

## Dose-Response Effects of Inspiratory Muscle Strength Training on Blood Pressure and Vascular Function

**Status:** Recruiting

### Eligibility Criteria

**Sex:** Male or Female

**Age Group:** 18 years and over

This study is also accepting healthy volunteers

**Inclusion Criteria:**

- Non-smoking (not smoking cigarettes or vaping over the past year) - Resting systolic blood pressure at or greater than 120 mmHg - Free from serious cardiovascular or metabolic diseases - English-speaking with ability to comprehend study materials and instructions - Willing to comply with pre-visit instructions (avoiding food and caffeine  $\geq$  3 hours, vigorous exercise, alcohol, and non-prescribed medications  $\geq$  24 hours) prior to each measurement visit

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**Exclusion Criteria:**

- History of cardiovascular disease, or conditions affecting the ear (e.g., ruptured eardrum) - Recent abdominal surgery or presence of an abdominal hernia - Asthma with very low symptom perception, frequent severe exacerbations, or abnormally low perception of dyspnea - Pregnant or planning to become pregnant during the study period

### Conditions & Interventions

**Conditions:**

Breathing, Lung & Sleep Health, Heart & Vascular, Respiratory System

**Keywords:**

blood pressure, hypertension, prevention and wellness, Cardiovascular health

### More Information

**Description:** There is evidence that a short daily resisted breathing exercise, called inspiratory muscle strength training, can lower blood pressure and improve cardiovascular health. However, the most effective inspiratory muscle strength training protocol has not been established. This study seeks to test different training protocols. Participants will perform inspiratory muscle strength training daily, for 6 weeks. Each day's training will take less than 15 minutes to complete. Cardiovascular function will be measured before and after the 6-week training period.

**Study Contact:** Hannah Westerberg - lewi1241@umn.edu

**Principal Investigator:** Daniel Craighead

**Phase:** NA

**IRB Number:** STUDY00025718

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