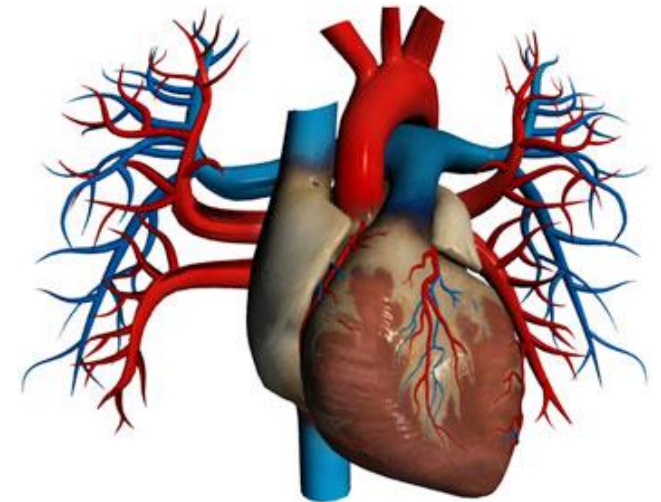


Background and Rationale

- **Heart failure (HF):** structural/functional impairment
 - **Ventricular filling**
 - **Ejection of blood** (Yancy et al., 2013).
- **Primary symptoms of HF** (Yancy et al., 2013).
 - Fatigue
 - Shortness of breath
 - Fluid retention



Objectives/Research Questions

1. What is the effect of exercise on lower extremity function (LEF) including: balance, walking speed, endurance & muscle strength) in older adults with HF?
2. What is the effect of multimodal vs. unimodal exercise on LEF in older adults with HF?

Methods

- **Data sources:** MEDLINE, EMBASE, CINAHL, AMED & Web of Science (inception to August 1st, 2018); hand searching.
- **Search terms:** exercise, physical function, walking speed, heart failure, aged.
- **Meta-analysis:** DerSimonian & Laird random effects in RevMan version 5.3 (The Cochrane Collaboration, 2014).
- **Risk of bias:** The Cochrane Collaboration's tool (The Cochrane Collaboration, 2011).

Results



- Six Minute Walk Test (6MWT) distance
- Strength/endurance plantar flexors
- Isokinetic & isometric knee extension strength



- Multimodal exercise (e.g. Tai chi + endurance training) improved 6MWT distance more than unimodal exercise (e.g. endurance training).

Relevance/Implications

- Our findings show that exercise can improve LEF in older adults with HF.
- Longitudinal studies: LEF predicts onset of mobility-related disability and ADL disability in older adults (Guralnik et al., 1995, Fried et al., 2000 & Onder et al., 2005).
- Physiotherapists can play a role in improving LEF & reducing disability in older adults with HF through exercise training.