



Conference Abstract

P.13 Pulse Wave Velocity Trajectories during COVID-19 Epidemic: Effect of Lockdown on Cardiovascular Health

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ABSTRACT

Aim: To investigate PWV trajectories before and during the lockdown period among Withings Body Cardio bathroom scale users in France, in which a strict total lockdown was imposed, and Germany, in which partial social distancing measures were adopted.

Methods: The study population is constituted by Withings BodyCardio Bathroom scale users with at least one recorded weight in the period from week 8 (start 17 February 2020) to week 17 of 2020 (end 26 April 2020) in France ($n = 14,131$) and Germany ($n = 20,104$). Subgroup analysis in owner of activity trackers and the blood pressure (BP) oscillometric devices were conducted. Linear growth curve modeling and clustering trajectories analysis were used.

Results: French participants experienced during total lockdown a marked reduction in PWV, weight and physical activity, with no change in BP. German participants showed a higher PWV at baseline (difference 0.29 m/s, $p < 0.0001$), but French participants showed a steeper reduction over time (difference in slope -0.8 cm/s/week, $p < 0.0001$). Conversely, German participants had a greater weight at baseline than French participants, but also a greater weight reduction during lockdown, with a marginal reduction in PWV. In the French population three clusters were identified: decreasing (24.4%), stable (56.6%) and increasing PWV (19.0%). Decreasing and increasing PWV clusters had similarly higher PWV at baseline than stable PWV cluster, whereas only decreasing PWV cluster showed a significant weight reduction (-500 g).

Conclusion: Total lockdown induced a reduction in PWV in a significant proportion of French bathroom scale users, thus representing an opportunity to improve their cardiovascular health.

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