

Trace element requirements in humans: An update

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Concepts about nutrient intake requirements and recommendations have emerged from a period of relative consensus about concepts and goals to one of vertiginous shifts of paradigms and a proliferation of agendas, often competing, for making nutrient and dietary recommendations in public policy. The recommendations for intakes of those trace elements considered to be essential in human nutrition are updated in the context of the ferment and controversy regarding how to establish a recommended intake. It is our contention that making universal recommendations for the intake of trace elements to cover all societies among the diverse geographic and ecological settings of the world is a futile effort. Differences in ethnicity, body size, traditional diets, genetics, and environmental stressors condition distinct needs at distinct locations. It is speculated that lower than 'usual' body stores of certain trace elements may be adaptive, i.e., to improve human survival under certain adverse and