

A New Approach to Medicine: the Anti-Aging Framework



Virunhagarun T, MD

Tanupol Virunhagarun, MD¹
Wimonchan Wutthikongsombat, MD¹
Piyamart Suvansanya, MD¹

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¹ Anti-aging Center, Bangkok Hospital, Bangkok Hospital Group, Bangkok, Thailand.

**Address Correspondence to author:
Wimonchan Wutthikongsombat, MD
Anti-aging Center, Bangkok Hospital
2 Soi Soonvijai 7, New Petchburi Rd.,
Bangkok 10310, Thailand.
e-mail: wimonchan.wu@bangkokhospital.com*

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Cell degeneration depends on many factors including complex genetics that influence aging. All factors leading to aging are partially controllable, and aging is fundamentally a result of controllable abnormal defects. Doctor Denham Harman postulated a “**free radical theory of aging**” more than 50 years ago. With a study of mice exposed to radiation, Dr Harman observed destructive molecules as free radicals that changed the cell function irretrievably. Malnutrition and exposure to toxins increases the risk of cell oxidation.² Previous studies supported the theory that the free radical is a primary cause of common diseases such as brain disease and kidney diseases.

Persistent inflammation occurs frequently with aging and is a primary contributor to the deterioration that our body undergoes as we grow old.³ Inflammation can be triggered by both internal and external causes, making it difficult to prevent. For instance, excess belly fat releases inflammation-causing molecules called cytokines.⁴ Continuous low-level inflammatory assaults inflict damage on everything from brain cells and arterial walls, to cell regulatory genes.⁵ Heart attack, stroke, heart valve failure, cancer, and Alzheimer’s have all been linked to chronic inflammation that occurs in most of us as we age.

Glycation is the result of excessive glucose in the body reacting with the body’s protein forming toxic substances and nonfunctioning units.⁶ Glycation can sometimes result in two strands of protein being joined together, called cross-linking.⁷ This is a process which can damage the body’s organs.⁸ Methylation is the process of replacing a hydrogen atom with a methyl group. Human beings depend on methylation to detoxify poisons, to repair DNA and to supply anti-aging hormones. Hormone decline is one factor in the aging process and aging is caused by hormone imbalances. All male and female hormones affect the mental and physical well being of humans. An abnormal hormone concentration is a serious contributory factor of illness.

Overcoming the effects of aging

Preventing free radical damage⁹ is the most important factor to fight aging. People need to take a series of measures in order to reduce free radicals. These include consuming chemical-free foods, avoiding exposure to ultraviolet radiation and toxins, in order to prevent radical damage.^{11,12} People can counteract the effects of these damaging factors by supplementing their daily diet with^{13,14} vitamins, carotinoids, selenium, zinc, manganese, coenzyme Q10, and lipoic acid. All of these substances are essential to attack free radicals.¹⁵⁻¹⁷ Most people obtain phytochemicals from fruits and vegetables in their diet but this is not deemed sufficient for optimal antioxidant protection.^{18,19}

C-reactive protein and fibrinogen are important blood markers.²⁰ A slight elevation of these markers can double the risk of heart disease. Supplementary nutrition such as omega-3 fatty acids and curcumin play an active role in the reduction of inflammation.^{22,23} Homocysteine destroys the vascular endothelial lining which is the cause of cholesterol deposits on the vascular wall.²⁴⁻²⁷ Consumption of folic acid, vitamin B6 and B12 counteract the negative effects of homocysteine.^{28,29} The prevention of glycation with carnosine is one of the most effective anti-aging measures to be taken.³⁰⁻³⁵ An anti-aging lifestyle requires adequate diet, exercise, sleep and stress reduction.

The anti-aging lifestyle

The prevention of anti-aging incorporate essential components; diet, exercise, sleep and stress reduction. The diet should emphasize the quality of lean protein complex carbohydrates and healthful fats rather than the quantity.

Recommendations for anti-aging diet are:

- Eliminating sugar and refined carbohydrates.
- Increased more unsaturated fats (olive oil and nuts) and essential fatty acids (omega 3 acid salmon and other fatty fish).
- Increased consumption of quality protein. At least one third of calories consumption should be from fish, egg white, lean cuts of organically raised beef and poultry, low-fat organic dairy products, beans.
- Take fresh vegetables and the widest possible variety of brightly colored fruits and vegetables in red, yellow and green foods; these are health promoting phytochemicals.

The role of anti-aging (regenerative medicine) is based on an accurate diagnosis and treatment of disease. The goal of regenerative medicine is to achieve good health and sustained wellness throughout the whole human life span. Each step of anti-aging medicine uses scientific and medically tested technologies including detection, prevention, treatment and attempts at the reversal of existing dysfunction and diseases on a treatment basis. Regenerative medicine is based on a combination of traditional and alternative approaches.

The four domains of regenerative medicine are:

1. Improved health and reversal of disease
2. Prevention of a disease before it occurs.
3. An holistic approach, considering each aspect of the patient's health.
4. A combination of traditional and alternative treatments based on an open minded approach albeit founded on a scientific basis.

Anti-Aging focuses on preventing damage and rejuvenating the entire body to achieve total wellness and longevity. Anti-aging medicine addresses fundamental preventive measures like proper diet and exercise, and the importance of living a healthy lifestyle. At the same time, advanced technology is utilized to thoroughly investigate each organ system through a range of specialized tests to create a tailor-made health program for each individual.

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