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# A study on the measures to maintain equable temperament of Mashaikh

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#### Abstract

In unani system of medicine, preservation of aged health, lengthening of years of life, and preventive methods for age-related illnesses were all areas of interest for physicians throughout the Hippocratic era (460-370 BC). Galen While illustrating the body condition (Halat-e-Badan), placed the elderly into the third category of La Sehat wa La Mardh, where there is neither complete health nor disease. According to Unani physicians in Sinn-e-Shaikhukhat, the quantity of Ratubat-e-ghariziyah (intracellular fluid) is less than that required for the preservation of the Hararat-e-ghariziyah as well as the body's regular metabolism. Ratubat-e-Gharibah ballah is likewise dominant in Sinn-e-shikhukat. Decline in Ratubat-e-ghariziyah lead to decrease in Hararat-e-ghariziyah. As a result, Mizaj (temperament) become Barid Yabis (cold dry). The goals of Tadabeer-e-Mashaikh are to preserve and protect Ratubat-Ghariziya (Protoplasm) and Hararat-e-Ghariziya (Innate heat) for as long as possible, and to avoid the production of Ratubat-e-Gharibah ballah to eliminate the morbid matter from the body through natural means, and to avoid the conversion of Mizaj to Barid Yabis.

**Keywords:** La sehat wa la maradh, sinn-e-shaikhukhat, ratubat-e-ghariziya, hararat-e-gharidiya, ratbat-e-gharibah ballah, barid yabis

#### Introduction

To maintain the equable temperament and health of Mashaikh (elderly people) and soundness, modifications in Asbabe-Sitta-Zarooriya (Six Essential Factors), i.e., air, food, and drink, body movement and repose, mental movement and repose, sleep and wakefulness, retention and evacuation, and also moderation in Asbab-e-Ghair Zarooriya (Non-Essential Factors) i.e., exercise, massage, therapeutic bath are required [1]. Renowned Unani physicians, notably Rabban Tabri have discussed elderly care. In their texts, Zakaria Razi, Ali bin Abbas Majoosi, Abu Sahel Masihi, Ibn-e-Sina, Ismail Jurjani, Ibn Rushd, Ibn Hubal Baghdadi defined Tadabeer-e-Mashaikh as the regimens or systemic plan for the maintenance of equable temperament of mashaikh. Even in the World Health Organization, a procedure on ageing and health stated that good behaviours such as proper diet, sleeping, and exercise considerably support successful ageing [2]. Life style, environmental changes, dietary habits, occupation, chronic illness, psychosocial situations, and moderate steps in eating, such as dividing the entire day diet into three to four meals, moderate exercise, and establishing healthy habits, are all factors that influence the elderly quality of life [1, 4, 5].

**Historical perspective:** Ageing is a natural, unavoidable, universal phenomenon that occurs because of the increasing degradation in various sections of the body as one gets older. According to the United Nations, elderly are those over the age of 60. Over the last few decades, medical discoveries and advancements as well as improvements in socioeconomic conditions and public health have improved the average lifespan of humans. Because of these occurrence, the share of elderly persons in the global population is increasing. Globally, the proportion of aged people has risen from 9.2% in 1990 to 11.7 percent in 2013, with a projected 21.1 percent by 2050. By 2050, the world's old population is predicted to exceed 2 billion individuals. India is likewise undergoing a demographic change with the proportion of aged people exceeding 7% in 2000, and the country being labelled as an ageing nation. By 2025, this percentage is predicted to rise to 12.6%. The rapid rise in the old population brings with it a slew of issues, one of which is preventing physiological ageing from turning into pathological ageing, as well as preventing elderly people from suffering the repercussions of the ageing process.

Corresponding Author: Abid Nadeem Nomani Assistant Professor, Department of Kulliyat, RA & UTMC, Bhawanigarh, Sangrur, Punjab, India The aged population has a variety of challenges, including physical, psychological, and socioeconomic issues. In Unani system of medicine, preservation of aged health, lengthening of years of life, and preventive methods for agerelated illnesses were all areas of interest for physicians throughout the Hippocratic era (460-370 BC). Aristotle started the debate about quality of life over 2000 years ago. According to him, "a good life is not only something to live for but also something to live by". Galen described ageing as a normal, unavoidable, and non-pathological process which results in a cold and dry physique with decrease in organ function, vitality, and muscle strength.

