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Ageing and anti ageing diet

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Abstract

Proper nutrition is an important parts of any ageing-well strategy. Ageing is a biological process which makes an organism more susceptible to disease and debility because of a gradual erosion in its adaptability to the environment. An older person is likely to need extra amounts of essential nutrients; and these are Calcium, Vitamin D, Vitamin B12, Zinc, Potassium, Folic acid and Fiber. The signs of aging include not only wrinkles, but also memory loss, decreased brain function, and an increasing risk for chronic diseases such as heart disease, osteoporosis, and cancer. Many Physiological and biochemical changes occurs in ageing like Decrease in the Number of Functioning cells, Changes in Brain etc.

Anti-aging diet is not a diet in the sense that its objective is to make you loose weight. Anti-aging diet is actually a lifestyle of dietary habits that will lead you to longevity. It is therefore not a weight reduction diet, although it has weight reduction effect. Anti-Aging Food Pyramid are divided into daily, 2-3 times a week, and weekly layers. Imagine a pyramid with three layers, each layer getting much narrower as it gets closer to the tip. Staying youthful is equal to staying healthy. They go side by side. And staying healthy is controlled, to a large degree, by daily habits of eating. If your eating habits have become just a habit with little thoughts put into them, your diet can be imbalance in nutrients and calories.

Keywords: Aging, Physiological changes, Anti aging diet

Introduction

In India's society, more and more people are concerned about their eating habits. While aging is inevitable, many of the degenerative changes that prevail past middle age are not if preventive steps are taken. Good nutrition can prevent, or at least slow, such debilitating conditions as osteoporosis, diabetes, and heart disease. In fact, one- third to one half of the health problems of people over the age of 65 are related to diet.

Proper nutrition is an important parts of any ageing-well strategy. Seniors are the most poorly nourished group. With increasing age, the body is less efficient in absorbing and using some nutrients; osteoporosis and other medical conditions common among older people also change nutritional needs. An older person is likely to need extra amounts of essential nutrients; and these are Calcium, Vitamin D, Vitamin B12, Zinc, Potassium, Folic acid and Fiber.

Ageing is a biological process which makes an organism more susceptible to disease and debility because of a gradual erosion in its adaptability to the environment. Hence ageing (physiological ageing) may precisely be defined as regression of physiological functioning accompanying advancement of age, and chronological or calendar ageing (age in years) is not its best indicator. Ageing is a characteristics of all multicellular organisms. Ageing sum of all changes that take place in a person leading to a decrease in his functional capacity as he ages ahead of adulthood.

Normal physiological ageing, therefore, begins after the completion of the growth and development period, and the changes occur slowly, yet surely, over time and are influenced by life events, such as illness, both acute and chronic, genetic heritage, stress, socio- economic status, accessibility of health care, nutrition and environment.

Human aging, physiological changes that take place in the human body leading to senescence, the decline of biological functions and of the ability to adapt to metabolic stress. In humans the physiological developments are normally accompanied by psychological and behavioural changes, and other changes, involving social and economic factors, also occur.

The signs of aging include not only wrinkles, but also memory loss, decreased brain function, and an increasing risk for chronic diseases such as heart disease, osteoporosis, and cancer.

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Healthy aging is also defined as living a longer, healthier life. And many studies have documented the link between a healthy diet and prevention of age-related or chronic diseases. Adopting a healthy lifestyle that includes regular physical activity, adequate rest, avoiding tobacco, and a diet full of healthy foods and beverages can be the best defence against aging.

The process of ageing brings about physiological, psychological, and immunological changes which influence the nutritional requirements.

Physiological Changes in Ageing

Decrease in the Number of Functioning cells:- Decrease in the number of functioning parenchymal cells. A decrease in the renal function has been reported which indicates a decrease in the number of functioning nephrons.

Nervous system:- As a result of ageing, the following changes in the nervous system take place

- (1) Decrease in reaction time especially when higher centres are involved.
- (2) Decrease in visual activity,
- (3) Decrease in memory power and rate of learning and
- (4) Behavioural changes.

Skeletal system and Dentition:- Demineralisation of bone has been observed commonly in aged persons. This condition is known as Osteoporosis. Some clinical studies have indicated higher calcium requirements for aged persons.

Gastrointestinal tract:- Decrease secretion of saliva and decreased ability to digest starch have been observed in old people. Gastric acidity decreases in a large percentages of old people.

Cardiovascular system:- Increase in the incidence of atherosclerosis and decreased functioning of the heart due to changes in the character of heart muscle, elastic tissues and coronary vessels are observed in old people.

