

Lifting light weights with blood flow restriction to improve muscular fitness and functional abilities in older people

ACTRN12619000585123

Status	RECRUITING
Sponsor	Dr. Brendan Scott
Enrollment	22 participants

Plain Language Summary

This study is investigating whether using inflatable cuffs on the limbs during low-intensity weightlifting — a technique called blood flow restriction (BFR) training — can help older adults build muscle size and strength more efficiently. As we age, maintaining muscle is critical for independence and preventing falls, but older adults may not be able to safely lift the heavy weights normally needed to stimulate significant muscle growth.

Healthy adults aged 60 and over who are not currently doing any resistance training will be randomly assigned to either low-intensity resistance training with BFR cuffs or without. This initial 4-week phase is followed by 8 weeks of standard heavier resistance training for all participants. Muscle size, strength, and performance on everyday tasks (like getting up from a chair) will be measured before, during, and after the program.

You may be eligible if you are over 60, have not done resistance training in the past six months, have relatively low leg strength for your weight, and have a BMI under 30. People with uncontrolled high blood pressure, heart disease, recent fractures, neuromuscular disease, or terminal illness cannot participate. This study aims to find a practical and safe way for older adults to build muscle and maintain independence as they age.

Key Eligibility Criteria

Inclusion (3)

- Healthy older adult (over 60 yrs)
- Not currently engaged in resistance training, and have not undertaken resistance training in the previous 6 months
- Strength-to-weight ratio (knee extensor force divided by body mass) below 1.71 Nm·kg⁻¹ for males and 1.34 Nm·kg⁻¹ for females

Exclusion (5)

- Body mass index >30 kg·m⁻²
- Currently engaging in structured exercise training
- Uncontrolled hypertension, neuromuscular disease, terminal disease, myocardial infarction in the past 6 months, unstable cardiovascular disease or a fracture within the last 6 months
- Those unable to satisfy the vigorous exercise requirements of the Adult Pre-exercise Screening System tool
- People in existing dependent or unequal relationships with project staff

Locations (1 total)

WA, Australia

<https://www.anzctr.org.au/Trial/Registration/TrialReview.aspx?ACTRN=ACTRN12619000585123>

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