

A note on public health and nutrition.

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Public health nutrition is the science and art of preventing disease, prolonging life and promoting health through the medium of nutrition. The goal of public health nutritionists is to help everyone improve their health and well-being by making better food and nutrition decisions. Food-based dietary guidelines (FBDG) should be established in public health nutrition to convert nutrient-based dietary recommendations into food-based guidelines that are understandable to the general public. Existing eating patterns and health issues should be considered. The FBDG should include the whole diet, not just single foods.

Three main messages direct food selection in Optimized Mixed Diet: eat lots of plant-based foods, moderate quantities of animal-based foods, and avoid high-fat, high-sugar foods. The current German dietary reference intakes for energy and nutrients are based on the consumption of common, nonfortified foods (except iodized salt).

The value of a safe lifestyle in terms of health and illness is undeniable. Nutrition, in particular, plays an important role in one's life and quality of life. Nutrition, despite its importance, is only second on the list of topics covered in postgraduate university curricula, public health textbooks, and public health studies.

The current interest in public health nutrition is intended to counteract the previous century's overemphasis on nutrition science and the chemical and biochemical characterisation of food exposure and its effect on human physiology. The benefits of the former strategy, which frequently reduced nutrition to the effects of single nutrients on health and disease,

can easily be justified by the benefits it provided to society as a whole in terms of disease prevention. Millions of people were healed or avoided disease thanks to reductionist research, which was used to develop single and multinutrient supplementation and food-fortification programmes. Scurvy, pellagra, beri beri, rickets, and xerophthalmia were all overcome in this manner in the early twentieth century. That's how iodine, vitamin A, iron, and zinc deficiency are addressed in modern times, and it is possible to remove with concerted effort. These latter flaws, on the other hand, are proving more difficult to overcome, highlighting the importance of well-integrated and well-supported multidisciplinary and multisectoral methods for success. We have the basic scientific knowledge about nutrition to solve the majority of the deficiency diseases that still exist, so we need to take meaningful public-health nutrition action now. Knowledge of nutrient modulation of gene expression and nutrient-induced epigenetic regulation of the genome supports the idea that DNA is a map that can be interpreted in several ways rather than a fate in and of itself. A greater understanding of these fundamental biological processes opens up new avenues for reducing the risk of nutrition-related chronic diseases like heart disease and cancer. Given our growing understanding of such nutrient-gene interactions, it might be time to rethink Geoffrey Rose's advice to adjust exposure for whole populations wherever possible, thus minimising risk in all people, rather than focusing on those at higher risk.

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