

Analysis of the elderly level based on database

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Abstract: Aging is a global problem, and dietary nutrition of the elderly has a very obvious impact on their physical health. A survey of 242 elderly people who can take care of themselves was conducted with the aim of improving the quality of life of the elderly as well as providing a scientific basis for the development of appropriate nutritional interventions. The weight, biochemistry and daily diet of the elderly were analyzed, and the data were sorted out using relevant excel tables, and the results were analyzed by software to understand the healthy nutritional status of the elderly. The results showed that with the increase of age, the weight and obesity level of the elderly decreased significantly. In terms of nutritional intake, salt, oil, vegetables, potatoes and cereals were appropriate, eggs were slightly higher, legumes were lower, and fruits, milk and aquatic products were insufficient. There is a situation of irrational dietary structure. It is necessary to adjust the dietary structure in daily life in a timely manner, and formulate a scientific and reasonable dietary program according to the actual situation of the elderly, so as to make the elderly nutritionally balanced and improve their quality of life. At the same time, publicity on reasonable diets should be strengthened, so that the elderly can understand nutritional knowledge.

1 Introduction

Nutrition is an important material basis for the maintenance of life and health. Nutrition is not only a health issue, but also a key to population quality and socio-economic development. Nutritional data of the population can reflect the economic and social development, health care and health status of the population of a country or region, and are also indispensable basic information for the formulation of national public health and disease prevention and control strategies^[1].

With the improvement of economy and material level, people pay more and more attention to dietary health, and Domestic and foreign countries have also carried out regular surveys and studies on the nutritional status of people's diets on an annual basis^[2]. However, due to the rapid development of the economy and the diversification of foodstuffs, the national nutrition survey conducted once every 10 years has long been unable to make the most accurate assessment of the dietary structure of the population^[3]. However, due to the rapid development of the economy and the increasing variety of foodstuffs, the national nutrition survey conducted once every 10 years has long been unable to provide the most accurate guidance and advice on the dietary structure of the population.

Traditionally, nutrition research has focused on the health effects of individual nutrients and individual foods, ignoring the complex interactions between various nutrients and foods, whereas people's diets are a combination of foods, not just the intake of a single

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nutrient or food, so the trend in nutrition and health research will be to consider diet as a whole, i.e., to study the impact of dietary patterns on health.

As the degree of aging deepens, attention to the health of the elderly has become a part of our country's development that must be emphasized. First, due to the weakening of the swallowing function, gastrointestinal digestion, absorption and other functions of the elderly, the nutritional absorption and intake of the elderly is limited, and the nutritional supply and consumption are out of balance^[4]. the body is generally in a weakened state, coupled with the impact of disease, social, psychological and other factors, the incidence of malnutrition risk is still at a high level, and once malnutrition occurs, the elderly's body immunity will further decline, thus further increasing the occurrence of malnutrition-related diseases and deaths; secondly, the knowledge of personal nutrition to a certain degree determines their own healthy dietary behaviors, because of the influence of different genders, ages, living environments, economic income levels, living habits and other factors, the dietary nutritional status of the elderly population are all very different, with different perceptions of diet and nutrition, and different health conditions of the body.

When the human body enters old age, its functions gradually decline, the declining basic metabolic rate and resistance and improve the incidence of various metabolic-related and degenerative diseases, which has an impact on physical health. In this regard, the analysis of the health and nutrition status of the elderly based on the database can obtain relevant basic data^[5].

The nutritional health status of the elderly in China is not optimistic, specifically manifested in the following

aspects: 1. The phenomenon of both malnutrition and excess nutrient intake coexists; the average malnutrition rate of the elderly population is 12.4%, and the prevalence of anemia is as high as 19.6%, which is obviously higher than that of other groups. At the same time, the proportion of overweight and obesity among the elderly (32.4%) is much higher than that of the general population. 2. High incidence of diet-related chronic diseases. The prevalence of hypertension among the elderly in China reaches 49.1%, dyslipidemia 23.4%, diabetes mellitus 6.77%, cardiovascular disease and microvascular disease develops a high incidence of mortality, malignant tumors, the elderly population accounts for 50%. These problems seriously affect the quality of life and health of the elderly. 3. The increased incidence of degenerative diseases is closely related to nutritional imbalance and insufficient intake of antioxidant nutrients. Studies have shown that the occurrence of cataracts is related to the insufficient intake of antioxidant nutrients by the elderly, and supplementing the elderly with antioxidant nutrients such as vitamins A, E, C and selenium can delay the occurrence of cataracts. Alzheimer's disease is related to insufficient intake of carbohydrates, calcium, zinc, tyrosine, glutamic acid, phospholipids and vitamin E. Appropriate supplementation of the above nutrients can improve the symptoms of Alzheimer's disease. As one of the most important degenerative diseases in the elderly, osteoporosis and the fractures it causes have become a serious social problem. Osteoporosis is mainly related to the reduction of end-products of glycosylation in late life, lowering of sex hormone levels, insufficient intake of calcium, potassium, vitamin D, etc.; reduction of outdoor exercise; inappropriate intake of phosphorus; excessive intake of sodium and protein^[6].

