

## **Diet and Nutrition Status of Urban Population of India**

### **Report on Diet and Nutritional Status of Urban Population and prevalence of obesity, hypertension, diabetes and its associated non-communicable diseases released by NIN.**

This report is based on comprehensive urban nutrition survey that was carried out by National Nutrition Monitoring Bureau (NNMB), during the year 2015-16, with an objective to assess 'diet and nutritional status of urban population and the prevalence of obesity, hypertension, diabetes and dyslipidaemia among representative urban population from 16 states of India.

Several studies carried out in the developing countries, including India, have been reporting the double burden of disease, i.e. prevalence of both under nutrition and over nutrition among its urban population. Also reported is an increase in the diet related chronic Non-Communicable diseases (NCDs) like overweight and obesity, insulin resistance, diabetes mellitus, hypertension, other cardiovascular diseases (CVDs), cancers etc.

Major causes for the increase in incidences of NCDs are generally attributed to nutrition transition that is a change in the food habits, sedentary behaviour and unhealthy lifestyles and other high risk behaviours. About 2.6 million Indians are predicted to die of coronary heart disease (CHD), which constitute a whopping 54.1% of all CVD deaths in India by 2020. In addition, CHD in Indians has been shown to occur prematurely, that is, at least a decade or two earlier as compared to those reported from developed countries. Hypertension is an important risk factor for CVD alongside overweight and obesity and is a major public health concern in developing countries around the world.

This study was conducted by NIN scientific teams and various ICMR and non-ICMR institutes who also participated and carried out the first of its kind investigation, in a very large sample population during the year 2015-16 under the continuous guidance of the Director, National Institute of Nutrition, Hyderabad and DG, ICMR, New Delhi.

#### **The salient features of the study:**

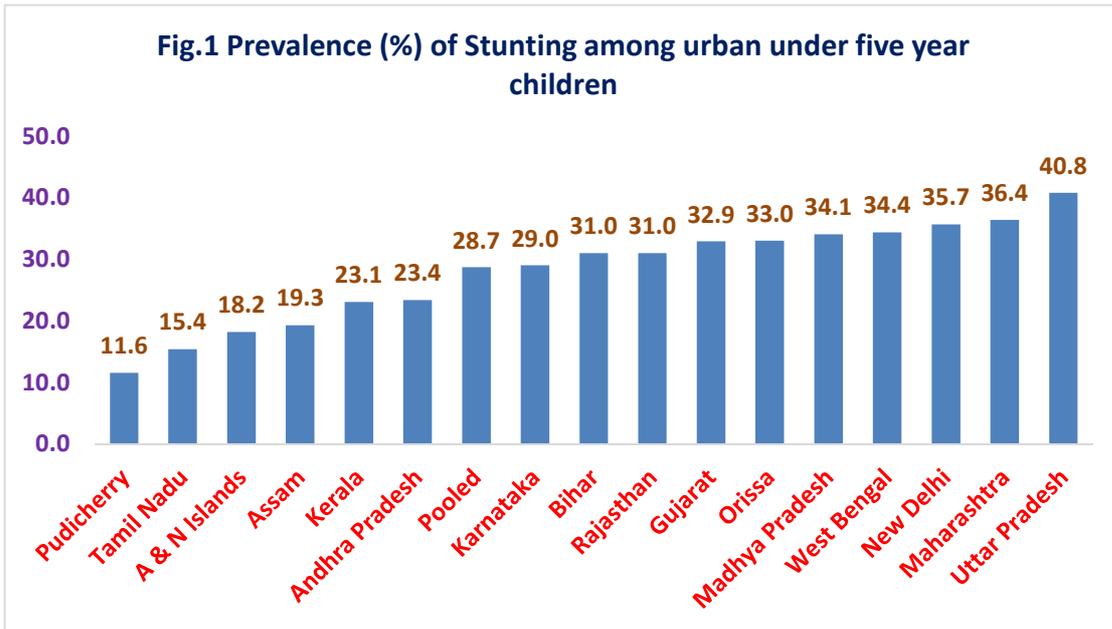
A total of **1.72 lakh** subjects from 52,577 households (HHs) from more than 1000 wards and belonging to 16 states in India were covered for their socio-demographic status, anthropometry and clinical examination for nutritional deficiency signs. Food and nutrient information was collected through 24 hour dietary recall method from 44,883 individuals. A total of 5,642 mothers who have children of <36 months were interviewed for information on antenatal care, infant and young child feeding (IYCF) practices as well as of their coverage for immunization, iron & folic acid tablets and massive dose of vitamin A supplementation. The blood pressure measurements was carried out in 39,415 men and 54,436 women who were  $\geq 18$  years of age, while a total of 18,130 men and 22,672 women were covered for fasting blood glucose estimation, and the lipid profile of 18,392 men and 22,989 women were estimated for this study.