#### Mizaj-E-Mashaikh

- 1. *Mizaj* is the key factor in the diagnosis and treatment of diseases. Each and every human being has a particular mizaj, which is distinct but changes with the advancement of age [3].
- 2. In Unani system of medicine this change in temperament, and the process of aging, depends upon the quantity of *Hararat-e-ghariziyah* (Innate heat) as well as of *Ratubat -e-Ghariziyah* (protoplasm), and these are essential for the maintenance of equable temperament.
- 3. According to Galen, *Hararat* and *Ratubat* are essential for the maintenance of life, while *Barudat* and *Yaboosat* are opposite to life and an indicator for death <sup>[6]</sup> Kabeeruddin said that *Hararat* and *Ratubat* are essential for life that is why every living organism shows affinity towards these two <sup>[7]</sup>.
- 4. *Hararat-e-Ghariziya* is the innate heat produced by metabolism (*istehala*) that maintains the specific temperament of the body, and help to perform normal function. It is produced in livings as the result of burning of *Makhsoos Ajza-e-Ghizai* (nutrient) in presence of *Ruh*.
- 5. On the other hand, *Ratubat-e-ghariziyah*, also known as *Ratubat-e-ustuqussiyah*, *Ratubat-e-asliyah* intracellular fluid or protoplasm, establishes the internal environment of the cells. Mizaj and homeostasis of the whole body depends upon this *Ratubat-e-Ghariziya* along with *Ratubat-e-Tajaweef* (intercellular or tissue fluids) and Ratubat-e-urooq (vascular fluids) [5].
- 6. Unani physicians divided the entire life span of an individual into four stages collectively termed as *Asnan-e-arba*, according to the quantity of *Ratubat-e-ghariziyah* and *Hararat-e-ghariziyah* present in the body <sup>[7]</sup>.

#### Physiological changes in old age

Cardio Vascular system: Histological examination of the myocardium reveals accumulation of yellowish brown Lipofuscin pigment. Large areas of fibrosis especially in the Sub-endocardial region may be observed. The capillary density of the myocardium may be decreased. Accumulation of calcium salts in the elastic and muscular type of arteries, as well as deposition of more collagen fibres, decreases the distensability of the blood vessels.

**Respiratory System:** There is a gradual decline in the number of alveoli, the elasticity of the lungs is decreased leading to increase compliance. On the other hand, calcification of costal cartilage decreases the mobility of the ribs, as well as the compliance of the thoracic cage <sup>[9]</sup>.

**Central nervous system:** Post-mortem examination of the aged who died from non-neurological disorders revealed a number of lesions:

Atrophy of the brain especially involving frontal lobes, Enlargement of the ventricles, Depigmentation and other degenerative changes in the substantia nigra, Degenerative changes in the lentiform nucleus, The number of neurons decline with age. In the cerebral cortex the pyramidal cells show a gradual loss of dendrites. Cerebral oxygen utilization is reduced by 25%. There is loss of sense of vibration, and elevation of threshold of most other sensation. Sense of two-point discrimination is also affected.

**Reflexes:** Ankle jerk is lost in most of the elderly individuals. Other deep and superficial reflexes tend to be sluggish or absent, skeletal muscle atrophy gradually increases with age. Senile dementia and Alzheimer's disease are very serious disorders of the nervous system, because they affect the higher cortical functions. Basically both are similar in nature and caused by degeneration of cholinergic neurons in the forebrain. Parkinsonism is another disorder of the aged involving the basal ganglia. It is caused by degeneration of dopaminergic neurons of the substantia nigra <sup>[9]</sup>.

**Autonomic Nervous System:** Progressive disturbance of temperature regulation is an evidence of autonomic disturbance in the aged. Many elderly individuals go into hypothermia in their own home, sometime even when the weather is not so cold. Postural hypotension is a fairly common problem faced by the elderly, it is attributed to partial failure of the Baroreceptor mechanism <sup>[9]</sup>.

#### Special senses

The Eyes: presbyopia or the loss of accommodation is most well-known and obvious sign of ageing. After eight decades, degenerative changes in the muscles of accommodation further accentuate the problem. Gradual opacification of the lens (cataract) also occurs almost universally. The appearance of white (opaque) circle at the edge of cornea called Acrus Senilis is another sign of ageing. The papillary responses to light and accommodation also decline with age.

**The Ears:** Degenerative changes in the organ of Corti (hair cells), ganglion cells, as well as temporal cortex produce impairment of hearing (presbycusia), especially for higher frequencies. Otto sclerosis. Degeneration of hair cells of the cristae ampularis further contributes to the impairment of postural reflexes.

