

Obesity and prolactin in various populations

ABSTRACT

Association of Obesity with altered levels of serum prolactin (PRL), a marker of stress is well documented. The objective of this systematic review and meta-analysis was to estimate the association between obesity and PRL according to sex, ethnicity and age. PubMed, Web of Science (WoS) & EBSCO database were searched from the 5th to 20th of October 2018. Two reviewers independently extracted data from 12 cross-sectional studies that used body mass index (BMI), waist circumference (WC) or waist-to-hip ratio (WHR) as measures of obesity and aggregated using the random-effect model. The correlation (r) for BMI and PRL was -0.231; 95% confidence interval (CI) = -0.392 to -0.055) in adults and ($r = -0.500$; 95% CI = -0.622 to -0.354) in children. In adults, r for BMI and PRL was greater in women than men by -0.127 (95% CI = -0.178 to -0.05) and greater in European populations $r=0.156$ (95% CI = -0.132 to -0.079) than Middle Eastern populations $r = -0.655$ (95% CI = -0.880 to 0.191). Obesity is associated with decreased levels of PRL, and the association is greater among women and Europeans. The emergence of difference between different genders was observed only in adulthood.