



Review Article

Role of diet in old age

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ABSTRACT

The average human life expectancy has increased in recent times, so there is more focus on aging, age-related disease, and geriatric care in society. Older malnourished adults are more likely to have poorer health outcomes, longer hospital stays, and increased mortality, so there is a need to provide a nutritious and healthy diet to the old age population.

Recent studies have shown that some medicinal herbs are effective in the intervention or prevention of aging-associated neurological disorders. Unani System of Medicine is one of the old traditional medicines in the world providing health care to humanity for centuries successively through natural safe, effective, and economic herbal medicine.

Diets recommended for the old age population have been highlighted in this article with special emphasis on the traditional diets mentioned in the USM for geriatric care. There is a need to explore USM for better care of old age population and to find out an effective, safe, and economic treatment for old age diseases like Parkinson's disease and Alzheimer's disease, etc.

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1. Introduction

Throughout centuries food has been recognized as an important mean for the human being in health and diseases.¹ Diet is derived from the Greek word 'diaita' meaning to a whole way of living focused on self-control and eating in moderation.² The word diet first appeared in English in the 13th century. Its original meaning was "habitually taken food and drink." Diet was used in the middle and early modern English periods to mean "way of living."³ According to Merriam-Webster dictionary, diet is defined as "food and drink regularly provided or consumed".³ In a medical dictionary, diet is also defined as a prescribed allowance of food adapted for a particular state of health

or disease.⁴

Diet is an important approach for a healthy life, especially in old age.⁵ Poor nutrition, even in developed settings, is common. Older malnourished adults are more likely to have poorer health outcomes, longer hospital stays, and increased mortality.⁶ Food occupies a central place in our daily life: it supplies all essential nutrients necessary for our existence and is a source of our physical and mental energy.

1.1. Balanced diet

It contains a variety of foods in such quantities and proportions that the need for energy and nutrients is adequately met. It maintains health and includes a small provision of extra nutrients to tide over emergencies.

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1.2. Composition of balanced diet

1. Proteins: 0-15% of total daily energy intake
2. Fat: 15-30% of total daily energy intake
3. Carbohydrates: 50-70%

These are the macronutrients that form the bulk of the diet along with this we also require micronutrients; vitamins and minerals.

A healthy diet promotes health and wellbeing and reduces the risk of diet-related conditions and chronic disease. A healthy diet benefits us physically, mentally, and socially. Without good food and drink, we are at greater risk of chronic diseases such as cardiovascular diseases, Type 2 diabetes, some cancers, anxiety, and depression, etc. If someone eats less or has digestive issues, it can lead to the deficiency of some important vitamins and minerals.⁷

1.3. Old age

Aging is a universal biological process that leads to progressive and deleterious changes in organisms.⁷

As we grow older, both physiological and physical changes take place in our body as a natural part of aging and these changes can affect all organs of the body with an effect on our health and also over the lifestyle. As we age our appetite and food preferences also change so there is a need to make a plan a healthy and balanced diet for them.⁸ Diet for an elderly person should have a balance between caloric need and daily physical activity because as we grow older the efficiency of the body to absorb nutrients from foods decreases. A healthy balanced diet having all nutrients with the regular physical activity is essential for the healthy life of the elderly.⁹

The Healthy Eating Index (HEI) measures diet quality based on the Dietary Guidelines for Americans. Compared to other age ranges, older adults have the highest diet quality, with an HEI score of 63 out of 100. Although this is very encouraging, there's still a lot of room for improvement. Eating more fruits, vegetables, whole grains, and dairy improves diet quality as does cutting down on added sugars, saturated fat, and sodium. Social support from health professionals, friends, and family can help older adults to meet food groups and to get nutrient requirements.

Eating enough protein helps prevent the loss of lean muscle mass. But older adults often eat too little protein, especially adults of age 70 and above. Seafood, dairy and fortified soy alternatives, beans, peas, and lentils are great sources of protein. These protein sources also provide additional nutrients, such as calcium, vitamin D, vitamin B12, and fiber.⁹

The ability to absorb vitamin B12 can decrease with age and with the use of certain medicines.¹⁰ Health professionals can suggest the older individuals to get enough vitamin B12 by consuming enough through foods, such as breakfast cereals. Health care providers can help the older

adults about the use of dietary supplements to increase vitamin B12 intake.⁹

1.4. Healthy beverage

Sometimes it's hard for older adults to drink enough fluids to stay hydrated because the sensation of thirst declines with age. Drinking enough water is a great way to prevent dehydration and help with digestion and water doesn't add any calories. Unsweetened fruit juices and low-fat or fat-free milk, poultry, nuts, lentils, and soy products such as tofu can also help meet fluid and nutrient needs.