which is conducive to formulating highly targeted measures to improve the health and nutrition of the elderly and improve the quality of life of the elderly group. To make good suggestions for the dietary nutrition of the elderly and to reduce the high prevalence of chronic diseases among the elderly, with a view to making the life of the elderly in their twilight years happier and reducing the burden of their children, which is of great practical significance to improving the quality of life of the elderly and to promoting the healthy development of the aging of the population^[7].

2. Study Subjects and Methods

2.1. Study subjects

This study included 242 elderly people with self-care ability in a randomly selected area, including 135 men and 107 women. They were divided into four groups from the ages aged A, 61-65 (89), B, 66-70 (58), C, 71-75 (53) and D 76-80 (42). All investigators signed informed consent for professional physical examination, and extracted fasting venous blood from the study subjects to determine the relevant indicators.

2.2. Methods

The scale was used to test the weight of the study subjects, and the subjects were required to remain naturally relaxed and stand in the middle of the scale, and to read the scale data after stability. The fasting venous blood of the extracted researcher was sent to the laboratory and measured for triglycerides, cholesterol, fasting blood glucose and high-density lipoprotein using an automatic biochemical analyzer (Hitachi F-7600). In terms of dietary survey, using the weighing method survey researchers 3 diet, the canteen different meals before cooking, cooking food weight, remaining food weight, at the same time calculate each meal food weight and each number of food, also need to record study U object daily drinks, fruit intake, finally use LKAT software to calculate the average daily food intake per person.

2.3. Diagnostic criteria

Overweight and obesity diagnosis

According to the evaluation criteria set for adult BIM by Chinese workers of the International Society for Life Sciences, ranked from high to low, 28 were obese, overweight in interval 24.0-27.9, normal in interval 18.5-23.9, and thin in interval <18.5.

Diagnosis and judgment of diabetes, hypertension and hyperlipidemia

In terms of diabetes diagnosis, this paper takes the study to extract fingertip blood from the researcher to judge the blood glucose according to the patient's blood glucose data. Combined with the clinical diagnostic criteria, when the fasting blood glucose value, diabetes can be diagnosed as 6.1 mmol/L.

In terms of hypertension diagnosis, WHO jointly issued guidelines for hypertension in 1999, normotensive: 120 / 80mmHg, prohypertension: systolic 120-139mmHg, diastolic 80-89mmHg, stage 1 hypertension: systolic 140-159mmHg, diastolic 90-99mmHg; stage 2 hypertension: 160 / 100mmHg.

In terms of high-lipid blood diagnosis, total cholesterol is 5.68 mmol/L, triglyceride is 1.70 mmol/L, low-density lipoprotein cholesterol is 3.10 mmol/L, and high-density lipoprotein cholesterol is 1.1 mmol/Ls. One of the above indicators can be judged as hyperlipidemia.

2.4. Statistical treatment

Data were sorted by excel and analyzed by SPSS13.0 software, and mean \pm was used to indicate measurement data, t-test mean difference, and $P < 0.05$ is meaningful.

3. Results

3.1. Weight analysis in older adults

With increasing age, the decline trend of elderly body weight and obesity is relatively significant. Height decreases with age. The older the age, the lower the weight. Men in the 76-80 age group had lower weight loss than women in the 61-65 age group. BMI also decreases

with age and is significant in the 76-80 population compared to the 61-65 population and is more significant

in females than in males. Specific data are shown in Table 1.

Table 1. Analysis of height, weight and BMI index in different ages

Age	stature		weight		BMI index number	
	male	female	male	female	male	female
A	166.8±5.7	157.8±6.7	67.2±8.1	61.4±9.5	24.5±2.5	27.2±3.3
B	166.5±4.2	153.5±4.9	66.7±5.3	59.8±7.6	24.1±3.5	26.5±4.1
C	165.2±5.1	152.2±4.1	66.5±7.4	59.1±6.9	24.0±2.3	24.9±3.2
D	164.5±4.4	149.3±2.7	66.3±9.4	58.9±8.6*	23.9±3.2	23.5±3.1*

Note: P <0.05 when compared to Group A

3.2. Analysis of biochemical indicators

Elderly people generally suffer from chronic diseases such as hypertension, hyperglycemia, high cholesterol,

and high triglycerides. As we age, the more pronounced are the differences in health indicators such as blood pressure, blood sugar and cholesterol.

