

***Links:***

Google Scholar: <https://scholar.google.com/scholar?hl=en&as_sdt=0%2C15&q=Exercise+with+Blood+Flow+Restriction+to+Improve+Quadriceps+Function+Long+After+ACL+Reconstruction.&btnG>=

Pubmed:

<https://www.ncbi.nlm.nih.gov/pubmed/31342480>

***Introduction***

Much attention recently has been given to Blood Flow Restriction (BFR) an emerging area of PT practice. It is a hot topic of discussion as demonstrated by the link below to the APTA’s position below that BFR is a part of a physical therapist’s scope of practice (cool interview from CSM 2019 included talking about its roots and introduction to sports medicine).

<https://www.apta.org/PatientCare/BloodFlowRestrictionTraining/>

While emerging interventions and therapist being researched are great – what about those of us in the clinic? The article above is a recent publication in the International Journal of Sports Medicine. The researchers studied the effects of BFR on 9 individuals who were greater than 2 years post ACLR (5 +/-2 years) compared to 9 uninjured healthy controls.

***Methods***

BFR was applied with exercise via a 4-week home program of simple exercises (knee extensions, half-squats, walking) with the BFR cuff. This was performed 5 days per week (1 day each week was supervised) and took about 25 minutes each session. Limb strength, symmetry and size were all measures pre and post intervention. In addition, these numbers were compared to healthy controls.

***Results***

Not surprisingly, moderate asymmetry was noted in the ACLR group prior to intervention. Following intervention, significant gains were noted in muscle size (up to 11%), strength (up to 20%) and symmetry (noted to be the same as healthy controls).

***Relevance***

The study lends support to intervention with BFR even long after ACLR to improve measures of muscle size, strength, and symmetry. It also gives feasible and practical parameters to make this a possibility in your practice.