

# Objective vs. self-reported physical activity and sedentary time: Effects of measurement method on relationships with risk biomarkers

Celis-Morales, Carlos A.

Perez-Bravo, Francisco

Ibañez, Luis

Salas, Carlos

Bailey, Mark E.S.

Gill, Jason M.R.

**Purpose:** Imprecise measurement of physical activity variables might attenuate estimates of the beneficial effects of activity on health-related outcomes. We aimed to compare the cardiometabolic risk factor dose-response relationships for physical activity and sedentary behaviour between accelerometer- and questionnaire-based activity measures. **Methods:** Physical activity and sedentary behaviour were assessed in 317 adults by 7-day accelerometry and International Physical Activity Questionnaire (IPAQ). Fasting blood was taken to determine insulin, glucose, triglyceride and total, LDL and HDL cholesterol concentrations and homeostasis model-estimated insulin resistance (HOMAIR). Waist circumference, BMI, body fat percentage and blood pressure were also measured. **Results:** For both accelerometer-derived sedentary time (<100 counts.min<sup>-1</sup>) and IPAQ-reported sitting time significant positive (negative for HDL cholesterol) relationships were observed with all measured risk factors - i.e. increa