The specific data are shown in Table 2.

Table 2. Analysis of the biochemical indicators of the elderly of different ages

age	n	blood pressure	blood sugar	cholesterol	glycerin trilaurate
A group	89	41(46.06)	22(24.71)	18(20.22)	35(39.32)
B group	58	32(55.17)	15(46.87)	12(20.68)*	22(37.93)
C group	53	33(62.26)***	15(28.30)*	11(20.75)	19(35.84)
D group	42	23(54.76)***	8(19.04)** #	7(16.66)*#	12(28.57)*#
altogether	242	129(53.30)	60(24.79)	48(19.83)	88(36.36)

Note: * P, * P <0.05, and B, * * P <0.05, and # P <0.05 compared to C.

3.3. Nutrition situation analysis

In terms of nutritional intake, salt, oil, vegetables, potatoes and cereals are appropriate, with slightly higher eggs, low beans, and insufficient fruit, milk and aquatic products. Women's intake of fish, dairy, meat, and fruit is higher than men's

Specific data are presented in Table 3

Table 3. Daily food consumption in the elderly

class	man	woman	all
lipa	30.5	30.5	30.7
Aquatic class	0	7	3.2
Milk class	38.7	54.7	28
Eggs	66.1	56	47.1
Livestock and poultry	90.5	50.1	71.2
meat	18.7	42.5	28.3
fruit	34.4	35.1	37
Big beans	336.5	308.4	340.1
vegetables	337.0	303.4	325.8

4. Discussion and analysis

With the rapid improvement of the global economy, medical technology has also flourished in this context. The number of elderly people is also growing, and one of the important problems facing many countries is aging. At the same time, the elderly group is high-risk group for chronic diseases such as diabetes and hypertension, so the health and nutrition of the elderly has attracted wide attention. The results of this study show that the trend of body weight and obesity with age. The elderly because of the better nutrition condition and higher age, many old people like quiet like not to move, so that caloric intake

and consumption imbalance, visceral organs and subcutaneous excessive accumulation of fat, resulting in the body fat. At the same time, the elderly generally suffer from high blood pressure, hyperglycemia, high cholesterol and high triglycerides, egg intake slightly higher, low intake of beans, fruit, milk and aquatic products intake, so in daily life in collocation food to do thickness collocation appropriate, increase the proportion of coarse grain intake, more consumption such as red beans, broad beans, mung beans, soybeans can provide fat, dietary fiber, protein, B vitamins and other beans. At the same time, it is also necessary to adjust the food cooking method, mainly with low salt and low fat, the control of peanuts, cakes, candy and other food, so that the body is in a good state.

Epidemiological studies have found that diet affects the process of the onset and progression of a variety of age-related diseases. related diseases, and that dietary intervention can to some degree Dietary intervention can improve the abnormal metabolism of the disease.

The elderly need a healthy lifestyle style, the vast majority of them do not drink, smoke or eat spicy food. The majority of them do not drink, do not smoke and do not eat spicy food. diets are moderated, with regular and measured meals, not too much food, and a low burden on the stomach and intestines. The intake of the three major nutrients is moderate. The intake ratio of major nutrients is moderate, with rich sources of protein, meat, poultry, fish and eggs, meat, poultry, fish and eggs, with a high content of high-quality protein, fresh vegetables and fruits throughout the year, less salt and less oil. Fresh vegetables and fruits throughout the year, less salt and oil, and healthy cooking methods.

In 2005, Wang pointed out in a survey on the nutrition and health status of the Chinese population that the traditional dietary structure of cereals, which is mainly low in fat, low in energy density, low in carbohydrates and high in dietary fibre, is gradually being lost. Proteins, carbohydrates and fats are the three major energy-producing nutrients, and for the elderly, a reasonable ratio of energy supply is 12-14% of total energy from proteins, 55-65% from carbohydrates, and 20% of total energy from fats. A reasonable proportion of energy should be: 12-14 per cent of total energy from protein, 55-65 per cent from carbohydrate, and 20-30 per cent from fat^[8].

Reasonable mix of staple foods and vegetables. To maintain the basic characteristics of the energy source is mainly grain, to more with certain five grains and cereals, do not eat more and more fine. Rough grains have more trace elements, more vitamins, more fibre. Vegetables, have laxative effect, grains and cereals have become more and more popular among the elderly^[9]. At the same time, to eat more fresh fruits and vegetables, vegetables and fruits are richer in fibre, and contain a variety of essential vitamins and minerals. Vegetables and fruits are rich in fibre and contain a variety of essential vitamins and minerals, especially green leafy vegetables rich in vitamin C and carotene. Since each vegetable and fruit contains different nutrients, the elderly should choose a variety of kinds. The elderly should choose a variety of kinds of vegetables and fruits. Constipation is a very common problem in the elderly. Eating more fresh vegetables and fruits has been proven to be effective in relieving constipation^[10].