If older adults choose to drink alcohol, they should only drink in moderation-2 drinks or less in a day for men and 1 drink or less in a day for women. This population may feel the effects of alcohol more quickly in comparison to the young, which could increase the risk of falls and other accidents.¹¹

1.5. High nutrients and low calories foods

Fruits and vegetables, whole grains like oatmeal, whole-wheat bread, and brown rice provide high nutrition to the body. Fat-free or low-fat milk and cheese, or soy or rice milk that have added vitamin D and calcium also serve this purpose. Seafood, lean meats, poultry, and eggs, beans, nuts, and seeds provide high nutrients and low calories to the elderly.

1.6. Avoid high calories foods

The foods such as chips, candy, baked goods, soda, and alcohol are

Should be avoided as these are with lots of calories but few nutrients.

1.7. Low cholesterol and fat foods

Avoid saturated and Trans fats foods. Saturated fats usually come from animals, and Trans fats are processed fats in stick margarine and vegetable shortening. These types of food are usually some store-bought baked goods and fried foods at some fast-food restaurants.

1.8. Physical activity

Exercising may help in case of loss of appetite and it also keeps the body fit.¹¹

1.9. Special diets for some diseases

1.9.1. Obesity

1.9.1.1. Principle of diet . Low calorie, normal protein, and minerals (except sodium) with restricted carbohydrates, fat, and high fiber diet.

1.9.1.2. Importance of a high fiber diet . High fiber and low-calorie food like green leafy vegetables, salad, fruits, whole grain, cereals, and pulses can be included in the diet. Low-calorie density foods like grains provide many vitamins and minerals, provide satiety, and reduce blood cholesterol with a decreased rate of ingestion.

1.10. Food to be avoided or restricted

High-fat food like butter, chocolate, fried foods like samosa parathas, poori, and high carbohydrate foods such bread, cake, potatoes, sweet potatoes, sweetened fruit juices, etc.

1.11. Cardiovascular disease

1.12. Hypertension

1.13. Principle of diet

Less saturated fat, high potassium, and low sodium diet as it lowers hypertension. (DASH diet)

1.14. Atherosclerosis

Atherosclerosis is the commonest and most important arterial disease that leads to the narrowing of the lumen of the artery; it involves mostly cerebral, pulmonary, and coronary arteries.

1.15. Principle of diet

A diet low in saturated fats and high in unsaturated fats (e.g. fish oil) is advisable to the patients.

1.16. Gastrointestinal diseases

1.16.1. Principle of diet

Generally a soft diet rich in protein and calories and a high amount of calcium should be given. A low-fat diet with a liberal amount of vitamins and minerals and a large amount of fluid is recommended.

1.16.2. Food to be avoided

Fatty and red meats, fried foods, strong spices, pickles, strong tea, coffee, and alcohol.

1.17. Endocrine disorders

1.17.1. Principle of diet

Low calorie, high protein, and high fiber diet.

1.17.2. Food to be avoided

High carbohydrate food such as bread, cake, sweet potatoes, and all sweets are avoided. High fatty foods like butter, chocolate, fried food.¹¹

Supporting Older Adults in Healthy Eating

1.17.3. Enjoyment of food

Sharing meals with friends and family can increase food enjoyment and provide a great opportunity to share a lifetime of stories, all while improving dietary patterns.

1.17.4. Ability to chew or swallow foods

Experimenting with different ways of cooking foods from all food groups can help identify textures that are acceptable, appealing, and enjoyable for older adults, especially those who have difficulties chewing or swallowing. Good dental health is also critical to the ability to chew foods.

1.17.5. Food safety

Practicing safe food handling is especially important for this age group. The risk of food-borne illness increases with age due to a decline in immune system function.

1.17.6. Unani system of medicine

Unani System of Medicine is one of the old traditional medicines in the world providing health care to humanity for centuries successively through natural safe, effective, and economic herbal medicine. In the Unani system of medicine, four types of treatment have been in practice namely Ilaj bil Tadabeer (Regimental Therapy), Ilaj bil Ghiza (Dieto-therapy), Ilaj bil Dawa (Drug Therapy), and Ilaj bil Yad (Surgery). Dietotherapy (Ilaj-bil- Ghiza) involves recommending a specific diet, which is the simplest and most natural course of treatment by a Hakim (Physician). The Unani system of medicine is based on the concept of *Asbab-e-Sitta Zaruriya* (six essential prerequisites) which includes Hawa-e-Muheet (atmospheric air), Makoolat wa Mashroobat (foods and drinks), Harkat wa Sukoon- Badni (physical activity and repose), Harkat wa Sukoon wa Nafsani (mental activity and repose), Naum wa Yaqza (sleep and wakefulness) and Ehtibas wa Istifragh (retention and elimination). These six factors are essential for the sustenance of life.¹² Foods and drinks is one of the key factor of *Asbab-e-Sitta Zaruriya* and according to the scholars of Unani medicine, the food we consume plays a key role in maintenance of health and disease. Unani System of Medicine lays great stress on treating certain ailments by administration of specific diets or by regulating the quality and quantity of food.¹³

