

## Changes in coronary heart disease risk profile of adults with intellectual disabilities following a physical activity intervention

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### Abstract

**Background** Regular physical activity is one of the modifiable risk factors for coronary heart disease (CHD). With an increasing age profile and similar patterns of morbidity to the general population, persons with intellectual disabilities (ID) and their caregivers would benefit from data that indicate CHD risk factors. Knowledge of the CHD risk factors and the changes a physical activity intervention may have on these risk factors will facilitate future intervention programmes.

**Methods** A cohort of 100 men and women between the ages of 21 and 73 years with ID living in a community group home in the North-West Province of South Africa was recruited. A CHD risk profile was compiled by means of a questionnaire and physical assessment that included resting blood pressure, body mass index, non-fasting glucose and cholesterol and cardiorespiratory fitness. A 12-week physical activity intervention was then conducted 3 days/week after which the baseline measurements were repeated.

**Results** The results indicated that 85% of the participants were inactive, while 67% were overweight and obese. Hypertension (6.1%) and smoking (6.1%) were relatively low in this population with ID. Glucose concentrations above the recommended cut-off values were observed in 28% of the participants. Total cholesterol concentrations above normal were measured in 23% of the participants. The physical activity intervention reduced inactivity to 50% and resulted in a significant increase in cardiorespiratory fitness and a decrease in percentage body fat in both men and women.

**Conclusion** Inactivity is a major risk factor in this population with ID living in a community group setting. The implementation of the physical activity intervention significantly reduced the risk factors for CHD.

**Keywords** coronary heart disease, intellectually disabled, physical activity

### Introduction

The mortality rate in people with intellectual disabilities (ID) because of coronary heart disease (CHD) is reported to be similar to that of the general population (Carter & Jancar 1983; Wells *et al.* 1997; Janicki *et al.* 1999; Patja *et al.* 2001). A

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