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Diagnostic criteria for metabolic syndrome in high-altitude regions: A systematic review

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Metabolic syndrome (MS) is increasing in the world, is very important investigate the diagnostic criteria in populations living in high-altitude geographic regions. The aim was to identify the components of MS that cross-sectional studies use to assess adults in high-altitude regions. Trought a systematic review study was conducted, using the Pubmed database, the search for original articles (cross-sectional) was performed from January 2014 to December 2020, the keywords used were metabolic syndrome, adults, and altitude regions. The search strategy considered the components of the PICOS tool. Ten cross-sectional studies were identified in the Pubmed database, altitude levels varied between countries and regions, from 2060 to 4900 m. above sea level. Three studies were conducted in both China and Peru, two studies in Ecuador, and one in Bolivia and India. The age ranges in the population studied were from 18 to ~80 years of age. The components used to assess MS in most studies (between 9 to 10 studies) were body mass index (BMI), waist circumference (WC), blood pressure (BP), triglycerides (TG), high-density lipoproteins (HDL) and serum glucose (SG). These results suggest that to evaluate and/or investigate MS in subjects residing in highaltitude populations, at least four diagnostic criteria should be considered in their protocols, so future studies should be interested in developing new proposals that allow more accurate assessment, diagnosis, and monitoring of altitude residents.

Biography

Doctorated on Biomedical Sciences by Universidad Nacional de San Agustín from Peru. Master Degree with mention in Social Program's Evaluation by Universidad Nacional del Altiplano from Peru. Human Nutrition Bachelor. Titular, main professor in nutrition school at level postgraduate and bachelor with 22 years of experience. Researcher in the line of research chronic diseases, dietary intervention and food safety. Certified in healthy eating by FAO. Director of Human Nutrition program at the Universidad Nacional del Altiplano, by three periods (last recent 2017-2019). Coordinator of researches in the Health Sciences school (2014-2016). Autor of systematic review on Diagnostic Criteria for Metabolic Syndrome in adults living in high altitude regions, published in the Journal Medicine (MDPI), and other various papers in scientific journals. Certified by ELSEVIER as reviewer.