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DOES WAIST SIZE MATTER? THE HEALTH CONNECTION

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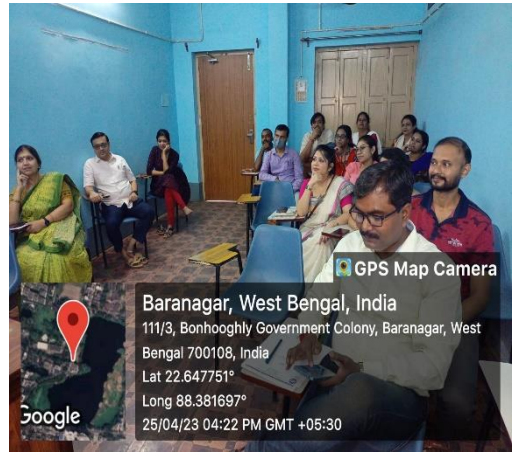
Abstract

Visceral /abdominal obesity indicative of excess fat deposition in the waist i.e., around the midriff of the body is a surrogate estimate of the manifestations of metabolic diseases which can precipitate T2DM/ CVD in an individual. This consequence can undeniably be related to physiological type (apple type), economic changes (urbanization and globalization) and even sociological changes (women becoming financially independent). The role of Thrifty Gene Hypothesis cannot be denied. Anthropometric parameters are a cost-effective tool to identify obesity and indicate metabolic risk. Prognosis of risk can be made by measuring Waist Circumference (WC), Waist to Hip Ratio (WHR), Conicity Index (CI), Body Fat Percentage (by Bioelectrical Impedance method) and then comparing with the gender-based cut offs. Body Mass Index (BMI) calculated as weight in kg/height in metre² is a common method to assess excess fat deposition in humans. Indians should be assessed based on World Health Organization Asian cut off points and not based on international classification. A large waistline with excess adiposity (hypertrophy and hyperplasia) predominantly in visceral region results in increased flux of Free Fatty Acids (FFA) in circulation elevating Triglyceride (TG), elevated FFA impairs activity of beta cells of pancreas inducing Insulin Resistance (IR). This condition influences decrease in cholesterol content of HDL (low HDL) and increased LDL in blood. Adipose tissues secrete chemokines and cytokines like IL-6, TNF alpha, leptin, resistin inducing inflammation. Thus the co-occurrence of any 2 clinical features from dysglycaemia (fasting blood glucose ≥ 100 mg/dl), hypertension ($\geq 130/\geq 85$ mm Hg) , hypertriglyceridemia (TG ≥ 150 mg/dl) , low LDL(< 40 mg/dl in males , < 50 mg/dl in females) apart from the mandatory criterion (increased waist circumference i.e.. WC >80 cm in females and WC > 90 cm in males) is cumulatively termed Metabolic Syndrome (MS) as per International Diabetes Federation (IDF) criteria. Yes, waist size plays a critical role in precipitation of MS and hence physical activity is must and lifestyle need to managed efficiently.

Keywords: *Waist circumference, Metabolic Syndrome, visceral, adiposity*



Speaker



Audience