

RELATIONSHIP BETWEEN BODY MASS INDEX, WAIST TO HIP RATIO AND BLOOD PRESSURE AMONG PERADENIYA UNIVERSITY STUDENTS

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The growing prevalence of obesity is recognized as one of the most important risk factors for development of hypertension. This study was done to identify the relationship between body mass index, waist to hip ratio and blood pressure among first year students in University of Peradeniya. Although there had been studies that have assessed these parameters and its risk factors for older adults and the elderly, there is a paucity of such data among young adults. Knowledge about these parameters and predisposing risk factors is vital in the modification of lifestyle and to enhance quality of life. The study was cross-sectional, carried out among 646 first year students in University of Peradeniya. A predesigned and pretested questionnaire was used to collect data. Body weight, height, waist and hip circumference and blood pressure were measured using standard equipment and procedures. BMI had significant

positive correlation with systolic blood pressure (SBP) ($r=0.383$) and diastolic blood pressure (DBP) ($r=0.336$) for all subjects ($p=0.01$). Waist to hip ratio had positive correlation with SBP ($r=0.273$) and DBP (0.175) for males ($p=0.01$) and positive correlation with SBP ($r=0.109$) and DBP (0.118) for females ($0p=0.05$). Prevalence of hypertension among males was 3.15% and 1.41% among females. Family history of obesity and other chronic diseases, dietary habits, routine exercise and sports, sleeping pattern, smoking and alcohol habits were recognized as associated factors with obesity and hypertension. BMI and waist to hip ratio had a significant positive correlation with systolic and diastolic blood pressures. Biological and environmental factors were associated with obesity and hypertension.

Keywords: Body Mass Index, Blood Pressure, Waist to Hip Ratio