

## Review Finds Tailored Exercise Program Can Help With POTS

Postural Orthostatic Tachycardia Syndrome, or POTS, is a condition where a person's heart rate is elevated after standing up or changing position. While this may not sound like a big deal, it can cause light headedness, fainting, blurry vision, headaches, fatigue, brain fog and more. In fact, the quality of life of POTS sufferers has been compared to people on dialysis for kidney dysfunction. Up to half of people with hypermobile Ehlers-Danlos Syndrome (hEDS) also suffer from POTS and about 9-20% of Chiari patients have hEDS, so it stands to reason that POTS affects about 5-10% of Chiari patients.

While it is generally believed that exercise can improve not only subjective POTS symptoms but the actual heart rate of patients after postural changes, the evidence to support this belief is not clear. In addition, POTS patients face barriers to undergoing an exercise program given the nature of the condition. Now, however, a research review from Australia has found that a 3-month, tailored exercise program can greatly benefit POTS patients. The Australian group originally wanted to investigate the impact of exercise-based interventions specifically on hEDS patient with POTS, but there wasn't enough research to do so. Instead, they broadened their review to any adolescents or adults with POTS.

They identified 10 research studies overall, of which 6 were high enough quality to warrant a detailed review. The most common exercise intervention involved a 3-month progression of endurance and resistance training. Subjects begin the program building endurance in a recumbent or semi-recumbent position and gradually progress to standing endurance exercises and then strength training. One study looked at an aquatic exercise program where the depth of the water (and thus the resistance) gradually increased over the study period.

Some of the interventions were done under professional supervision and some were not, which did appear to have an impact. More than 76% of the subjects completed the supervised exercise programs, while only about 40% completed the unsupervised programs.

Although the number of studies reviewed was small, the overall results consistently showed the effectiveness of both the land based and water-based programs. Specifically, they showed that the exercise programs resulted in more than a 50% reduction in the number of people who suffered from POTS in addition to self-reported improvements in quality of life.

Although it may be difficult for Chiari patients with POTS to imagine undertaking an exercise program, it may be worth finding a professional to help create a program based on the existing research.

**Source:** The use and effectiveness of exercise for managing postural orthostatic tachycardia syndrome in young adults with joint hypermobility and related conditions: A scoping review. Peebles KC, Jacobs C, Makaroff L, Pacey V. *Auton Neurosci.* 2024 Apr;252:103156. doi: 10.1016/j.autneu.2024.103156. Epub 2024 Feb 13. PMID: 38401460

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