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PHYSICAL ACTIVITY AND ARTERIAL STIFFNESS IN AN ELDERLY POPULATION: RESULTS OF THE SAPALDIA3 COHORT STUDY

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Objectives:

Physical activity (PA) is an established mean for the prevention of non-communicable diseases. We investigated the impact of PA on arterial stiffness as a vascular biomarker in an elderly population of the SAPALDIA3 cohort study.

Methods:

Arterial stiffness was measured oscillometrically (Cardio-Ankle Vascular Index, CAVI; heart-ankle pulse wave velocity, haPWV). The International Physical Activity Questionnaire (IPAQ) long version was administered to classify the subjects' PA level in a subsample of the cohort (917 men, 48.2%, 63.4±7.8yrs, range 50-81yrs).

Results:

PA was classified into low (10.5%), moderate (28.9%) or high (60.6%) and in inactive (27.6%) or active (72.4%) categories according to IPAQ and Swiss PA recommendations (cut-off 150 min of moderate to vigorous PA per week), respectively. CAVI and haPWV decreased significantly as PA increased in univariate analyses (see Fig. 1), however not after adjustment for age, sex, body mass index, mean arterial pressure, heart rate, education and smoking status for IPAQ but for Swiss PA recommendations ($p \leq 0.01$ for CAVI and haPWV).

Conclusion:

Elderly individuals complying with the Swiss PA recommendation have lower arterial stiffness reflecting better vascular health.

