Diet-Induced Low-Grade Metabolic Acidosis and Clinical Outcomes: A Review.

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Low-grade metabolic acidosis is a condition characterized by a slight decrease in blood pH, within the range considered normal, and feeding is one of the main factors that may influence the occurrence of such a condition. The excessive consumption of acid precursor foods (sources of phosphorus and proteins), to the detriment of those precursors of bases (sources of potassium, calcium, and magnesium), leads to acid-base balance volubility. If this condition occurs in a prolonged, chronic way, low-grade metabolic acidosis can become significant and predispose to metabolic imbalances such as kidney stone formation, increased bone resorption, reduced bone mineral density, and the loss of muscle mass, as well as the increased risk of chronic diseases such as type 2 diabetes mellitus, hypertension, and non-alcoholic hepatic steatosis. Considering the increase in the number of studies investigating the influence of diet-induced metabolic acidosis on clinical outcomes, this review gathers the available evidence evaluating the association of this disturbance and metabolic imbalances, as well as related mechanisms. It is necessary to look at the western dietary pattern of most countries and the increasing incidence of non-comunicable diseases for the balance between fruit and vegetable intake and the appropriate supply of protein, mainly from animal sources, so that it does not exceed the daily recommendations.