

# The Relationship Between Nutrition, Disease & Aging: A Review

## Beslenme, Hastalık ve Yaşlanma Arasındaki İlişki

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**ABSTRACT** Life expectancy has been steadily increasing in almost all regions of the world since the beginning of 20<sup>th</sup> century. This happened as a result of epidemiologic and demographic transition in the world. Populations of 21<sup>st</sup> are rapidly aging. The diseases of the 21st century are chronic and complex diseases, which stem from mainly the complex interaction of human genome with life style factors. Thus, 21st century brings us to an aged population living with chronic conditions, creating a huge burden on health care systems and society.

The interaction of genome with lifestyle factors, in particular nutrition, is the key to the development of the complex diseases. Although everyone bears nearly the same information in her/his genes, every individual is unique nevertheless. This individuality is granted due to slight variations in the human genome, scientifically referred to as "polymorphisms". Latest scientific research has confirmed that some polymorphisms are associated with an increased risk of acquiring complex diseases, especially if you are exposed to unfavorable lifestyle factors throughout a prolonged period of time.

Gene-nutrient interactions are not only influent in disease development, but also bioprocesses that lead to aging, such as inflammation, oxidation, detoxification, DNA repair, glycation, vascular control, methylation and demineralization.

**Key Words:** Nutrition, disease, aging, polymorphism

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