Renal System:- Several workers have reported of decreased glomerular filtration rate and renal plasma flow as revealed by functional tests.

Endocrine system:- The changes found in the endocrine glands of the aged are similar to those observed in chronically ill or starved individuals in younger age groups. The endocrine activity is diminished.

Biochemical Changes in Ageing

Changes in Brain:- In normal ageing, it appears that in some brain regions there may be significant loss of nerve cells in late life. Linked to this is reduction in glucose metabolism and decreased transmitter synthesis. In contrast, in the main form of pathological ageing in which typical histological alterations occur in neurons (senile dementia of Alzheimer type), the cholinergic system is especially affected

Changes in Enzymes:- The primary structures of genes coding for these enzymes, their isoenzyme patterns and their expressions change with age.

Changes in Collagen:- Such changes may be due to the changes in the levels of enzymes that catalyse reactions that lead to cross-linking of collagen molecules. Hence, these age-related changes are secondary in nature.

Anti-Aging Diet

Anti-aging diet is not a diet in the sense that its objective is to make you loose weight. Anti-aging diet is actually a lifestyle of dietary habits that will lead you to longevity. It is therefore not a weight reduction diet, although it has weight reduction effect.

Effect on Food Patterns

Some of the physical changes of aging affect food patterns. For example, secretion of digestive juices and motility of gastrointestinal muscles gradually diminish, causing decreased absorption and use of nutrients. Decreased taste, smell and vision also affect appetite and reduce food intake.

Anti-aging diet consists of 2 components:

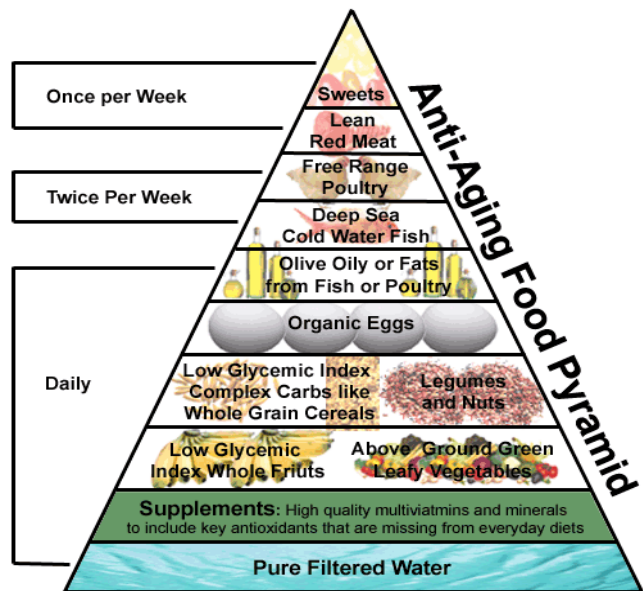
- **Calorie Restriction (not starvation)**
- **Modified Mediterranean Diet**

Benefits of Calorie Restriction

The physiological benefits of calorie restriction are many, including:

1. Increased maximum life span
2. Increased learning ability (sharper mind)
3. Increased neurotransmitter receptors (clearer mind)
4. Decreased fat accumulation (better body contour)
5. Decreased insulin level (better sugar control)
6. Decreased cancer (less oxidative damage)
7. Decreased heart disease (less stress on the cardiovascular system)
8. Decreased loss of bone mass (less osteoporosis)

Anti-Aging Diet Pyramid



There are three major layers to the Anti-Aging Food Pyramid. They are divided into daily, 2-3 times a week, and weekly layers. Imagine a pyramid with three layers, each layer getting much narrower as it gets closer to the tip.

The broad base layers of the pyramid starts with 10 glasses of pure filtered water a day and complex carbohydrates supplying up to 55% of the calories. These carbohydrates are those of low glycemic index type - barley, cereal, legumes, and above ground BLUE leafy vegetables. A limited amount of nuts, which is a fatty food, is also included in this first base layer. Three servings of vegetables should be taken daily. High

glycemic index complex carbohydrates such as wheat, rice, and corn should be restricted. Moderate amount is acceptable if they are mixed with fat and protein. Egg forms also part of the base layers. It is a good protein source. One egg per day is acceptable (including those used in cooking and baking). Organic eggs are the best.

