



Is Obesity as Measured by Body Mass Index and Waist Circumference in Adult Australian Women 2002 Just a Result of the Lifestyle?

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KEYWORDS Lean Waist Circumference. Skinfolts. Overweight. Microevolution

ABSTRACT Conducted in 2002 anthropometric survey of 1266 adult (18-100 years old) Australian women indicated high levels of overweight and obesity as assessed using formal classifications of the values of the Body Mass Index (BMI) and of waist circumference. Approximately 1/3 of Australian women have “normal” values of BMI (<25) while another 1/3 are obese (BMI>30), the remaining 1/3 being overweight. BMI, as expected, correlates strongly with body weight, but shows no significant correlation with body height. Triceps, subscapular and abdominal skinfold thicknesses explain each about 50% of BMI variance while the lean arm circumference (after removal of adipose tissue thickness by calculation) explains over 40% of BMI variance. The lean waist circumference (minus abdominal skinfold) explains about 75% BMI variance. Bony hip width (Bi-iliocrystal diameter) explains over 40% BMI variance directly, and even more when expressed as a percentage of body height. These findings indicate that BMI is to a large extent influenced by components of lean body mass and suggest that recent epidemic increase in BMI may be partly due to microevolutionary change in body composition in addition to the increase in metabolic abnormalities and in the positive energy balance due to abundant diets and sedentary lifestyle.

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