

## Prevalence of Hypertension in Obese Business Community of Sukkur

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### Abstract

**Objective:** To find out risk of hypertension in obese subjects involved in business profession.

**Methodology:** This was a community based, observational, cross sectional study, among male shop keepers only. 86 obese personnel were selected to include in this study.

**Results:** Among these shop keepers, 22 had normal blood pressure. 57 had blood pressure ranging from 140/95 mmHg to 160/100 mmHg and 6 had blood pressure 180/110 mmHg and 1 had blood pressure 200/110 mmHg

**Conclusion:** Findings of this study indicate strong need to provide awareness about benefits of regular walk/exercise as well as health education about demerits of obesity in business related personnel.

**Keywords:** Obesity; Hypertension; Business community

body mass index less than 20 kg/m<sup>2</sup> [3]. Study revealed a high prevalence of overweight, central obesity and hypertension amongst a young South Asian male migrant population in the UAE. The prevalence of risk factors for Non-Communicable Diseases (NCDs) in Pakistan is expected to increase as further epidemiologic, nutritional and demographic changes occur [4]. Causal mechanisms for obesity associated hypertension include increased sympathetic nervous system activity, increased renal sodium retention secondary to insulin resistance/hyperinsulinemia, and obesity mediated inflammation [5].

### Description

This was a community based, observational, cross sectional study, among male shop keepers only. The height and weight of 238 shop keepers were recorded and among these, 86 were found obese and were selected to include in this study. Their ages ranged from 16 to 75 years, mean age being around 35 years [6]. Blood pressure was recorded in all of these persons and noted. An informed consent was obtained from all of participants. Locality of these shop keepers was Victoria market, Gharib abad, new pind, purana Sukkur and Shahi bazar (Sukkur city) [7]. In our study, 3 cases were 109 kg and above, which was highest weight, 6 cases were 83 to 108 kg and remaining 77 cases had weight 70-82 kg. Regarding BMI, 62 were with BMI 30 to 34.9 (obese class I), 20 were with BMI 35 to 39.9 (obese class II), and 4 were with BMI 40+ (obese class III). Among these shop keepers, 22 had normal blood pressure. 57 had blood pressure ranging from 140/95 mmHg to 160/100 mmHg and 6 had blood pressure 180/110 mmHg and 1 had blood pressure 200/110 mmHg.

- Normal <130/80
- High normal 130-139/85-89
- Hypertension
- Stage 1 140-149/90-99
- Stage 2 150-159/100-109
- Stage 3 >160/110

17 shop keepers had different additional symptoms but only 9 were taking regular medicines. Others had no symptoms (Table 1).

### Introduction

Hypertension is one of most common found cardio vascular ailments in the community. It is particularly more abundant in those who are obese. Since obesity is a common accompaniment of small business holders who sit most of time at their shops and find no time for exercise, therefore it is necessary to work up for risk of hypertension in these personnel [1]. Obesity and obesity are risk factors for hypertension, dyslipidemia, and diabetes mellitus. The Framingham Study demonstrated that obesity was about twice as prevalent in obese men and in obese women as in men and in women with a normal Metropolitan relative weight [2]. The Framingham Study also demonstrated that both men and women had an increase in blood pressure with increased overweight. In 19,841 Canadians aged 18 to 74 years, the prevalence of hypertension in men and in women increased with increasing body mass index, especially in those aged 18 to 34 years. In the younger adults, men and women with a body mass index of more than 30 kg/m<sup>2</sup> had a 5 times higher prevalence of hypertension than persons with a

Obesity group	Class interval	Count
Obese class 1	30-34.9	62
Obese class 2	35-39.9	20
Obese class 3	40-onwards	4
Total		86

**Table 1:** BMI of shop keepers (n=86).

Our study shows that a reasonable number of shop keepers were obese and most of them were unaware of its complications. Majority of them had none or minimal time for daily walk/exercise [8,9]. Those who were having symptoms or were on medicinal therapy, also did not consider sedentary sitting as root cause for it. Attributable risk estimates from the Framingham Offspring Study of 2,027 men and 2,267 women aged 20 to 49 years followed for 8 years showed that obesity may be responsible for 78% of hypertension in men and for 65% of hypertension in women [10]. Loss of weight in overweight persons lowers blood pressure. A meta-analysis of 18 studies showed that loss of 3% to 9% of body weight reduced systolic blood pressure 3 mmHg and diastolic blood pressure 3 mmHg. Although the epidemiologic relationship is clear, the understanding of mechanisms linking hypertension and weight gain is still evolving [11]. Lifestyle modifications and specific pharmacologic agents address many of the known mechanisms; however, blood pressure remains difficult to control in obese hypertensive patients. Hypertension was mildly correlated with the weight, but not significantly correlated with other variables such as smoking, height, diet, and age. The primary treatment for obesity associated hypertension is weight reduction with lifestyle changes in diet and physical activity.

## Conclusion

Findings of this study indicate strong need to provide awareness about benefits of regular walk/exercise as well as health education about demerits of obesity in business related personnel. For this purpose, weekly healthy habits campaigns and health awareness gathering are suitable among shop keepers on day of markets closed.

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