**Taste and Smell:** The number of taste buds per papilla decreases from an average of 250 in childhood to 90 by the age of 80 years. Hence the taste threshold is elevated in old age, the impairment of sensation of smell and taste may be partly due to cellular loss in the cerebral cortical centres <sup>[9]</sup>.

**Gastro-intestinal tract:** Dryness of mouth is a common complaint in old age. Salivary amylase secretion is drastically reduced, but it does not affect the digestion of starch. Gastric secretion falls to 1/5<sup>th</sup> the adult value by the age of 60 years. The secretion of pancreatic amylase is not affected in old age. Since of digestibility and absorption of carbohydrates, fats and proteins in the aged individuals

shows no apparent deterioration, All the hepatic function tests show normal result, except for decrease in Albumin /globulin ration, bile pigment excretion is also remains normal [9].

**Endocrines:** The anterior pituitary hormone secretion is not reduced in old age. In females, the gonadotropin secretion from anterior pituitary is actually increased, there is definite decrease in the secretion of thyroid hormones. Basal plasma insulin level seems to be unaffected, but there is impairment of insulin response to a glucose load. Plasma adrenal cortical level and glucagon level remain normal. Plasma oestrogen and progesterone levels are markedly decreased.

**Blood:** Total blood volume and total leukocyte count remain normal in old age. Immunological function is markedly depressed. Immune surveillance by T-Lymphocytes is reduced, B-Lymphocyte function is also depressed. Due to all these factors old people are more prone to infections. The function of coagulation of blood and platelet count remains normal in old age. Senile purpura is observed due to a defect in the capillary endothelium. ESR value tends to be markedly elevated (up to 40mm in 1st hour) without evidence of any disease. It is probably related to increased plasma fibrinogen level observed in old age.

**Musculo-Skeletal-System:** Progressive loss of muscular power is a characteristic feature of ageing. Osteoporosis is an essential component of ageing;it becomes especially prominent in women after menopause, although no definite cause for osteoporosis can be detected in males or females. Thinness of bone predispose to fracture. A fracture leads to immobility which further aggravates osteoporosis [9].

**Skin and Hair:** Wrinkling of skin and greying of hairs are the hallmark of ageing. The greying of hairs is due to the loss of melanin pigment. On the other hand, almost complete deficiency of oestrogen leads to unopposed action of adrenal androgen causing increased facial hair growth. In males, baldness is very common but the growth of beard is not affected. Sweat glands decrease in size and number. There is decrease in secretion of sweat gland as well as sebaceous glands <sup>[1]</sup>.

**Kidney:** By the age of 80 years, there is 30-40% decrease in the number of renal glomeruli, leading to a corresponding decrease in GFR. Any type of circulatory stress may precipitate renal failure. Decreased urinary excretion of certain drugs may produce toxicity at doses well tolerated in younger individuals <sup>[9]</sup>.

Measures to maintain equable temperamen: The Unani system of medicine advocates maintaining the body in perfect well-being and optimal health. To maintain the body in equable temperament and to prolong the life, balance in six essential factors i.e. Hawa-e-muheet (Air), Makool-wa-Mashroob (Food &Drinks), Harkat-wa-Sukoon-e-Badani (Bodily movement &Repose), Harkat-wa-Sukoon-e-Nafsani (Psychic Movement and Repose), Naum-wa-Yaqza (Sleep &Wakefulness), Ehtebas-wa-Istifragh (Retension & Excretion). Imbalance in asbab-e-sittah zarooriya causes an alteration in equable temperament subsequently decline in quwa and af'al. Af'al are many as there are quwa in the body. Every normal function of the body is an indicator of

normal quwa of the body. If functioning of all organ of the body is conducive and equable it indicates a good health. Each and every organ is furnished with a power through which specific physiological functions and biochemical

which specific physiological functions and biochemical processes are performed by that particular organ. These Quwa are specific for proper functioning of a particular tissue or organ on which the specific function of that organ is depends.

## These faculties have been classified mainly in three major types as follows:

- 1. Ouwa-e-tabiyah (natural faculties)
- 2. Quwa-e-hawaniyah (vital faculties)
- 3. Quwa-e-nafsania (psychic or mental faculties).

