

Tilt training prevents fainting

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Tilt training effectively prevents fainting, according to research presented today at EHRA 2019, a European Society of Cardiology (ESC) congress. The programme also improved quality of life, reduced the worry and fear about future fainting and enabled patients to return to work.

"Our study included teachers who fainted in the classroom and had to quit work," said study author Dr. Sergio Laranjo, of the Hospital Santa Marta, Lisbon, Portugal. "None of the conventional treatments had helped, but after tilt training they stopped fainting and were able to resume their jobs."

Syncope affects one in two people during their lifetime and is one of the leading emergency care conditions. For some with recurrent episodes it is life-limiting—they end up in emergency or admitted to hospital, and fear stops them working and socialising. Fainting is caused by either a fall in blood pressure and/or number of heart beats. The most common triggers are standing in a hot, crowded space or sitting up too quickly. Some [patients](#) have no [warning signs](#), and medications or devices do not help.

A tilt training programme was designed to retrain the [autonomic nervous system](#) (which controls heart rate and blood pressure) to respond correctly to moving to an [upright position](#).

The response of both the autonomic nervous system and cardiovascular system improved—for example, blood pressure did not drop when

moving upright and cardiac output (the volume of blood pumped with each beat) normalised. But, more importantly, an average of 5.5 years after the programme, 86% of patients had not fainted again. In the rest (14%), average numbers of yearly faints (syncope) and presyncopal episodes (feeling faint) fell significantly by more than half—from five faints to less than two, and from more than 11 presyncopal episodes to less than five.

Twenty-five patients completed the "Impact of Syncope on Quality of Life" questionnaire before tilt training and six months afterwards. It showed that tilt training was significantly associated with less worry, fear, and frustration related to fainting.

"Patients were able to lead full, normal lives after the tilt training programme," said Dr. Laranjo. "Most participants were of working age—the average age was 46—and could return to work."

The study enrolled 102 patients who had fainted at least twice in the previous six months or fainted once and had three presyncopal episodes in the previous year.

The protocol had two parts. In the hospital part, patients lay down on a table that moved up to 60° for six sessions and 70° for three sessions—each time staying raised for 20-30 minutes while electrocardiogram (ECG) and [blood pressure](#) measurements were taken. The nine sessions were spread across three weeks, there was a month break, and the nine sessions were repeated across three weeks. The home-based part consisted of sitting up in bed at 60-70° for 30 minutes daily, sleeping with extra pillows so the head was at 10°, avoiding quick upright movements, drinking around 2.5 litres of water daily, and doing [aerobic exercise](#) for 30 minutes a day.

Aerobic exercise was included to retrain the muscles and cardiovascular

system, noted Dr. Laranjo. "Despite their young age, the fear of fainting caused these patients to become very inactive," he said.

Dr. Laranjo said that many patients with syncope are passed between doctors in different specialties with no effective treatment. "These results show that tilt [training](#) is a safe and [effective treatment](#) option for selected patients with recurrent syncopal episodes," he said.

ESC guidelines recommend that patients are referred to a syncope unit for one-stop multidisciplinary assessment, diagnosis, therapy, and follow-up.

More information: The abstract 'Long-term efficacy of tilt training in the treatment of reflex syncope' will be presented during Poster session 2: Syncope and Bradycardia on Monday 18 March at 08:30 to 18:00 WET (GMT) in the Poster Area.

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