## Key Findings:

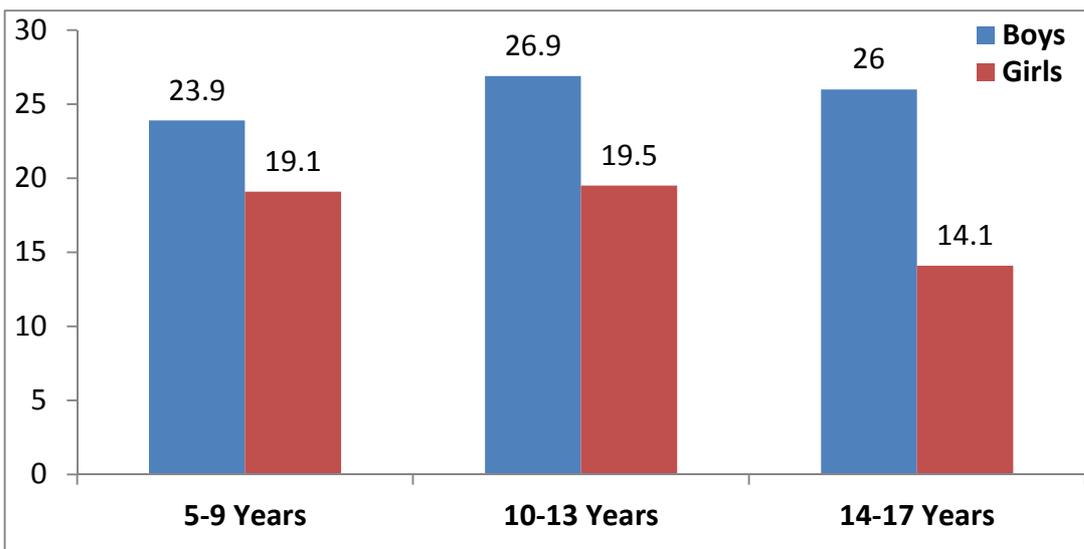
The facts that emerged from this study are highlighted below:

- The average intake of cereals and millets was 320g/CU/day, while the intake of pulses and legumes was 42g/CU/day, which is on par with the levels suggested by ICMR.
- The intake of green leafy vegetables (GLV), milk & milk products and sugar & jaggery were lower than the suggested level of ICMR. The intake of all nutrients was lower than that suggested by Indian Council of Medical Research. Only half of the population who fall in the age bracket of 1-3-years (56%), two thirds (68%) of the population of 4-6-year old children and half of the population of pregnant women (56%) were consuming adequate amounts of both protein and calories.
- Even though the prevalence among the population of underweight (25%), stunting (29%) and wasting (16%) for children who are under five year old was lower than the rural and tribal children, these figures are still very high when compared to those from developed countries. The prevalence of stunting was highest in the States of Uttar Pradesh (40.8%), followed by Maharashtra (36.4%), New Delhi (35.7%) and West Bengal (34.4%) and lowest in Pudhucherry (11.6%) **Fig.1**. There was no gender differentials observed in the nutritional status of under five year old children.
- However, the prevalence of undernutrition (thinness) was significantly higher in 6-11 year old and 12-17 year old boys as compared to girls of the same age group (**Fig. 2**). It was observed that even in urban communities, the infant and young child feeding (IYCF) practices were not encouraging. The simple practice of initiation of breast feeding within the first hour of delivery was only 42% and one fourth of mothers fed pre-lacteal feeds like honey, glucose/sugar water, goats milk etc., immediately after birth.
- The factors contributing for high undernutrition amongst the under five year old children could be due to low literacy status and since they hail from SC/ST community, low per capita income and also since their households lack a sanitised toilet facility.
- The prevalence of hypertension (SBP  $\geq$ 140mm Hg and/or DBP $\geq$ 90mm Hg) among urban men and women was found to be 31% and 26%, respectively (after adjustment for age). It was maximum in the state of Kerala (31 to 39%) and lowest in Bihar (16% to 22%) (**Fig. 3**).
- The prevalence of tobacco smoking among men was 16%, while alcohol consumption was estimated to be 30% for men.
- The prevalence of diabetes (fasting blood sugar  $\geq$ 126mg/dL) among men and women (after adjustment for age) was 22% and 19%, respectively. It was significantly associated with overweight and obesity, physical inactivity, hyperlipidaemia (**Fig. 4**).
- It was also significantly associated with high per cent body fat, and those who indulged in risk behaviours like abnormal consumption of tobacco and alcohol.

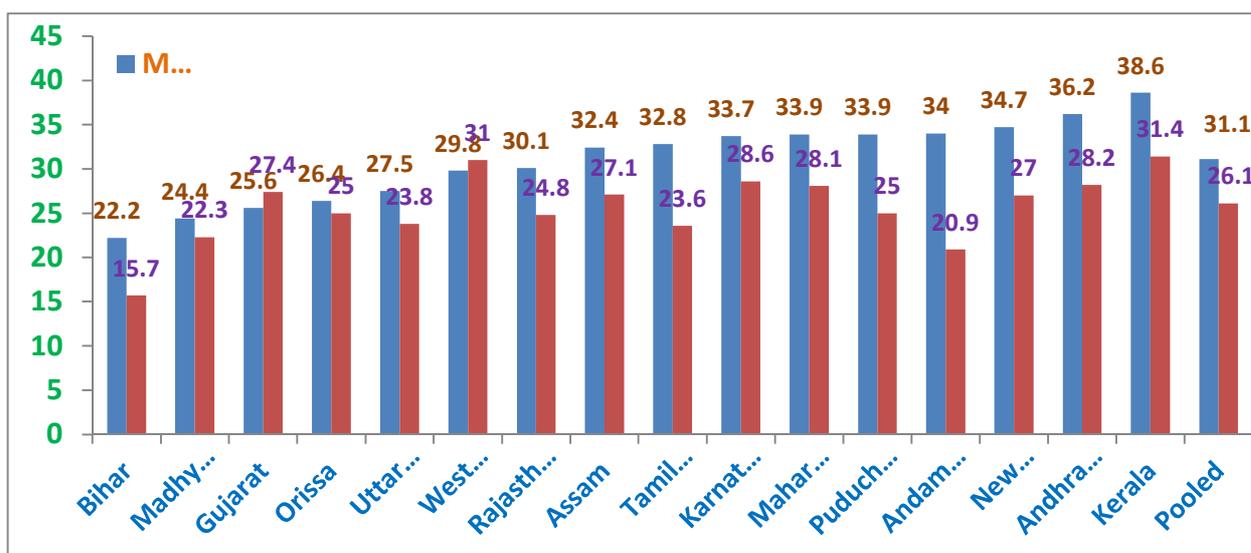
There is a need to sensitize the community on the causes and consequences of obesity, hypertension, diabetes, and consumption of high fats from their diets etc., through health and nutrition education by using IEC activities, and behaviour change communication (BCC) methods. People also need to be educated on the benefits of healthy lifestyles, physical activities and healthy dietary habits as it enable us to prevent non-communicable diseases and to promote overall health.