For maintaining equable temperament of mashaikh primary measures are need to strengthen the respective Quwa and their *Af'al* by different *Tadabeer*:

### 1. Tadabeer to strengthen the quwa-e-tabiyah (Natural Faculties)

In classical Unani literature, physicians described and recommended principle of intake and diet comprising different *Aghzia* (nutrients) to strengthen and treat the *Quwa-e tabiya*, to prevent from common ailment and also to maintain the equable temperament as follows:

Nauiyat-e-ghiza for Mashaikh: Majoosi in his book Kamil-us-san'at mentioned about quality and quantity of food and timings of food for elderly. According to him food should be hot and moist in temperament, it should be light and easily digestible e.g. well baked and fermented bread, small fishes, half-boiled egg etc. He advised to include fibre rich vegetables in their diet and also milk for those who can easily digest it. According to him elderly people should avoid heavy foods, which are not well in quality and such foods which aggravate bile secretion, phlegm, and black bile, and easily putrefiable in stomach. Food should be given two to three times a day in small quantity and it should be chewed well [10]. Ibn Sina in his book Al-Qanoonfi-al-tib also mentioned about the diet of the elderly. He advised that food for elderly should be nutritious, laxative and humectants in nature. They should be avoiding Hot, pungent, desiccant foods, Milk is beneficial for those who can easily digest it. Food articles mentioned in literature include, honey, beet, leek, garlic, preserved ginger, fig, plum, been, olive oil etc. Much emphasis is given for intake of laxative food articles which have bowel cleaning property without any harm [11]. Galen advocates that the food should be given thrice a day [12]. Food should not be taken before hammam. Food articles which produce warmth in the body should be used, and those foods which produce dryness in the body should be avoided. Use of fig, honey, ginger, olive oil in diet helps to avoid constipation  $^{[\bar{1}]}$ .

*Baghdadi* mentioned that for preservation of their health, Healthy soups like meat soups, honey, rice, yolk of half boiled egg, chicken, meat of lamb, spinach, beet root, fig, grapes, musk melon, date etc. are good for them [13].

According to the *Razi*, the diet and sleep in adequate quantity produce ratubat in the body [14]. Garlic and ginger like hot preserves are suitable for digestion. According to Unani Physicians, in old age, there is dominancy of *Barudat* and *Yaboosat*, therefore *Musakhin* and *Murattib* (demulcent and moistening) diet should be advised for elderly peoples.

Extremely hot and cold water should not be given [15,16,17,18]. Weak persons of this age group should be provided with frequent intake and *Muqawwi Gizha* (strength providing foods), like *Maa-ul-Laham*, Half boiled egg, honey, *Roghan-e-banafsha* etc. Mulattif (demulcent) and the drugs which remove the waste material from the body like *Sikanjabeen usooli*, *Sikanjabeen-e-bazuri*, can be given.

Due to decrease amount of *Safra*, persons usually complains of constipation in this age group, So *mulayyan advia* (*laxative*) should be given like, *jawarish tamar hindi*. According to the Avicenna the elderly person should have adequate sleep, and the time spend on the bed should be more than it is for the adults. Their bowel should be kept soft. A continuous use of mild diuretics is recommended [18, 19]

**Recommended Aghziya in sin-e-shaikhukhat to maintain equable temperament:** Some Specific Aghziya (nutrients) beneficial for maintenance of equable temperament and to strengthen the quw-e tabiya are as follows:

**Breads:** The best bread is made up of fermented wheat cooked in oven, and has maximum water quantity during kneading dough, and when cooked become like sea sponge, this type of bread has Haar Ratab mizaj, and beneficial for healthy as well as diseased person, easily digestible in every season and in every age [20].

**Simsim/kunjad (sesame):** Har Ratab, causes flatulence and nausea, and increases the bile production, after being fully digested Simsim is highly nutritious.

**Bazr-al-katan** (**flax seed**): *Bazr-al-katan* (Flax seed), also has same mizaj and same effect like sesame, and it is also nutritious after being digested <sup>[20]</sup>.

Birds and animals' meat: Lahm-al-za'n (lamb's meat), lahm-al-ijl (veal), lahm-al-ghazal (deer's meat), lahm-al-dajjaj (chicken meat), al-yamam wa hammam (doves & pigeons), lahm-al-bat (duck meat), lahm-al-awz/hans (goose meat). All these meats have Har ratab Temperament and beneficial in old age. Al-arnab (rabbit).

**Al-alaban (milks):** Labn-al-ma'iz (goat milk) [20, 21], labn-al-baqar (cow's milk) [18]. Laban-al-naqqah (camel's milk), these all milks are Lateef and easily digestible hence suitable for this age.

