

### **Short Communication-3**

## **Assessment of Overweight and Obesity among Urban Adult Males of Amritsar (Punjab)**

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#### **Abstract**

In the present study, an attempt has been made to report the prevalence of overweight and obesity in 1,000 adult urban males of Amritsar city of Punjab. For the assessment of overweight and obesity, height and weight measurements were taken on each subject. The prevalence rate of overweight and obesity was calculated according to the latest WHO critical limits of body mass index (BMI). The observations revealed that the prevalence of overweight and obesity in the present sample was 29.8% and 21.7%, respectively.

Key Words: **Body Mass Index, Obese, Underweight**

#### **Introduction:**

According to World Health Organization (1998), one of the greatest public health challenges in the first-half of the 21<sup>st</sup> century is preventing the epidemic of obesity. Obesity is now so common that it is replacing the mere traditional public health concerns, including under nutrition and infectious diseases, and has proved to be one of the most significant contributors to ill-health. An increasing dichotomy can be seen in many developing countries whose populations are facing the serious problems of hunger and under nutrition as well as overweight and obesity (Shetty, 2003). For example, although the majority of Indian citizens are undernourished, a growing sector of urban population and high-income groups are becoming overweight and obese. Punjab is an economically advanced and physically robust state of India. Urban upper middle

class of Punjab has achieved a socio-economic status similar to that of the developed countries, especially with respect to living conditions and nutritional intake. The socio-economic development has created changes in dietary intake, food consumption patterns and physical activity levels. All these factors have contributed to the problem of overweight and obesity. Therefore, in the present study, an attempt has been made to report the prevalence of overweight and obesity in urban adult males of Amritsar.

#### **Materials and Methods:**

This study was approved by the Ethical Committee of Guru Nanak Dev University, Amritsar (Punjab). The consent for participation was obtained from each subject. The aims and importance of the study were explained to each subject.

In this cross-sectional study, the data from 1,000 adult males of age 30-50

years were collected during the year 2003-2004. All subjects were of Punjabi origin and belonged to upper middle class with income ranging from Rs. 10,000 to Rs. 20,000 per month. The majority of data were collected from residential colonies occupied by well-to-do officers, professors, doctors and businessmen of Amritsar city of Punjab. The information regarding age, education, occupation, income and health status was collected through the pre-tested interview schedule from each individual. For the assessment of obesity, height and weight measurements were taken on each subject using standard protocol (*Weiner, J.S. & Lourie, 1981*). The protocol and clinical definition of obesity is based on body mass index (BMI). Therefore, the value of BMI was calculated for each subject. The suggested critical limits of BMI by *WHO/IOTF (2000)* were utilized for the assessment of obesity as given below

Classification	BMI (kg/m <sup>2</sup> )
Underweight	< 18.5
Normal range	18.5-22.9
Overweight	23.0-24.9
Obese-I	25.0-29.9
Obese-II	≥ 30.0

**Results:**

**Table 1: Classification of urban middle class males of Amritsar according to body mass index (BMI)**

BMI	N	%age prevalence	Nutritional status
< 18.5	34	3.4	Undernourished
18.5-22.9	451	45.1	Normal
23.0-24.9	298	29.8	Overweight
25.0-29.9	148	14.8	Obese-I
≥ 30.0	69	6.9	Obese-II

Table 1 presents the distribution of all subjects according to BMI classification. Out of 1,000 adult males, only 34 males (3.4%) were underweight and 451 (45.1%) were normal while 298 (29.8%) were overweight, but 148 (14.8%) were in obesity grade I and 69 (6.9%) were in obesity grade II. Thus, the overall prevalence of overweight and obesity in this sample was 29.8% and 21.7%, respectively.

**Discussion:**

**Table 2: Prevalence of overweight and obesity among adult males in India**

Study group	BMI	Prevalence rate (%)	Investigator
Delhi urban males	> 25	21.30	(5)
Population of Hyderabad	> 25	23.90	(6)
Urban Delhi	> 25	29.20	(7)
Andhra Pradesh urban males	≥ 25	38.18	(8)
Kashmiri population	≥ 25	7.00	(9)
Urban slums of Delhi	> 25	13.30	(10)
Punjabi urban males	≥ 23	51.50	Present study

It is apparent from the present study that more than half (51.5%) of the adult males belonging to middle class in Amritsar city are currently overweight and obese (Table 1). A comparative picture of the prevalence of overweight and obesity in various populations (Table 2) no doubt suffers from the limitations of periodic dissimilarity of field work methodology and criterion used in defining obesity, but there is higher prevalence of overweight and obesity in Punjabi adult males as compared to other populations of India (*Gopinath et al, 1994, Visweswara et al, 1995, NFI, 1999, Venkatramana and*

Reddy, 1999, Zargar et al, 2000, Mishra et, 2001). A report from urban India (Gopalan, 2001) also suggests that the prevalence of obesity varies with socio-economic status with those in upper strata having higher prevalence rate than those in lower socio-economic groups.

The prevalence of obesity in urban middle class males of Punjab is no doubt less than that has been reported for industrialized western countries (WHO, 1998), but developing countries, like India, can ill-afford to bear the financial cost of obesity and its consequences. The prevention and control of this problem must, therefore, claim priority attention. Hence appropriate precautionary measures to prevent further progression of the problem into epidemic must be taken right at this stage. Because, if the present trends of overweight/obesity continue, the situation can get worse even within a decade and overweight could emerge as a single most important public health problem in adults of Punjab.

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