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Topic: Capacity development for public health nutrition

Title: Association between Framingham Risk Score and risk factors for cardiovascular disease

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Cardiovascular disease (CVD) generates significant economic and social impact, efforts have been made to detect the disease onset and to establish primary prevention strategies using Framingham Risk Score (FRS). Evaluate association between FRS, body mass index (BMI), waist circumference (WC), waist-hip ratio (WHR), neck circumference (NC) and level of physical activity (LPA) in asymptomatic CVD patients, according to age and gender. Cross-sectional study with asymptomatic patients ($n = 201$) ranging in age between 20 to 79 years old, selected by simple random sampling. The study included patients with no previous diagnosis of cardiovascular disease. The absolute individual risk of coronary artery disease in 10 years was estimated by FRS. Associations between the variables FRS, BMI, WC, WHR and NC were verified by multiple linear regression, stratified by gender; for this analysis, tests, the measure used was the standardized beta (β) coefficient and significance level at 95%. Average age of 51.0 years old, predominance of females 62.2%. FRS was negatively associated with BMI (β (IC 95%) -0.42 (-1.60 / -0.08)). Increased BMI value, reduces cardiovascular risk by FRS among the male population studied. This finding can be explained by a factor of confusion between the variables, since the FRS receive scores according to age, total cholesterol, high density lipoprotein, smoking, systolic blood pressure treated. In females, the FRS was significantly associated with BMI $\beta = 1.89$ (IC 95% = 0.09; 3.06) and WC $\beta = 2.18$ (IC 95% = 0.09; 2.82). The BMI and WC are strongly positive associated the FRS in women.