

Effectiveness of blood flow restriction while training in college students with past ankle injury

In a study titled, "Effectiveness of blood flow restriction while training in college students with past ankle injury", we will investigate how using blood flow restriction (BFR) during a series of ankle specific banded and balance exercises affects ankle strength, stability, and balance in individuals who have had a previous ankle injury within the past five years. In the United States and beyond, lateral ankle sprains are the most prevalent type of injury among athletes and physically active people. When considering rehabilitation from an ankle injury, it is important to avoid significant load or resistance so as not to cause increased discomfort and strain on the injury. However, it is essential that the strength and stability of the ankle be increased so that the athlete may return to their sport, or the injured individual may resume a healthy and active lifestyle without discomfort. The method of blood flow restriction, using an inflatable cuff to keep oxygenated blood concentrated in a certain area, is thought to enhance muscle strength without the strain on joints and injuries that comes with activities like heavy resistance training. So, in theory, BFR seems like the perfect tool for increasing ankle strength and stability for those who have experienced a previous ankle injury.

In our study, we will compare individuals with BFR applied during training to those with no BFR during training, to those who do no training at all, over a series of four weeks. After some initial pretesting, participants, excluding those in the control group, will perform a series of banded ankle and bodyweight exercises twice per week for four weeks, either with or without BFR applied. At the end of the four weeks, participants will be retested to see if any changes in ankle strength, ankle stability, or overall balance occurred. Overall, we expect that the individuals who receive blood flow restriction while training will show greater improvements in ankle strength, stability, and balance than the groups without the blood flow restriction cuff.