

Cardiac patients benefit from home-based high intensity training

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Researchers often study the effects of high intensity exercise on participants in the laboratory. But new research shows that when it comes to cardiac rehabilitation, patients don't need elaborate equipment to measure their exercise intensity and can successfully use high intensity training at home in cardiac rehabilitation. Credit: NTNU Communication Division, Nancy Bazilchuk

Rapid rehabilitation is a must after a heart attack or other cardiovascular event. Different forms of exercise as a part of rehabilitation have been examined by researchers, including high-intensity interval training (85-95 % of maximum heart rate), which has proved to be both a good and efficient form of rehabilitation.

However, most of the studies that document these findings have been conducted in exercise laboratories, where patients and the intensity of their exercise are carefully monitored. But can we expect the same benefits when patients are told to exercise at home?

Researcher and PhD candidate Inger Lise Aamot, from the Cardiac Exercise Research Group at the Norwegian University of Science and Technology (NTNU) in Trondheim, says the answer to this question is yes.

Aamot studied the feasibility of interval training both in a clinical context and in home-based cardiac rehabilitation. She conducted a randomized trial consisting of a 12-week cardiac rehabilitation programme with interval training in two Norwegian hospitals.

Ninety patients with heart disease were enrolled and randomly assigned either to group exercise, treadmill exercise or home-based training. Participants controlled their [exercise intensity](#) by using heart rate monitors, and undertook interval training twice a week.

The results showed that the treadmill group increased its fitness as measured by maximum oxygen uptake significantly more than those who exercised at home, because several patients in the home exercise group did not exercise in line with the exercise program.

However, when Aamot compared only those who actually followed the prescribed program, she found no significant differences between the groups in terms of increases in maximal oxygen uptake. The training intensity was as prescribed in all groups and the majority completed training in 12 weeks.

Aamot remeasured the participants' maximal oxygen uptake again after one year. She found these levels were significantly higher than before

patients started the 12 week training program.

She also found that participants who trained at home for the first 12 weeks showed a strong tendency to have a higher frequency of physical activity compared with those who trained at the hospital.

She concludes that [interval training](#) for [cardiac rehabilitation](#) can be implemented efficiently both in the clinic or at home, but that home [exercise](#) seems to contribute most positively to a long-term physically active lifestyle.

More information: [cpr.sagepub.com/content/early/ ...
87313488299.abstract](https://cpr.sagepub.com/content/early/2013/12/05/087313488299.abstract)

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