

[PP.02.62] BLOOD PRESSURE CIRCADIAN PATTERN AND PHYSICAL ACTIVITY IN HEALTHY SUBJECTS. EVIDENT STUDY

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**Objective:** To analyze the relationship of physical activity, assessed objectively and subjectively, with peripheral (office and ambulatory) and central blood pressure.

**Methods:** Multicenter cross-sectional study (EVIDENT Study). We included 587 patients (aged mean  $54.31 \pm 13.57$ ), females 57.9%) without arteriosclerotic diseases. Measurement: Office, 24 h ambulatory and central blood pressure (Bpro (A-pulse)). Physical exercise was measured by Seven PAR-day questionnaires (METS/hour/week) and an Accelerometer (counts/s).

**Results:** The mean METS/hour/week was  $26.77 \pm 38.45$  and Counts/second  $4.32 \pm 2.75$ . We considered sedentary by 7 PAR-day to 357 (59.1%). We don't found difference between active and sedentary subjects in office, ambulatory, neither central blood pressure. However, the blood pressure nocturnal dipping of actives subjects was higher than in sedentary in systolic ( $11.71 \pm 5.71$  vs.  $10.20 \pm 7.39$ ,  $p = 0.009$ ) and diastolic blood pressure ( $11.66 \pm 5.39$  vs.  $10.28 \pm 9.58$ ,  $p = 0.047$ ). Systolic and diastolic night/day ratio were 0.89 in sedentary and 0.88 in active subjects ( $p < 0.05$ ). Physical activity in nonreducing blood pressure patterns (no dipper and riser) was less than dipper pattern ( $p < 0.05$ ), evaluated both METS/h/week as counts/s. We found positive correlation of the decrease in systolic and diastolic blood pressure (and negative ratio of night/day) with physical activity as Mets/h/week ( $r = 0.14$ ,  $r = 0.12$ ,  $p < 0.05$ ) and counts/s ( $r = 0.16$ ,  $r = 0.11$ ,  $p < 0.05$ ). Office, daytime and central blood pressure, were positively correlated with physical activity measured with Mets/hour/week ( $r = 0.09$ ,  $r = 0.012$ ,  $r = 0.09$ ,  $p < 0.05$ ) respectively, but not measured in counts/s.

**Conclusion:** We found a positive association between physical activity, measured subjectively and objectively, and the nocturnal blood pressure dipping. However with both peripheral and central blood pressure only found positive correlation with the subjective measure of exercise.

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