**Fawakeh (fruits):** In fruits: figs, walnuts, almonds, grapes, mulberry and Alu Bukhara (*Prunus domestica*) are advisable. Har murrabah & vegetables like kasni (*chichorium intibus*), kahu (Lactuca sativa), khubbaze (*Malva sylvestris*) are useful. Zanjabeel (*Zingiber officinalis*) can also be used [22]. Al-zabeeb (raisins) [1], himmas (gram), lobia (beans) tuffah (apple) luffat /shaljam (turnip), al-jazar/gajar (carrot), rumman (pomegranate), albasal (onion), al-jarjeer/halon (arugula/rocket), al-tamar (tamarind) [20,21].

**Diet forbidden for elderly:** According to Unani concept of *usool-e-ilaj*, we follow the rule of *ilaj-bil-zid*, either prescribing Giza or Dawa, and we know the temperament of *mashaikh* is *barid yabis*, so we can prescribe him only those diets which are har and ratab, and forbid them from

consuming those things which are similar to their temperament (*barid yabis*), because *ilaj bil misl* is not our way of treatment, e.g. Beans Bread, Camels' meat, Cow's Meat, Al-Jubun (Cheese),Sour & Spicy diets, are forbidden to mashaikh because these are either have barid yabis or barid ratab temperament which is not required by elderly.

#### Nutritional needs of elderly peoples

**Energy:** daily energy needs range from 1600 to 2200 kcal for women and 2000 to 2800 kcal for men [23, 24]. Chronic conditions common in elderly including cardiac failure, COPD, increase energy needs, it appears that older people, even relatively inactive have higher energy requirement than predicted [25]. Because they expend more energy in performing a given activity such as walking than younger adults with greater muscle coordination [26].

**Water:** Dehydration is a concern for both healthy and chronically ill elderly peoples <sup>[27, 28]</sup>. Physiologic changes, disease effects, and environmental circumstances can predispose older people to inadequate fluid intake. Change in the hypothalamus alter the thirst mechanism. Age related alterations in kidney function increase water loss, and body water serves as the medium for the dilution of medications. Dehydration exerts effect on alertness and cognitive function <sup>[29]</sup>.

**Carbohydrate:** Persons of all ages should obtain 45% - 65% of their total energy from carbohydrate, with an emphasis on complex carbohydrate <sup>[30]</sup>. Diets rich in fibre support gastrointestinal function and reduce the need for laxatives <sup>[31, 32]</sup>.

**Fats:** A diet in which fat contributes 35% of total calories (with an emphasis on unsaturated fats) can assist in maintaining body weight in frail older peoples.

**Protein:** the current RDA of protein 0.8g/kg body weight <sup>[30]</sup>, may not be sufficient for frail or chronically ill elderly person, Protein intakes of1.25g/kg body weight not only reduces the net loss of body Nitrogen, but also support the production of new protein and addition of lean tissue <sup>[33]</sup>. Older individuals recovering from surgery or acute illness may require as much as 1.5g/kg for optimal recovery over all 10% to 34% of total calories should be supplied by good-quality protein <sup>[34, 35]</sup>.

#### Vitamins

Vitamins of special importance to the ageing peoples include the following:

**Folate:** Optimal folate intake prevents a rise in blood homocysteine levels that damage the blood vessels and accelerate atherosclerosis.

**Vitamin B<sub>6</sub>:** vitamin  $B_6$  is important to preserve or increase muscle mass.

**Vitamin B<sub>12</sub>:** Vitamin  $B_{12}$  deficiency leads to not only a megaloblastic anaemia but also changes in cognitive function in elderly peoples <sup>[36]</sup>.

**Vitamin D:** Ageing changes in the skin also reduce vitamin D synthesis regardless of sun exposure [37].

**Calcium and vitamin D foods include:** Milk, Salmon, Cheese, Perch, Yogurt, Beef Liver, Soy beans, Egg yolks, Kale, Fortified orange juice, Spinach, Fortified cereals, Sardine [36].

#### **Minerals and Electrolytes**

In planning diets for elderly, calcium and electrolytes potassium and sodium require particular attention as follows:

**Calcium:** The AI for calcium is 1200 mg for elderly. Fluid milk, fortified soy milk, or fortified yogurt are good sources of calcium, also contain added vitamin D<sup>[38]</sup>.

