

Waist-to-Height Ratio as an Index of Central Obesity: its association with Life-Style Characteristics

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Abstract

Background: In addition to all health complications of obesity, screening for central obesity is more important for diagnosing metabolic syndrome than body mass index, as there are increasingly “metabolically healthy obese” patients who have no central obesity; on the other hand, a subset of “metabolically obese normal weight” patients have central obesity.

Objective: To evaluate the prevalence of central (abdominal) obesity amongst Iraqi university students, by applying a novel index of central obesity (ICO), using the proportion of waist circumference divided by height (WHtR) with a cutoff of 0.5; so that to obviate various gender-characteristic cutoffs for waist circumference, and to assess its association with life style.

Patients and Methods: In our cross-sectional analysis, 175 students randomly chosen from three different colleges in university of Baghdad at April 2014. Dietary, exercise, and sleep habits; history of cigarette smoking, and family history of diabetes mellitus evaluated by self-appraised survey. Physical measurements involved weight, height, and waist circumference.

Results: Among our sample of students, 14.9 % were overweight, and 5.1% had general obesity. When using ICO, The prevalence of central obesity is 30.3%, which is higher than that when using waist circumference (23.3%). There is significant percentages of male and female students with normal BMI have a central obesity 15.8%, and 17.1% respectively ($p < 0.0001$). There is a strong association between skipping breakfast, and sleeping less than 7 hours with the risk of having central obesity, ($P < 0.001$).

Conclusion: Central obesity is a common problem among Iraqi university students. When using waist-to-height ratio, central obesity can be manifested in normal BMI and waist circumference (WC). Central obesity is strongly associated with skipping breakfast, and sleeping less than 7 hours.

Key words: Central obesity, ICO, WHtR, Breakfast Skipper, Metabolic syndrome.

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