

## Singh R.B., Fedacko Jan, Wilson D.W.

Halberg Hospital and Research Institute, Moradabad, India; (2) Faculty of Medicine, PJ Safaric University, Kosice, Slovakia; School of Medicine and Health Sciences, Durham, UK.

## PREVALENCE, AWARENESS, CONTROL AND RISK FACTORS OF PREHYPERTENSION AND HYPERTENSION IN FIVE INDIAN CITIES.

**Background:** Studies detailing prevalence of prehypertension and hypertension in India are meager.

Methods: Men and women, over 25 years of age were included. Dietitian-administered questionnaire followed physician evaluation, examination and blood pressure measurement. Cross-sectional survey screened 6940 subjects, (3507 men (M), 3433 women (W): 1993-96) from cities located in five corners of India (Kolkata, n=900; Nagpur, n=894; Mumbai, n=1542; Thiruanantpuram, n=1602; Moradabad, n=2002). Diagnosis for prehypertension (BP 130-139/85-89 mm Hg) and hypertension (BP≥140/90 mm Hg) were based on European Society of Cardiology criteria.

**Results**: Prevalence of prehypertension and hypertension, respectively, was significantly greater in South India (Trivandrum: W 31.5;31.9%; M 35.1;35.5%) and West India (Mumbai: W 30.0;29.1%; M 34.7;35.6%) compared to North India (Moradabad: W 24.6;24.5%; M 26.7;27.0%) and East India (Kolkata: W 20.9;22.4%; M 23.5;24.0%). Subjects with prehypertension and hypertension were older, with higher BMI, central obesity and of sedentary behavior. They

had higher salt and alcohol intake, with greater oral contraceptive usage (W). Multivariable logistic regression analysis, revealed strong positive associations of hypertension with age, central obesity, BMI, sedentary lifestyle, salt and alcohol intake and oral contraceptive usage (W). Fruit, vegetable and legume intake showed inverse associations, tobacco intake showed none. One in four with hypertension was aware of their diagnosis and of those receiving treatment, one in three exhibited control.

**Conclusions**: There is little awareness that prehypertension and hypertension are public health issues in India. Ageing population, central obesity, sedentary lifestyle, excessive salt and alcohol, lower fruit, vegetable and legumes intake increases risk for blood pressure elevation. Lack of general and health education appear to be common cause for lack of awareness and control of blood pressures.

Correspondence.
Prof.Dr RB Singh, MD,FICN
Halberg Hospital and Research Institute,
Civil Lines, Moradabad-10 (UP)244001,India