PEARLS

Practical Evidence About Real Life Situations

Can exercise benefit people with pulmonary hypertension?

Clinical Question	What are the benefits and harms of exercise-based rehabilitation for people with pulmonary hypertension (PH) comparative to usual care or no exercise-based rehabilitation.?
Bottom Line	Based on these studies, this Cochrane review suggests that exercise-based rehabilitation is safe, does not increase mean pulmonary arterial pressure (mPAP), and results in clinically meaningful changes in exercise capacity and quality of life. Inpatient exercise training was typically performed daily whereas outpatient and home-based exercise training was undertaken three to five times per week. Exercise training typically consisted of aerobic exercise of the lower limbs using either cycling or walking on a treadmill or overground. Exercise intensity was regulated with heart rate or using rating of perceived exertion. Whilst there were no studies that only implemented a strength training protocol, most studies included both upper and lower limb strength training within the exercise protocol.
Caveat	There were only five serious adverse events reported across 11 studies and exercise-based rehabilitation was shown not to be associated with an increased risk of serious adverse events. However, it should be noted that studies did not apply a universal definition for adverse events. It is also worth noting that exercise is not entirely without risk in people with PH, and international guidelines currently suggest that exercise rehabilitation should be undertaken by centres experienced in both PH patient care and rehabilitation of compromised patients.
Context	Individuals with PH have reduced exercise capacity and quality of life. Despite initial concerns that exercise training may worsen symptoms in this group, several studies have reported improvements in functional capacity and well-being following exercise-based rehabilitation.
Cochrane Systematic Review	Morris NR, Kermeen FD, Jones AW, Lee JYT, Holland AE. Exercise-based rehabilitation programmes for pulmonary hypertension. Cochrane Database of Systematic Reviews 2023, Issue 3. Art. No.: CD011285. DOI: 10.1002/14651858.CD011285.pub3. This review contains 14 trials with a total of 571 participants.

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Systematic review link:
https://www.cochranelibrary.com/cdsr/doi/10.1002/14651858.CD011285.pub3/full