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Waist-To-Hip Ratio As The Best Predictor Of Cardiovascular Risk Factors Compared To Waist Circumference And Body Mass Index In Adult Men, District-13, Tehran

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Abstract:

Background: Stenotic coronary arteryIt is essential to identify the best simple anthropometric index in any population to predict chronic disease risk. This study was designed to compare the ability of waist circumference (WC), body mass index (BMI) and waist-to-hip ratio (WHR) to predict cardiovascular risk factors in an urban adult population of Tehranian men. Materials and Methods: This population-based cross-sectional study was conducted on 4449 men aged 18-74 years, participants of Tehran Lipid and Glucose Study (TLGS). Demographic data was collected. Anthropometric indices were measured according to standard protocol. Blood pressure was measured and hypertension was defined based on JNC VI. Biochemical analysis was conducted on fasting blood samples. Diabetes was defined as FBS≥126 mg/dl and dyslipidemia based on ATP II. The presence of "at least one" and "at least two" risk factors from the four major cardiovascular risk factors (hypertension, dyslipidemia, diabetes and smoking) was also evaluated. Results: Mean age of men was 41.8±15.4. Mean BMI, WHR and waist circumference was 25.6±4.2 kg/m2, 0.91±0.07 and 87.7±11.7 cm, respectively. Of the three individual indicators, WHR had the highest sensitivity for all risk factors. No combination of indicators had higher average sensitivity + specificity than WHR alone. WHR had a higher percentage of correct prediction than BMI and waist circumference for all risk factors. No combination of measures was significantly more accurate than WHR alone, except for combinations where another indicator has been combined with WHR by "or". Conclusion: It is concluded that WHR is the best predictor of cardiovascular risk factors compared to BMI and WC in Tehranian adult men residing in district-13.

Keywords:

waist , men

TUMS ID: 1017

Full Text HTML   Full Text PDF   260 KB