Olive oil and fats from fish, nuts are part of this daily layer. 25-30% of the calories in your comes from fats. The fats in the diet should come mainly from olive oil, which is high in monounsaturated fats and also a good source of antioxidant. Some comes from the fish, poultry and meat consumed. The second layer is a much smaller layer contains protein food from fish and poultry. You should eat from this group 2-3 times a week. Fish should be those that live in deep and cold water, such as salmon and tuna. Poultry should preferably comes from free range chicken.

The third layer, which is very small, contains foods that one should eat 1 time a week. These include sweets, red meat (lean).

Calorie restriction works on three different levels:

1. As food intake decreases, metabolism goes down. Free radicals form as by-products of the metabolic cycle of your body decrease. Less free radicals means less cellular damage and less likelihood of cancer and other free radical linked diseases
2. Calorie restrictions cause an increase in protective enzymes such as superoxide dimutase and glutathione peroxidase, both of which oppose free radicals. Certain hormone production such as melatonin, which has anti-oxidant function, is increased.
3. Calorie restrictions, if properly carried out through eating more frequent smaller meals rather than few big meals, reduce insulin secretion and stabilize blood sugar level.

Anti-Aging Diet Tips

Staying youthful is equal to staying healthy. They go side by side. And staying healthy is controlled, to a large degree, by daily habits of eating. If your eating habits have become just a habit with little thoughts put into them, your diet can be imbalance in nutrients and calories. Keep in mind that the quality of life starts at the nourishment level for each of your cells.

The following dietary guidelines are to help you to incorporate sound nutritional habits into your daily life. These are simple tips especially useful if your focus have not been on a balanced diet before:

- a. Be aware of the amount of calories you need to maintain your ideal weight. 5-10% below ideal body weight is a good target for anti-aging weight.
- b. Eat like a king at breakfast, a prince at lunch and a pauper at dinner. Breakfast is the most important meal. It provides you nutrients to start the day and you have all day to burn off the calories. Dinner should be the lightest meal because there is less time for calories burn off and digestion.
- c. Reduce overall fat and sugar intake. Eliminate refined carbohydrates and fried food from your diet. Substitute complex carbohydrates that have lots of fiber. Fruit should be the major source of sweetness in your diet. Fruits are filled with fibers, anti-oxidants, vitamins and minerals, which are essential for anti-aging and keep the body youthful.

- d. Eat a variety of complex carbohydrates and vegetables instead of bread, rice, and corn. These foods are the building blocks of good health and they keep the blood sugar at a constant level and aging of the arteries is minimized.
- e. Try meat substitutes or non-animal protein foods such as beans and miso (fermented soy). Soy beans should be eaten when it is fermented to avoid toxins. Tofu is not fermented and intake of this should minimized. Eat more fish, chicken and very little red meats. Vegetable proteins, eaten throughout the day, in a well-balanced vegetarian diet are each "complete" in their own way and will be metabolized quite completely, finding their way to the liver and other tissues where they will be used as needed. While animal protein contain more saturated fats and cholesterol.
- f. Include organically grown foods in the diet. Chemically laden food is a burden to the body. Even small amounts of toxin accumulate and eventually wear down the body organs and cause premature aging.
- g. Drink at least 10 glasses of water every day in order to remain healthy. Water helps you to get rid of the toxins and unwanted waste materials from your body.
- h. Milk and other dairy products should be avoided, especially for the allergy prone individuals because they are mucous-forming and have a high potential for allergic reactions. As you age, you do not have the enzymes necessary to break down the milk sugars. Therefore, you may experience gas, bloating, nausea, diarrhoea and often gall bladder distress. However plain low fat yogurt is beneficial for the intestinal tracts. The beneficial bacteria found in the yogurt maintain the health of the intestine by promoting absorption of nutrients, which are crucial for anti-aging.
- i. One of the best ways to ensure removal of toxins in your home water supplies is to buy good water filters, not only for the kitchen sink but for the tub and shower as well. Most of the nation's water supply is contaminated by agricultural run-off, manufacturing waste, fluoride, chlorine and other chemicals and chemical by-products.
- j. Avoid drinking coffee, tea, sodas and anything else that contain caffeine because they are toxic for your body, which cause oxidative damages that result in premature aging.
- k. If you are over-weight and need to lose weight, the best way to lose weight is eliminate saturated fat and excessive protein and sugar from your diet. These foods create free radicals in your liver, while making you feel sluggish.
- l. Eat 6 small meals per day, rather than the traditional 3 square meals. In this way, you will maintain a balance in your blood sugar and the level of nutrients in your body throughout the day, so that you blood vessels maintain the elasticity as in the young.

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