

# Greek dancing improves jumping ability of elderly heart failure patients

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Greek dancing improves the jumping ability of elderly patients with heart failure, according to research published today in the *European Journal of Cardiovascular Nursing*. Patients randomised to Greek dancing jumped higher and faster than their sedentary counterparts. Those who danced had stronger legs and could walk further.

"Greek dancing is an important part of weddings and other celebrations, and is popular among older people," said Zacharias Vordos, an [exercise physiologist](#) at Aristotle University in Thessaloniki, Greece. "We believed dancing would increase the attractiveness of rehabilitation programmes for [patients](#) with chronic heart failure. This was the first study to assess the impact of traditional Greek dancing on jumping ability."

The study included 40 Greek patients with chronic heart failure who were randomly assigned to a three month rehabilitation programme based on traditional Greek dancing or to their usual sedentary lifestyle. Exercise training took place at three municipal gyms and consisted of three 40 to 65 minute weekly sessions. Patients were 73 years old on average and none had done any exercise in the past year.

At the beginning and end of the study, the researchers tested patients' jumping ability using a Myotest-Pro dynamometer. Jumping ability included jump height, amount of time the feet were in contact with the ground, and strength and speed during the jumps. In case patients were hard of hearing, both an audible alarm and visible signal from the

researcher were used to tell patients when to start each jump.

Strength of the [leg muscles](#) was assessed with a leg-chest dynamometer. Endurance of the leg muscles was evaluated using the six-minute walking test.

There were no differences between groups in any of the measurements at the start of the study. After three months, patients who participated in Greek dancing jumped higher and faster than the sedentary patients. They also had stronger legs and could walk further, demonstrating more endurance.

When the researchers compared the performance of the dancing group at the start and end of the study, they found that their endurance and leg strength had improved by 10%, and they jumped 10% higher and around 6% faster. The sedentary group showed no change between the initial and final measurements.

"Our study shows that traditional Greek dancing improves strength, endurance and jumping ability in elderly patients with [heart failure](#)," said Mr Vordos. "Patients who participated in Greek dancing jumped higher at the end of the training programme, probably because they had stronger leg muscles."

He continued: "The physical benefits of Greek dancing should give patients more independence in daily life by helping them to walk and climb stairs. It should also improve their coordination and reduce their risk of falling and being injured. It is possible that Greek dancing also gives cardiac benefit as demonstrated by Zumba fitness programmes with Latin music."

Mr Vordos concluded: "Attendance at the dancing sessions was more than 90% which suggests that this type of cardiac rehabilitation could

attract more patients than the usual programmes. Traditional Greek [dancing](#) is enjoyable and sociable, and we have now shown that it leads to health benefits in [elderly patients](#) with [chronic heart failure](#)."

**More information:** Z. Vordos et al. Impact of traditional Greek dancing on jumping ability, muscular strength and lower limb endurance in cardiac rehabilitation programmes, *European Journal of Cardiovascular Nursing* (2016). DOI: [10.1177/1474515116636980](https://doi.org/10.1177/1474515116636980)

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