Many types of diets consisting of dairy products, meat, cereals, herbs, and fruit juices etc i.e. Maul jabn (Milk water), Maul Shaer (Barley water), Maul Asl(Honey water), Maul Lahm (Meat distillate), Maul Buqool (Vegetable Juice), Maul Usool (Roots Water), Maul Fawakeh (Fruit Juice), Paneer Maya, etc has been recommended for many ailments. Many more types of diet i.e. Asfeedaj, Alqabees, Falooda, Firni, Halwa, Hareesa, Hasarmiya, Hareera, Kheer, Mazeera, Masleeya, Sikbaj, and Zeerbaaj etc has been described by Unani scholars. Many types of bread have been described i.e. Fateer, Qashkar,

etc in classical Unani literature. Special attention has been given to the old age persons in USM by giving a separate guideline for this group as Tadabeer-e- Mashaikh (Geriatric care).¹⁴

Herbal medicine has a long history in Asian countries. It is believed that many medicinal herbs have anti-aging properties. Herbs contain several phytochemicals i.e. carotenoids, terpenoids, polyphenols which possess anti-aging activity. A few Unani herbal drugs like Elva (Aloe vera), Kheyar (Cucumis sativus), Honey, Gandum (*Triticum aestivum*), Aslussoos (Glycyrrhiza glabra), Arjun (*Terminalia arjuna*), Jatamansi (*Nardostachys jatamansi*), etc have shown anti-aging activities according to some researchers.⁷

Recent studies have shown that some medicinal herbs are effective in the intervention or prevention of aging-associated neurological disorders like Parkinson's disease and Alzheimer's disease.¹⁵

Dietotherapy is a vast subject in USM and this treasure have not been not been explored on modern parameters yet. There is a need to explore USM for better care of Old age population and to find out an effective, safe, economic treatment for old age diseases like Parkinson's Disease and Alzheimer's disease, etc.

2. Source of Funding

None.

3. Conflict of Interest

None.

References

1. Park K. Textbook of preventive and social medicine; 2021. p. 732.
2. A Brief History of diets; 2000. Available from: <https://www.alimentarium.org/en/knowledge/brief-history-diets>.
3. "dietdate7"; 2013. Available from: <https://www.merriam-webster.com/dictionary/dietdate7>.
4. Taber's Medical Dictionary . Available from: <https://www.tabers.com/tabersonline/view/Tabers-Dictionary/735137/15/diet>.
5. Stevenson RJ. Psychological correlates of habitual diet in healthy adults. *Psychol Bull.* 2017;143(1):53–90. doi:10.1037/bul0000065.
6. Robinson. Improving nutrition to support healthy ageing: what are the opportunities for intervention? *Br J Nutr.* 2017;77(3):257–64.
7. Ho YS, So KF. Anti-aging herbal medicine—How and why can they be used in aging-associated neurodegenerative diseases? *Age Res Rev.* 2010;9(3):354–62. doi:10.1016/j.arr.2009.10.001.
8. Jain V. Community Medicine (PSM); 2018. p. 351–2.
9. Food and Nutrition Services. Available from: <https://www.fns.usda.gov/healthy-eating-index-hei>.
10. Stover PJ. 2010.
11. Vitamin B12 and older adults. *Curr Opin Clin Nutr Metab Care* . 2010;13(1):24–7. doi:10.1097/MCO.0b013e328333d157.
12. Hamdani MK. Usool-e-Tibb ; 2019. p. 1–45.
13. Bashir F, Akhtar J. Ilaj-bil-ghiza-dietotherapy. *Eur J.* 2018;5(12):582–8.
14. Akram U. Importance of Dietary Therapy (Ilaj Bil Ghiza. *Acta Sci Nutr Health* . 2020;4(2):183–8.
15. Chakraborty A, Sahoo M. Anti-Ageing Natural Herbs: A Systemic Review. *Ind Res J Pharm Sci.* 2018;5(3):1589–98.

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