To control cholesterol intake. The World Health Organisation recommends that the standard daily intake of cholesterol per person from food is 300mg. Adjust the variety of foods by reducing the proportion of pork and increasing the intake of aquatic and poultry foods. Intake of aquatic and poultry foods. Generally speaking, fish, shrimps, crabs and other "white meat" have the best meat quality, rich in protein and fat. are the best quality, rich in protein and low in fat, and are the healthiest and ranked first. Poultry, for example Chickens and ducks rank second. Livestock, such as pork, beef, lamb and other "red meat", ranked last. However, lamb has less fat and less cholesterol than pork and beef. less fat and cholesterol than pork and beef. Compared with pork, lamb has more protein, less fat, and more vitamin B1, vitamin B2, vitamin B3, vitamin B4, and vitamin B5. Vitamin B1, Vitamin B2, Vitamin B6 and iron, zinc and selenium are rich for the elderly to consume. It is suitable for the elderly to eat. Especially in the north, the cold winter often eat mutton can benefit the blood, promote blood circulation, and enhance the ability to protect against cold. Mutton can also increase digestive enzymes, protect the stomach lining, help digestion. Chinese medicine believes that mutton has the ability to replenish essence and blood, benefit from fatigue, warm the middle and strengthen the spleen, tonify the It is also good for the liver and the kidneys. Mutton meat is tender and easy to digest and absorb. Eating mutton can help improve the body's immunity, which is beneficial to the health of the elderly^[11].

Pay attention to the intake of soya products and dairy products. Calcium is lost with age, especially in the

elderly. However, there is a general lack of calcium intake in the diet of our population. Calcium is an essential macronutrient, which is involved in the formation of human bones and teeth. When calcium is insufficient, it can lead to a number of diseases. Milk is the best source of calcium. and its products. Soya and soya bean products contain high quality protein. Elderly people can improve their protein intake by consuming soybeans and soy products, or peanuts and walnuts, which are good for their health.

Owing to changes in physiological, psychological and socio-economic conditions, such as loss of teeth, oral problems and poor mood, which can lead to loss of appetite and reduced intake of food, older persons are vulnerable to nutritional deficiencies or insufficiencies, such as malnutrition or anaemia. When malnutrition occurs, the body's ability to resist disease decreases. Therefore, the elderly should pay attention to preventing malnutrition and anemia. Older people are not as healthy as they are thin, but should maintain a healthy weight. They should maintain a healthy weight and eat iron-rich foods such as liver and tofu^[12].

Overweight or obese elderly people are at increased risk of hypertension, hyperlipidemia and diabetes, etc. They should do more outdoor activities and receive sunlight, which is conducive to the synthesis of vitamin D in the body and prevents or delays the occurrence of osteoporosis.

In short, chronic there are common diseases such as hyperglycemia and hypertension in the elderly, so it is necessary to adjust the diet structure in time in daily life, and formulate scientific and reasonable diet plans according to the actual situation of the elderly, so that the nutrition of the elderly tends to be balanced and improve the quality of life.

The conclusions of recent studies on the longevity of older people vary widely. In particular, the results concerning diet and nutrition are very different. Some long-lived elderly people mainly eat vegetarian food, but others eat both meat and vegetables^[13]. Therefore, there is no uniform understanding of the dietary structure of longevity. Longevity and the environment, nutrition, living habits are related. The environment and habits will affect the intake and metabolism of various nutrients, and it will be an important research direction to study what kind of environment the elderly live in, what kind of life and dietary habits they form, and what kind of psychology they maintain.

5. Conclusions

With increasing age, the elderly body weight and obesity decreased relatively significantly, and generally suffered from chronic diseases such as hypertension, hyperglycemia, high cholesterol, and high triglycerides. In terms of nutritional intake, salt, oil, vegetables, potatoes and cereals are appropriate, with slightly higher eggs, low beans, and insufficient fruit, milk and aquatic products. This shows that the elderly generally have chronic diseases such as hyperglycemia and hypertension, and they need to adjust the diet structure in time in daily

life, and formulate scientific and reasonable diet plans according to the actual situation of the elderly, so that the nutrition of the elderly should be balanced and improve the quality of life^[14].

Carrying out basic and applied research on geriatric nutrition and continuously applying the research results to geriatric health education and healthcare services have a positive significance in slowing down aging, minimizing diseases, and promoting healthy aging in the elderly.

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