



## LETTER TO EDITOR

### Proper Lifestyle and Nutrition due to Premature Aging Prevention

**Running Title:** Lifestyle, Nutrition and Premature Aging

Nasir Dehghan<sup>1\*</sup>, Zeinab Ebrahimi Fard<sup>1</sup>, Samin Dehghan<sup>1</sup>

<sup>1</sup>*Preventive Medicine and Public Health Research Center, Psychosocial Health Research Institute, Community and Family Medicine Department, School of Medicine, Iran University of Medical Sciences, Tehran, Iran*

\*Corresponding Author: Nasir Dehghan, E-mail: [Nasir.dehghan@gmail.com](mailto:Nasir.dehghan@gmail.com)

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### To the Editor

With increasing life expectancies worldwide, it is an important public health issue to identify factors that influence the quality of aging. The changes in society dynamics in the last two centuries has led to an important increase in the worldwide life's expectancy. It should be investigated the individual and combined roles of lifestyle factors at midlife for healthy aging (1).

The expanding advances in medical knowledge and technology, lifestyle changes, cultural and social structure, changes in disease patterns, people's medical needs, and the rapid growth of the population have led to new problems and barriers to medical care. In recent decades, the health of middle-aged people in developing countries has changed dramatically. This is largely due to changes in life habitude and social, cultural and economic variables.

In many cases, middle age can come to people without a crisis. According to the Ministry of Health, the age of 35 to 65 is regarded as the middle age. The aging process is different for everyone, but there are certain signs of aging that, if noticed before the age of 35, are considered "premature aging."

A healthy lifestyle allows people to be energetic and reduces the risk of various diseases. This behavioral habits are provided in the first place by having a healthy and balanced diet, adequate regular exercise and proper amount of work and sleep, as well as avoiding alcohol and tobacco.

Many people think that by entering the sixth decade of life and over the age of 50, they are getting older and sometimes they forget about themselves altogether. This age period,

which usually coincides with the retirement of people, is called middle age, and ironically, it is the best time to look at things that may have never been possible before.

If a person is dissatisfied with these changes at any stage of life for any reason, he or she may experience a midlife crisis or similar symptoms. The most common symptoms of a midlife crisis are mild psychological problems, anxiety and depression. The aging process somehow reduces the immune system's ability to react, leading to more infections, more inflammatory diseases, and even cancer.

Aging theories emphasize the genetic regulation of this process and consider aging a result of changes in gene expression and the continuous effects of oxidation in the body. In fact, the disruption of the antioxidant defense system due to the free radicals produces high amounts of these substances in the body which causes many disorders in the body along with reducing the occurrence of gene signals that repair the body's damages. Today's healthcare challenges and tomorrow's opportunity can only be met by those who search out deeper explanations of the body processes that generate health and disease.

Middle age is an age in which a person goes through a wide variety of experiences; on the one hand, in this stage, life is chaotic and turbulent, and on the other hand, it is relatively peaceful. Middle-aged individuals become aware that they are no longer young and cannot perform many past activities. Middle age can also be associated with the onset of illnesses and retirement.

Due to life expectancy increases in developed countries, diseases related to middle age and old age are on the rise.

Fortunately, much research on the aging process can benefit everyone. So, the presence of effective compounds to increase the expression of slow-acting genes in this process on the one hand, as well as increasing the production of antioxidants in the body on the other hand, is felt more than ever. Increasing or decreasing the expression of genes can lead to delayed aging. Also, reducing the expression of Nrf2 gene and free radicals from oxidation production resulting from damages to the neurogenic system, reducing the activity of antioxidant enzymes, and weakening the immune system induces premature aging.

Premature aging can occur at any age and has consequences such as depression, suicide, disability and a negative attitude towards old age. The most important causes of premature aging include poor nutrition, sedentary lifestyle and negative thoughts.

In fact, aging is an inevitable process, but there are some things to make it happen more slowly. Also, by observing these points, you can enjoy your old age with a higher quality.

Recent evidence is shaping a picture where low caloric regimes and exercise may improve healthy senescence, and several pharmacological strategies have been suggested to counteract aging (2).

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As a result, it is essential to provide a combination of anti-aging and antioxidant effects against the production of harmful substances in the body due to aging.

Free radicals in small and controlled quantities are useful in everyday metabolism. They take part in several normal reactions within the body including breathing. These free radicals are mainly produced during oxygen metabolism within the cells. The problem starts when the production of these free radicals increases and goes out of control (3).

However, most people would not comply with such a rigorous dietary program, particularly in the long term. Therefore, recent researches is increasingly aimed at determining the feasibility and efficacy of natural and/or pharmacological mimetic molecules/ treatments without decreasing food consumption (4).

An herbal tea made of the combination of *Stachys Lavandulifolia*, *Peperomia Magnoliaefolia* and Red-root *Amaranth* has a synergistic effect in preventing the signs of premature aging. On the other hand, Cotinine acid in *Stachys Lavandulifolia* tea reduces LDL and triglyceride levels through direct and non-competitive inhibition of the Diacylglycerolacyl transferase enzyme. This decrease in hepatic triglyceride synthesis leads to the destruction of intracellular APO-B and ultimately to the reduction of LDL, which is one of the important factors in the processes leading to aging in the body. One of the most important processes in aging is the body. The basic chemical process underlying aging was first advanced by the free radical theory of aging and oxidative stress is believed to be a primary factor in the normal process of aging (5).

This plant compound has been shown to decrease the rate

of damage to cells and body tissues by increasing the expression of the Nrf2 gene, which also has been shown to delay the aging process and also improves the total levels of antioxidants in order to neutralize toxic compounds and free radicals. Explained anti-aging mechanism included up-regulating telomerase activity, decreasing oxidative damage, regulating SIRT1 pathway (6).

The most important risk factors for premature aging are created by "aging lifestyle" which include poor diet, sedentary life habitude, smoking, overweight and obesity, high blood pressure, diabetes and hyperlipidemia.

While some people have a healthy aging process, the results of many studies show that older, middle-aged, and older people are more likely to develop infectious diseases and even die from these diseases than younger people.

Eating proper food for one's height, weight and body type and activity level is the foundation for a better quality of life and greater longevity (7).

By the time, many people are worried about gaining weight due to the slowing down of their metabolism. On the other hand, in middle age and old age, following less social relationships, a feeling of loneliness is created in people, which in addition to mental and social health, affects their way of life. People with high self-esteem are more likely to face external threats and stressful events without experiencing negative feelings. Elderly people who have high self-esteem value themselves and others and are highly satisfied with their social status, which in turn improves their mental and social health.

Self-efficacy is also a factor in health and the prevention of psychological disorders. People with strong self-efficacy beliefs choose tasks that are more challenging. They set bigger goals for themselves and are more proactive in dealing with various situations.

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## CONFLICT OF INTEREST

The authors have declared no conflicts of interest for this article.

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