

HIIT improves cardiovascular and physical health in patients with Rheumatoid Arthritis (RA)



Implication for clinical practice: a multi-centre, assessor-blinded, two-armed, randomised controlled trial

This trial provides evidence that supervised HIIT and strength training is both safe and effective in improving cardiovascular health, physical fitness, and perceived overall health in patients with well controlled RA.

This combination can be recommended as a structured treatment option for patients with RA within clinical settings to reduce cardiovascular risk and enhance physical function. The study supports inclusion of high-intensity, time-efficient exercise strategies in standard RA care, especially given the elevated cardiovascular risk in this population.

Context

The primary outcome was to evaluate the effects of HIIT combined with strength training on cardiorespiratory fitness (V02 Max).

Secondary outcomes included muscle strength, body composition, lipid profile and overall disease activity.

Methods

- It compared the effects of a 12-week supervised high-intensity interval training (HIIT) and strength exercise intervention against general physical activity advice in patients with well-controlled rheumatoid arthritis (RA).
- 87 patients with RA aged 20–60 were recruited. Participants were included if they were diagnosed over 1 year, under stable treatment with low to moderate disease activity.
- The control group included general advice to perform moderate-intensity physical activity ≥ 150 min/week and a home exercise programme.
- The intervention group underwent the following:
 - HIIT: 2x week, cycle ergometer, 4×4-minute intervals at 90–95% HRmax.

Results

- There were significant improvements in V02 Max, muscle strength and body composition.
- Individuals found improvement in overall health scores (VAS-global).
- 78% of the intervention group reported symptom improvement compared to 11% in the control group.
- There was no significant improvements in lipid levels or disease activity.

Reference

Bilberg, A., Mannerkorpi, K., Borjesson, M., Svedlund, S., Sivertsson, J., Klingberg, E., & Bjersing, J. (2024). High-intensity interval training improves cardiovascular and physical health in patients with rheumatoid arthritis: A multicentre randomised controlled trial. British Journal of Sports Medicine, 58(20), 1409–1418.