

Thesis Title The relationship of waist-hip-girth ratio and plasma glucose, plasma lipids, and blood pressure in obese women in The Din-Dang area.

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ABSTRACT

This study aimed at determining the relationship between Waist-Hip-Girth ratio, (WHR) and plasma glucose, plasma cholesterol, plasma triglycerides, and blood pressure in 128 obese adult women living in the Din-Dang area. Percentiles of WHR (P 25, 75, 100) were used to divide the subjects into four groups, and anthropometric measurements (weight, height, waist-hip circumferences), blood pressure and blood samples were collected.

The study revealed that there were significantly positive correlations between WHR and plasma glucose ($r = 0.1742$, $p < 0.05$), and between WHR and plasma triglycerides ($r = 0.2061$, $p < 0.05$). Plasma cholesterol did not have a significant correlation with WHR or Body Mass Index (BMI) but did have a significant correlation with age. Systolic and diastolic blood pressure did not correlate to changes in WHR but did correlate to BMI. Results of the multiple regression analysis suggested that obese persons whose WHR is greater than 0.87 (plasma glucose ≥ 110 mg% should seek further biochemical analysis of their blood in order to identify the actual plasma glucose level. For plasma triglycerides, the trigger levels recommended are : WHR = 0.70; plasma triglyceride = 150 mg/dl, WHR = 0.84 mg/dl; plasma triglyceride = 200 mg/dl. Those with plasma triglycerides levels higher than these trigger levels also should seek for biochemical analysis.