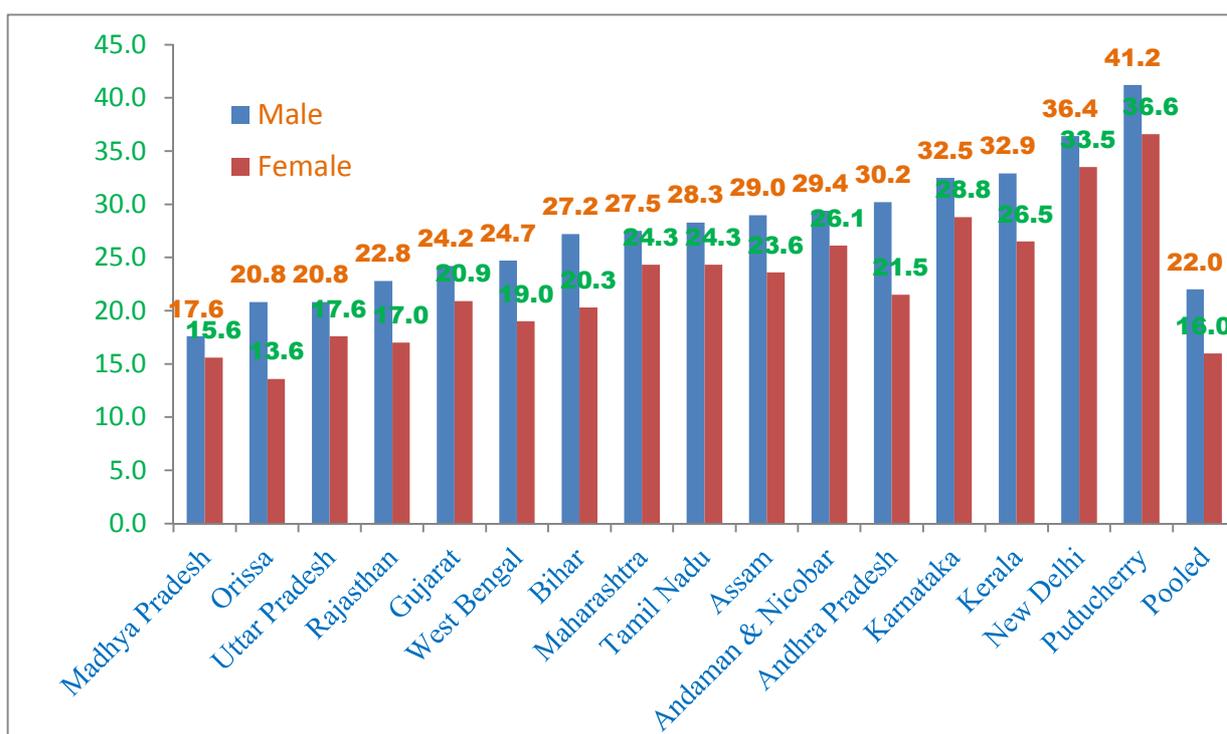
**Fig. 2 Prevalence (%) of Thinness among School age children and Adolescents**



**Fig 3 Prevalence (%) of Hypertension\* among urban Men & Women**



**Fig 4 Prevalence (%) of Diabetes mellitus among urban men and women (≥18 Years) by gender and State**



**Full report is available at:**

‘Diet and Nutritional Status of Urban Population in India and Prevalence of Obesity, Hypertension, Diabetes and Hyperlipidaemia in Urban men and women’ in [www.nmmbindia.org](http://www.nmmbindia.org).