common diagnoses include:

- post operative conditions
- overuse injuries
- osteoarthritis
- sarcopenia (age related muscle loss)

What are the possible side effects?

The side effects include slight discomfort from the strap itself and potentially mild bruising afterwards. It is generally well tolerated and can have a pain relieving effect to the injured area.

Contraindications (when BFR cannot be used)

- Malignancies in the area to be treated
- Areas of thrombophlebitis, thrombosis
- Uncontrolled cardiac conditions
- Rhabdomyolysis
- Varicose veins
- Current infection
- Pregnancy
- Distal Wound

LOCATIONS

Cheshire

1154 Highland Ave, Route 10
(203) 679-3533

Cromwell

50 Berlin Road, Route 372
(203) 284-3020

Madison

28 Durham Road, Route 79
(203) 284-2929

North Haven

8 Devine St
(203) 230-9226

Referral Fax (all locations):

(203) 294-8705

rehabwithapro.org

BFR in use at Gaylord Physical Therapy/Cheshire: Vitals taken, cuff is applied, patient performs exercise Patient will have already received a full initial evaluation before BFR is determined to be a treatment option.



1. Check vitals and screen for contraindications. Apply cuff proximally on target limb.
2. With doppler ultrasound, check for pulse. Pump cuff to desired pressure, which is above pt's systolic BP and until pt's pulse disappears, then reduce pressure until pulse returns slightly.
3. Perform exercises at target prescription.

Research information to show support of benefit of BFR:

There is a growing body of research to support the use of BFR in a clinical setting. This systematic review and meta analyses provides an overview and additional resources:

Hughes L, Paton B, Rosenblatt B, Gissane C, Patterson SD. Blood flow restriction training in clinical musculoskeletal rehabilitation: a systematic review and meta-analysis. Br J Sports Med. 2017.