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| **Interventions to increase exercise capacity in chronic thromboembolic pulmonary hypertension** |
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| **Introduction/Aim:** People with chronic thromboembolic pulmonary hypertension (CTEPH) have reduced exercise capacity resulting in limitations in their ability to participate in activities of daily living and leisure activities. This systematic review aimed to evaluate the effectiveness of interventions to increase exercise capacity in people with CTEPH. **Methods:** Studies involving interventions to improve symptoms of CTEPH and measured exercise capacity using a standardised objective measure were included (PROSPERO CRD42022383240). Two review authors independently screened for inclusion, completed risk of bias assessments and extracted data. Results are for interventions incorporating exercise training.**Results:** 1254 references were screened, 409 full texts reviewed and 122 studies were included. Of these, 6 cohort studies (5 prospective) incorporated exercise training (270 participants, mean age 63 years, mean pulmonary artery pressure 39 mmHg, range 49-100% female) and were of high risk of bias across most domains. Participants were stable on medical therapy (2 studies), post-pulmonary endarterectomy (2 studies), post-balloon pulmonary angioplasty (1 study) or mixed group (1 study). Most interventions included supervised inpatient training and an unsupervised home exercise program and duration ranged from 3–22 weeks. All studies reported 6-minute walk distance as an outcome, with improvements between 33m (95%CI 12–54, 1 study, 8 participants) and 85m (95%CI 60–110, 1 study, 18 participants) following exercise training. One study demonstrated an improvement in peak VO2 of 4.37 ml/kg/min (95%CI 3.45–5.29, 36 participants). The only study that compared exercise training (n=17) to usual care (n=22) reported a between-group mean difference in peak VO2 1 ml/kg/min (95%CI -1–3). No serious adverse were reported during exercise training.**Conclusion:** In people with CTEPH, improvement in exercise capacity has been demonstrated following exercise training interventions; however, the study quality is generally poor. Further work is required to determine the optimal model and timing to optimise exercise capacity.**Grant Support:** None to declare. |