Abstract Title

The myth of disease and acid/alkaline food impact on blood acidity balance

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Abstract

Introduction: Living in a world of misleading information in nutrition and health brings an urge to educate the public using scientific evidence by shedding light on a controversy surrounding diseases and blood acidity. Healthy individuals have a blood pH between 7.35 to 7.45.

Objectives: To explore the scientific evidence about the relationship between acid/alkaline food and blood pH. This theory can be easily misunderstood by the public because the maintenance of blood pH involves complicated and continuous chemistry processes.

Methods: 14 articles were reviewed, half of which, were peer-reviewed journals, the remaining are gray literature, Dietitian of Canada, google scholar, PEN, PubMed and Krause's nutrition textbook. Using the keywords: Blood pH, Alkaline diet, and blood acid-base balance.

Results: The homeostatic balance has many complex mechanisms. Respiratory and renal mechanisms play a crucial role in maintaining blood pH stability using a strict hemostasis and buffer system. Any fluctuation in blood pH level leads to serious health complications or even death. All sources reviewed do not support the claim that food intake affects blood pH; however, some literature suggests that having the highest end or the lowest end of the blood normal pH as a result of food intake may have deleterious effects on health on the long run "years to decades". Generally, meat and eggs produce acids metabolite where fruits and vegetables produce base metabolite.

Conclusion: From reviewing data it appears that although acid/ alkaline food may increase the acid load and consequently the net acid excretion through the kidneys, there has not been a clear evidence connecting extreme normal levels of blood pH and long-term chronic disease in healthy individuals.

Significance to the field of dietetics: Dietitians need to convey the true science about blood pH and food intake in an understandable way for the public. They also should increase awareness for the public to question anyone, regardless of their scientific background who promotes this myth.