NEJM Journal Watch

Exercise Works to Lower Blood Pressure

A meta-analysis finds that diverse types of exercise regimens can improve hypertension.

Hypertension continues to be a leading risk factor for cardiovascular disease and stroke. Nonpharmacologic interventions such as exercise can be highly effective for lowering blood pressure (BP). To identify optimal exercise training approaches for lowering BP, researchers performed a large-scale pairwise and network meta-analysis of 270 randomized controlled trials, with a pooled size of 15,827 people and evidence of heterogeneity.

The investigators identified evidence that significantly supported the systolic and diastolic BP-lowering effect of all exercise categories: aerobic exercise (–4.5/–2.5 mm Hg); dynamic resistance training (–4.6/–3.0 mm Hg), combined training (aerobic and dynamic resistance training; –6.0/–2.5 mm Hg); high-intensity interval training (–4.1/–2.5 mm Hg); and isometric exercise training (–8.2/–4.0 mm Hg). The top approaches were isometric exercise training and then combined training for reductions in systolic BP and resistance training for diastolic BP reductions. The reductions in systolic BP were greater in cohorts of people with hypertension.

COMMENT

This meta-analysis has several limitations, including the variable quality of the literature; heterogeneity of study designs, training compliance, and program duration; publication bias; and the wide spectrum of patient populations.

The quality of this literature varies, and we need more higher-quality studies. Even so, my take-home message is that many types of exercise regimens likely can have salutary effects on BP — and it is likely more important to steer people to activities they enjoy than to prioritize one type over another. Exercise seems useful for the prevention and treatment of hypertension.

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