

Abstract

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Nutrigenetics and nutrigenomics: viewpoints on the current status and applications in nutrition research and practice.

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BACKGROUND: Nutrigenetics and nutrigenomics hold much promise for providing better nutritional advice to the public generally, genetic subgroups and individuals. Because nutrigenetics and nutrigenomics require a deep understanding of nutrition, genetics and biochemistry and ever new 'omic' technologies, it is often difficult, even for educated professionals, to appreciate their relevance to the practice of preventive approaches for optimising health, delaying onset of disease and diminishing its severity.

SUMMARY: This review discusses (i) the basic concepts, technical terms and technology involved in nutrigenetics and nutrigenomics; (ii) how this emerging knowledge can be applied to optimise health, prevent and treat diseases; (iii) how to read, understand and interpret nutrigenetic and nutrigenomic research results, and (iv) how this knowledge may potentially transform nutrition and dietetic practice, and the implications of such a transformation.

CONCLUSION: This is in effect an up-to-date overview of the various aspects of nutrigenetics and nutrigenomics relevant to health practitioners who are seeking a better understanding of this new frontier in nutrition research and its potential application to dietetic practice.

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