**Potassium:** This electrolyte helps to regulate blood pressure. As an opposing force to sodium, which tends to raise blood pressure levels, potassium is especially important in the diet of elderly peoples. The AI for potassium is 4700 mg [39].

**Sodium:** Daily intakes should be limited to 2300mg or less [26]

**High protein foods include:** Lean meat, Tofu, Poultry, Hummus, Fish, Milk/Soy milk, Nuts Cottage, cheese, Nut butter, Greek yogurt Beans, Quinoa, Lentils, Buckwheat, Soy products.

**Add these herbs and spices to your food instead of salt:** Fresh garlic, Cayenne, Fresh onion, Nutmeg, Garlic powder, guava, Murrabah Amla, Onion powder, Low-sodium/, salt free seasoning blends, Black pepper, Vinegar, Cinnamon [20].

**Soft Foods:** Smooth yogurt, Applesauce, Boiled/cooked eggs, Canned fruits, Soft cheeses, Soft fruits w/out skins, Cottage cheese, Melons, Ground cooked meat or poultry, Peaches, Baked broiled or poached fish, Bananas, Soft cooked or canned vegetables, Hot cooked cereals, Legumes, Soft bread, rolls, muffins, Potatoes, Pancakes, Squash, French toast, Desserts w/out nut.

**High fibre foods include:** Beans, Oats, Legumes, Flax seed, Nuts Fruits, Whole grains, Vegetables [40].

#### 2. Tadabeer to strengthen the Quwa-E-Haiwaniya

Quwa-e-haiwaniyah deals with the cardiovascular system, the system has been classified mainly in two Quwa as (1) *Quwat-e-failah* (Active faculty) (2) *Quwat-e-munfa'ilah* (passive faculty).

- Quwat-e-failah is responsible for the contraction and relaxation of the heart and arteries which maintain the whole circulatory system.
- Quwat-e-munfa'ilah is responsible for psychic reactions and emotional expressions.

Whenever disequilibrium occurs in substance of the air, pollution and putrefaction are produced in the substance (Maddah) and (Quality), causing plenty of symptoms (*a'rad-radiyah*) and disease in human body.

The intervention may be made in the *Asbab-e-sitta-zarooriyah* (Essential factors) and Co-efficient factors according to the need of SOP provided for the maintenance of Quwat-e-Haiwaniyah.

To avoid CVD and other respiratory diseases, we should

live in clean atmosphere. Breathing in polluted air increases the risk of heart attack and stroke by raising risk of blood clots, increases blood pressure, inflammation (swelling) in blood vessels, Hardening of arteries (atherosclerosis) and irregular heartbeat.

According to Hippocrates overeating should be avoided because excess of food causes superfluous humour and subsequently causes illness. Plenty of dietary fibre especially soluble fibre prevents absorption of cholesterol in the digestive tract and helps in prevention of blood cholesterol from rising as high. Avoid saturated and trans fats, sodium, and added sugars, unhealthy fats can raise bad cholesterol, and sodium can increase blood pressure,

Saturated fats are found in animal sources and whole-milk dairy products. They're also in certain tropical oils, like coconut oil. Trans fats are found in processed foods that contain partially hydrogenated oils, such as some baked goods and fried foods. Replace these unhealthy fats with monounsaturated and polyunsaturated fats, which are in many nuts and seeds, canola and olive oils, fatty fish, and avocado. Healthier fats may even lower bad cholesterol levels, and decrease the risk of heart diseases.

Older adults should be advised to drink plenty of water to stay well hydrated  $^{[41]}$ .

**Moderate exercises:** Moderate activity and rest are very essential to prevent CVD. Moderate activity even walking or gardening per week lowers the rate of heart attack, stroke, and death from all causes <sup>[4]</sup>.

**Psychic emotions:** It has been proved that mental stress plays a significant role in the development of CVD. Therefore, to avoid CVD, moderation in *Harkat wa sukoon-e-nafsani* is must [42].

**Moderate sleep:** Sleep should be moderate with respect to age and one's Temperament.

**Evacuation and retention:** Excess of LDL and triglycerides are harmful to body and cardiovascular system, they should be removed from the body. Minerals, Vitamins and HDL which help to protect the body and cardiovascular system should be retained in the body.

#### 3. Tadabeer to strengthen the Quwa-E-Nafsaniya

This Quwa performs intellectual, sensory and motor functions in the body. It is of two types:

- 1. Quw-e- mudrikah- concerned with the sensory functions.
- 2. Quw-e-moharrika- concerned with the motor functions.

