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Poster abstract

## Using a game computer to stimulate activity at home in heart failure patients. The study design

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### Abstract

**Introduction:** Exercise is important self care behaviour and is related to mortality in heart failure (HF). It is not always easy for HF patients to start exercising in the conventional ways (rehabilitation centre, fitness club). Virtual reality might be a solution to increase exercise in the home environment. It is conceivable that computer-based rehabilitation programs could be developed using current, widely available, affordable virtual reality platforms, such as the Nintendo Wii.

**Aim:** The aim of the study is to assess the feasibility to increase daily activity in HF patients using the Wii game console.

**Design:** A descriptive study design will be used with a baseline measurement before starting the use of the Wii game computer and four follow-up measurements, at 1 week, 5 weeks, 3 months and 6 months after the first use. Forty HF patients who are diagnosed with symptomatic HF in a stable condition will be included in the study. Patients with mobility or balance problems, with pacemaker or other implanted medical device, or patients in NYHA IV will be excluded. Patients need to be older than 18 years of age, but there is no upper age limit. The patients in the study will be recruited from the HF clinic in VrinnevisjukhusetNorrköping Sweden.

**Expected results:** Results of the study will provide an answer to the question if the virtual reality application the Nintendo Wii is a feasible and useable device to increase the daily activity of HF patients in the home situation. This insight is needed in order to develop a computer-based, widely available, affordable rehabilitation program in home situations of HF patients.

### Keywords

**heart failure, virtual reality, home-based, exercise, computer-based, rehabilitation**

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