

## **The prevalence and determinants of daily physical activity in heart failure patients: a performance based cohort study**

The HEART\*BEAT project

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### **Summary**

Heart failure (HF) has worldwide a high prevalence and mortality rate. HF patients are often advised to limit their physical activity, despite that daily physical activity (DPA) improves exercise tolerance and other symptoms of HF, slow down the progression of the disease and improves survival rate. Up to now, little is known about the performance based DPA status in HF patients. We hypothesize that most HF patients are sedentary. In addition, we suggest DPA in HF patients is affected by a number of psychosocial determinants like self-efficacy, social support, (intrinsic) motivation, depression and coping style.

A cross-sectional cohort study will be used to examine DPA in HF patients and the effect of a number of psychosocial determinants on DPA. We will include 60 out clinic patients at the Heart Failure Centre Groningen (NYHA II-III). DPA will be measured with the Sensewear Pro3 armband accelerometer (48 hours) and the SQUASH questionnaire. To measure the psychosocial determinants which might be related to DPA, we will use Bandura's Exercise Self-Efficacy Scale, the Social Support for Exercise Behaviors Scale, the Self-Regulation Questionnaire- Exercise, the Hospital Anxiety and Depression Scale and the Brief COPE. All questionnaires are valid and reliable.

Descriptive statistics will show DPA of the participants and multiple regression analysis will be performed to analyze the role of self-efficacy, social support, (intrinsic) motivation, depression and coping style.

Based on the results of this study, we await to develop a relevant program, additional to usual rehab programs, to enhance DPA in HF patients. In addition, the results of this study are relevant for the development of healthy policy by health insurance companies and the Ministry of Health, Welfare and Sports. Especially the NASB (Nationaal Actieplan Sport en Bewegen) campaign of the Ministry of Health, Welfare and Sports and the initiative of the Minister of Health, mr Klink, to enhance DPA in patients with chronic conditions can gain from the results of this study.

The total project time is 10 months. No major problems with feasibility are expected, because of the simplicity of the design/approach and the minimal burden for participants.

### **Keywords:**

Daily physical activity, heart failure, accelerometer, self-efficacy, social support, intrinsic motivation, depression, coping.

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