Modification in *Harkat-wa-sukoon-e-nafsani* and *Harkat-wa-sukoon-e-badani* is essential for the maintenance of equable temperament of *mashaikh*, to strengthen the *Quw-e-mudrikah* and *Quw-e-moharrika* and to prevent from elderly disorders. Psychosomatic integration is essential for the preservation of physical fitness, and preservation of health [4, 5]

(1) Harkat wa Sukoon-e-nafsani (Psychic Movement and Repose): It is now advocated that better thoughts, positive emotions and oriented environment put a good impact on the health of individuals. They improve physiological function, increase innate heat and strength defensive mechanism. Besides, they help in removing many diseases

and heal the wounds and trauma or at least shorter the period of suffering [4, 5, 7]. Elderly must involve themselves in developing spiritual strengths for the successful aging. Each elderly must find their own unique path to spirituality, either through meditation, prayer, reading Holy book, and/or attending a church, temple, mosque or religious congregations. Spirituality can significantly reduce stressful life events. It can bring happiness, a sense of inner harmony, a sense of Humour, a belief in the dignity and worth of each individual. Above all, spirituality can change one's life perspectives. Life experience and a sense of holistic well-being.

(2) Harkat-wa-sukoon-e-badani (Bodily Movements and Repose): Our daily routine work should be balanced. Physical movements of daily routine work should be in proper manner. Physical exercise is an increasingly popular health promotion activity for elderly people although evidence of its effectiveness is limited [43].

Aerobic exercise for elderly people are: Walking, jogging, swimming, and biking. Activities like cleaning gardening may also have aerobic effects [44, 45]. Elderly people by keeping themselves active and engaged in healthy behaviours seem to overcome difficulties due to ageing process and can raise their quality of life [46]. Exercise may improve some cognitive abilities of older adults such as memory and delay the onset of Alzheimer's disease [47-50], Walking for 20 minutes burn of about 148 calories, increase heart rate, way to relax and socialize with friends, good for bone and muscles development, provide a daily dose of Vitamin D from sunlight [51-54].

Dalak (massage): It is primarily about touch and in it has healing qualities for reasons that are beyond our understanding. It is relaxation technique. [179]. and helps to improve sleep quality and general well-being [56]. The aroma massage therapy seems to have potential as an alternative method for short-term knee pain relief among the elderly peoples [57]. BN Sina is very much in favour of massage for elderly and writes, "Massage for the aged should be of moderate type: weak and painful parts should not be massaged. If the massage is repeated on the same day, it should be given with a piece of coarse cloth (towel) or bare hands. This would strengthen the vitality of massaged organs and prevent relapses" [11] oil. Massaging is a good habit for elderly peoples, massaging gives the activeness and excitement. Ali bin Rabban Tabri emphasized on application of oil on elderly peoples, because oiling delays the ageing and removes the arthralgia, provides healthy skin and good sleep. Regular regimental therapies like Fasd (blood-letting). Ishaal (Purgation), use of strong Enemas (*Hugna*) have been contraindicated in the elderly peoples [1].

**Bath** (hammam): It should be done with fresh and lukewarm water and at least once in a week or according to body strength of the elderly people, hammam preferably should be done regularly but if person is weak then it should be done according to their strength. After bathing *Saras* leaves in sharab-e-rehani or in honey applied on whole body and then bath is taken, if *Sasurea Lappa* (*Qust Talkh*) *Juniperus Cummunis* (*Abhal*), Sweet Majoran (*Marzanjosh*), *Cinnamomum tamal* (Tezpat), are grinded and applied on

the body is beneficial, *Arad Baqilla*, Cucumber seeds are also beneficial [1].

Naum-wa-yaqza (Sleep & wakefulness): Sleep of elderly should be more than that is recommended to young peoples. Balance between sleep and wakefulness is essential to maintain health.

#### Drugs which delay the aging

Unani physicians also mentioned the medications, which delay the process of aging and balance the health are of three types *viz*; Plant origin, Mineral origin and an Animal origin. These drugs are mostly Har mizaj except Amla (which has Barid Mizaj) and most of the drugs have been proved as antioxidant, immuno-modulator, anticancer, free radical scavenging, *Kaya Kalp/ Rasayana /Aabe Hayat /Elixir of life/ Iksir-e-Badan*.

