

## Physical Activity in Adults at High Risk of Cardiovascular Disease

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**Aim** Our aim was to objectively measure physical activity in adults at high risk of cardiovascular disease (CVD) and to determine the proportion meeting current recommended levels of physical activity (at least 30 minutes of moderate intensity physical activity daily).

### Methods

Adults aged 40-70 years at high CVD risk (Framingham derived 10-year CVD risk  $\geq 20\%$ ) from four general practices in Oxfordshire, UK (n=1333) were invited to take part. Additional inclusion criteria included no previous history of CVD and no disability or other condition affecting the ability to walk. 187 adults took part. We used accelerometers to measure physical activity for seven consecutive days. Participant demographic information, anthropometric and biochemical parameters were also collected.

### Results

For those invited to participate the median (IQR) age was 60.4 (53.4, 65.0) years and 61% were male. Participants were median (IQR) age 62.4 (56.3, 66.1) years 67% men, 98% white Caucasian, 18% had type 2 diabetes, 2% type 1 diabetes and 80% no known diabetes. There were 19% current smokers. Mean (SD) waist circumference was 97.9 (12.4) cm, blood pressure 141.4 (18.2)/82.2 (10.7) mmHg, total:HDL cholesterol ratio 3.9 (1.1). Their median (IQR) BMI was 27.4 (25.2, 30.8) kg/m<sup>2</sup>, HbA1c 5.5 (5.3, 5.8) %. Mean (SD) estimated 10-year CVD risk was 42.9 (16.3) % using the Framingham risk equations for individuals without diabetes and the UKPDS Risk Engine version 3 for individuals with diabetes. Median (IQR) age at leaving full time education was 17 (16, 21) years and index of multiple deprivation score 13.8 (6.9, 15.5) (England average 21.6).

Activity of moderate or greater intensity was mean (SD) 45.7 (24.1) minutes per day. 28% of participants were not meeting the recommended level of daily physical activity.

### Conclusions

In this study three quarters of participants at high CVD risk who attended for CVD risk assessment are meeting physical activity targets as defined by the above criteria. This may be a reflection of the population sampled, which was largely of high socioeconomic status. Despite this there is still scope for increasing physical activity in this group as a method of CVD risk reduction.