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Abstract “Vitamins and Minerals for Health”

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There is overwhelming evidence which demonstrates that good nutrition and specific nutrients and other food substances can play a major role in maintaining and enhancing physical and mental performance as well as delaying the onset of chronic diseases. However, there are many social, demographic, economic and lifestyle changes that determine our nutritional status, and for a variety of reasons many more people are not achieving the recommended daily amounts (RDAs) for specific essential micronutrients. Although it is possible to achieve a balanced diet by eating a variety of foods, national and international surveys reveal a huge gap between the ideal and the reality of what people actually eat.

For individuals at all stages of life where food selections may compromise optimal nutrition, encouragement to eat a healthier diet must continue, but there is a need for health professionals and policy makers to recognize that dietary supplements can serve as an effective means of ensuring that micronutrient needs are fulfilled. Populations at risk include the elderly, people trying to lose weight and on restricted diets, socio-economically underprivileged groups, alcoholics and smokers.

There are few aspects of diet and health that are of greater importance than ensuring good nutritional status of mothers during pregnancy and lactation and of infants and children. Nutritional factors during early development not only have short-term effects on growth, body composition and body functions, but also exert long-term effects on health, including risk of disease in later life. Maternal influences are of particular importance during early development of the fetus and newborn, especially in relation to neural functions and behavior.

Likewise, research from around the world has highlighted the nutritional vulnerability of older people and the major, lasting impact of poor nutritional status on health, wellbeing and life expectancy. The numbers of elderly people are increasing dramatically, and the ageing of whole populations and societies will impact significantly on the economies and healthcare systems of all countries.

The vitamins and minerals perform vital jobs that keep the body going and the lack of any one of these micronutrients will cause a unique deficiency, which can only be corrected by supplying that particular nutrient. Overt deficiencies leading to specific clinical systems are very rare, but latent, marginal deficiencies may provoke unspecific, non-clinical symptoms including fatigue, weakness and increased susceptibility to infections. It is likely that, where a deficiency occurs, it will be in several micronutrients rather than one. Deficiencies do not occur overnight, but if the body is repeatedly deprived of a specific nutrient, or combination of nutrients, it soon becomes prone to illness and decreased physical and cognitive performance.

Our health is our most precious asset, and this review will highlight vital messages to health professionals and policy makers to pay more attention to the nutrient density of the whole diet, to recognize the special needs of vulnerable groups in society, and to raise awareness that good nutrition is key to reducing healthcare costs and maximizing the span of good health and quality of life for specific population groups including the elderly and women of childbearing age.