Plant Origin medicines which delay the process of ageing: Aakhrot, Ajwain Khurasani, Aqar Qarha, Amla, Asgand, Azaraqui, Badam, Badranj Boya, Balela, Barhami, Bhilavan, Bhui Amla, Bisbasa, Darchini, Filfil Daraz, Filfil Siyah, Gaozaban, Gilo, Haleela, Injeer, Jadwar, Jaiphal, Jatamansi, Kabab chini, Kalonji, Kalmeg, kishneez, kundu, Khulanjan, Lahsun, Mastagi, Ood, Qaranfal, Qust, Rehan, Kunjad, Sazaj hindi, Shahme Hanza Saad Koofi, Zanjabeel, Sibr, Salab, Tambool, Karafs, Waj Turki, Zarnab, Zaranbad

Mineral Origin medicines which delay the process of ageing: Fizza, Momiyai, Sammul Far, Shalajeet, Yaqoot, Zaharmohra, Zamarrud, Zahab.

Animal origin medicines which delay ageing process: Ambar, Asl (honey), Lulu, Mushk, Sadaf, Sartan.

Compound formulation: Anooshdaru, Habbe Azaraqi, Itriphal Kabir, Majoon Biladur, Majoon Falasfa, Majoon Waj, Tiryaq-e-wabai, Tiryaq-e-Farooq, Itriphal Kishnizi, Itriphal Ustokhodus, Jawarish Jalinoos, Itriphal Sagheer, Khamira Gaozban Ambari Jawaharwala, khamira gaozaban sada, Majoon Brahmi.

#### **Discussion and Conclusion**

The aged population has a variety of challenges, including physical, psychological, and socioeconomic issues, when people get older, the concept of ageing is also very old in Unani System of medicine, Jalinoos (Galen) while describing the *Halat-e-badan* placed elderly people, referred as "Mashaikh" in the state of Halat-e-Salisah (neither complete health nor the individual is entirely diseased). Hararat-e-ghariziyah burns out the Ratubat-e-ghariziyah during the cellular metabolism. If there is an increased dissolution of Ratubat-e-ghariziyah, then it eventually weakens the Hararat-e-ghariziyah, and a decrease in Hararat-e-ghariziyah alters the mizaj relatively towards the Barudat (coldness), this gradual increase in coldness with age results in the decline of the faculties, thereby functions of the body deteriorated. In Sinn-e-shaikhukhat, the quantity of Ratubat-e--ghariziyah (intracellular fluid) is less than that required for the preservation of the Hararat-e-ghariziyah as well as the body's regular metabolism. Ratubat-e-gharibah ballah is likewise dominant in Sinn-e-shaikhukhat. As a result, Mizaj (temperament) became Barid Yabis (cold dry). Age related physiological changes can be delayed by

adopting those regimens which increases the *Hararat-e-ghariziyah* in *mashaiykh*.

To maintain the equable temperament and health of Mashaikh, modifications in efficient causes and coefficient factors is required. Therefore, the goals of *Tadabeer-e-mashaikh* are to preserve and protect Ratubat-e-Ghariziya (Protoplasm) and Hararat-e-ghariziyah (innate heat) as long as possible, and to avoid the production of *Ratubat-e-gharibah ballah*.

The Unani system of medicine recommends (1) Ilai-Bil-Ghiza (Dietotherapy) (2) Ilai-bi'l Dawa (pharmacotherapy) (3) *Ilaj-bil-Tadbir* (Regimental therapy) for the maintenance of equable temperament in the case of Mashaikh. According to usool-e-ilaj, ilaj bil misl and ilaj-bil-zid is adopted for maintenance of health. Quantity and quality of food should be in accordance with mizaj and age. Food should be taken two to three times a day in small quantity and it should be chewed well. According to their Mizaj the elderly should be advised Musakhin and Murattib (demulcent and moisture) diet. A number of single and compound drugs like Amla, Zanjabeel, Asgandh, Garlic, Zafraan, Kalonji, Tiryaq-ewabai, Majoon-e-falasfa etc. frequently used in Unani system of medicine and now are proven to have anti-oxidant and immune-modulator properties. Scientific revealed that, antioxidants drugs have definite role in the prevention of geriatric diseases. Due to decrease amount of Safra, persons usually complains of constipation in this age group, so mulayyan advia should be given like, jawarish

For the graceful or delayed process of ageing all the above mode of treatments and advices varies according to temperament as well as physiological, psychological and socioeconomic status of each individual.

#### **Conflict of Interest**

Not available

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