International Conference on
Biomedical Engineering, Bioscience,
Bioinformatics, Biochemistry Cancer Biology,
Molecular Biology and Applied Biotechnology
(BCM-2019)

A Comparative Study of Body Mass Index, Body Weight and Waist to Height Ratio to Depict Serum Cholesterol Level in Healthy Young Individuals

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Abstract—*Many external and internal factors either directly or indirectly regulate our health. Similarly, many parameters such as high glucose, high cholesterol, and high blood pressure are the indicators of our healthiness. Body Mass Index (BMI) and Waist to Height Ratio (WtHr) are such parameters which indicate the degree of healthiness of an individual. Previous literature indicated that high cholesterol may associated with various health concerns like cardiovascular diseases, cancer etc. This study suggested a relation between BMI, body weight, WtHrwithtotal serum cholesterol in healthy individuals. This study was done on total 54 healthy persons (27 male and27 females) of age group 18-30.The data of age, height and weight and waist circumference of all participants were collected. In their fasting blood samples, total serum cholesterol was measured. Our statistical analysis suggested that BMI, body weight and WtHrall are positively correlated with average total serum cholesterol level with a significant p value (<0.05) among young individuals. Statistical correlation coefficient values and regression line analysis also suggested that BMI could be a better predictor of cholesterol level as compared to body weight and WtHr in healthy individuals of age group 18-30. High BMI and WtHR are indicators of overweight and/ obesity. Still, before making any conclusion, this study should be done in a large number of samples, and this study should be repeated in different age groups of participants.*

Keywords*: Body Mass Index, Waist to Height Ratio, Cholesterol, Cardiovascular Diseases.*