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Unhealthy behavior and risk of hypertension: the CONSTANCES population based cohort

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ABSTRACT

OBJECTIVES - We aimed to evaluate the individual and combined association between unhealthy behavior and hypertension (HTN). **METHODS** - We conducted cross-sectional analysis using data from the population-based cohort study CONSTANCES. Blood pressure measurements were taken based on standardized operational procedures. Dietary adherence was done following the dietary approach to stop HTN diet. We considered heavy alcohol drinking, sedentary-level physical activity, low/medium dietary adherence and overweight/obesity as unhealthy behaviors. Participants' characteristics were compared according to the number of unhealthy behaviors and the association between HTN and unhealthy behaviors was estimated using logistic regression. **RESULTS** - A total of 86 448 volunteer participants were included and the prevalence of HTN was of 31.1%. Of those with HTN, 8.2, 33.0, 44.3 and 14.5% exhibited 0, 1, 2 or at least 3 unhealthy behaviors, respectively. In both sexes, the prevalence of HTN increased with low/medium dietary adherence compared with high ($P < 0.01$), in overweight/obese compared with normal BMI ($P < 0.001$), with heavy alcohol consumption compared with moderate or never ($P < 0.05$) and with sedentary physical activity level compared to high in women only ($P = 0.049$). Combination of several unhealthy behaviors was associated with increased odds of HTN (P trend < 0.001); men reporting 2 or at least 3 unhealthy behaviors had an adjusted odds ratio of HTN of 1.77 and 2.29, respectively, while women had an adjusted odds ratio of 1.71 and 2.14, respectively. **CONCLUSION** - Individual and combined unhealthy lifestyle factors were strongly associated with HTN in this large population-based study.

KEYWORDS: Alcohol consumption; BMI; Dietary approach to stop hypertension diet; Epidemiology; Hypertension; Lifestyle behavior; Physical activity

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