

HEALTH LITERACY MODULE

Healthy Diet

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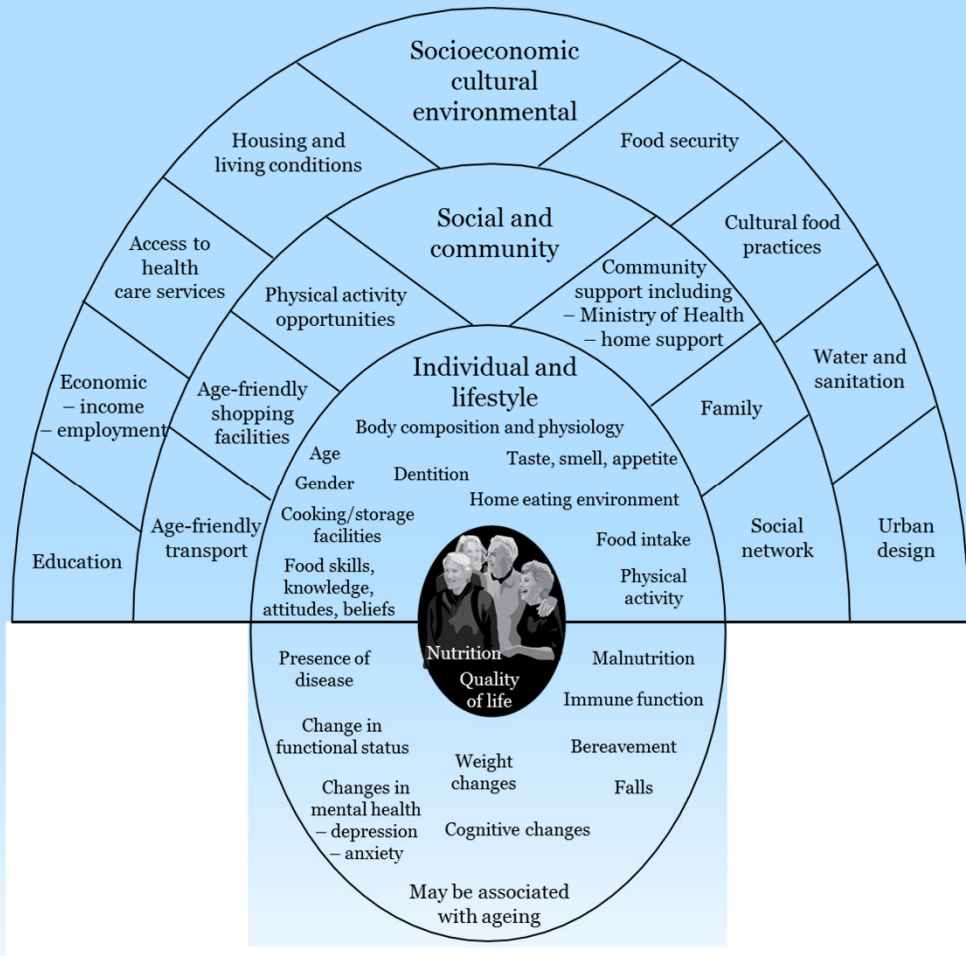
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Ageing, nutrition and health

- “Nutrition” in human life is not just the consumption of food.
- Nutrition also includes taking pleasure while eating, socializing, and practices made according to traditions and customs.
- Nutrition is one important factor that has beneficial or negative effects on the rate of the ageing process.
- Ensuring adequate and balanced nutrition in old age; protection, improvement and development of health is important in increasing life expectancy and quality.

Factors contributing to nutrition-related health



Understanding the range of factors that contribute to the nutritional health of the older population can help to identify ways to develop policies and programmes that have a positive impact on the health and wellbeing of older people

Source: Ministry of Health. (2013). *Food and Nutrition Guidelines for Healthy Older People: A background paper*. Wellington: Ministry of Health, New Zealand.

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Many factors associated with ageing affect food and nutrient intake and may promote poor nutritional status.

- Decreased taste and smell
- Tooth loss
- Loss of appetite
- Decreased digestion and absorption of nutrients
- Presence of chronic diseases
- Drug use
- The ability to choose, prepare and eat a variety of foods

Overall, healthy nutrition in older people is associated with:

- Preventing malnutrition
- Supporting physical function
- Reducing or preventing the risk of chronic disease
- Supporting mental health
- Preventing disability

Food groups

Healthy Food Plate: By food groups healthy food plate

Bread and cereals

Milk and milk products

Meat and its products, eggs and legumes and nuts/seeds

Vegetables

Fruits

Eat Healthy, Act for Health



Table 1. The four food groups: advice on servings and nutrients for healthy older people

Food group	Advice	Serving size examples	Nutrients provided
Milk and milk products (includes milk, yoghurt, cheese, kefir and ice-cream) and alternatives	Eat 3 servings per day (choose low- or reduced-fat options)	1 large glass milk (240 mL) 1 large glass or 1 small bowl yoghurt (200 mL) 1 large glass kefir (240 mL) 3 slices White cheese (60 g) 2 slices cheddar cheese (40 g)	Protein Fats: higher proportion of saturated than poly or mono-unsaturated fats, especially in full fat products Vitamins: riboflavin, B ₆ , B ₁₂ , niacin, A, D, E and K Minerals: especially calcium, phosphorus, zinc
Meat and its products, eggs and legumes and nuts/seeds	Meat, chicken, fish, eggs: eat 1 ^{1/2} servings per day Legumes: Eat 2-3 servings per week nuts/seeds: Eat 1 ^{1/2} servings per day	3-4 grilled meatballs or 1 handful of meat (80 g) 2 small size egg (100 g), 1 medium drumstick or 1 palm-sized cooked chicken meat (80 g), 1 hand-sized thin slice or 1 palmsized thick slice cooked fish (150g), anchovy etc. small fish cooked 12-13 pieces (150 g), ¾ cup or 2 small ladles or 8-10 tablespoons cooked legumes (130 g), handful nuts or seeds (30 g)	Protein Fats: both visible and marbled in meat (mostly saturated fat, cholesterol); mostly unsaturated fats in seafood, nuts and seeds Vitamins: red meat and poultry, fish, eggs, nuts/seeds, legumes are good sources of vitamin B ₁ , B ₆ , B ₁₂ and A. Vitamin B ₁₂ is only found in foods of animal origin. Minerals: iron, zinc, phosphorus, magnesium, copper, potassium and selenium Iodine: particularly in seafood and eggs Legumes are also a good source of fiber.

Table 1. The four food groups: advice on servings and nutrients for healthy older people

Food group	Advice	Serving size examples	Nutrients provided
Vegetables and fruit (includes fresh, frozen, canned and dried)	Eat at least 5 servings per day (at least 400 g/day): at least 2.5-3 servings of vegetables and at least 2-3 servings of fruit.	1 cup or 1 punch or 5-6 tablespoons or 2 medium scoops dark leafy greens (spinach, chard, purslane, kale etc) and other vegetables (broccoli, okra, green beans, fresh peas, green zucchini, artichokes, asparagus, brussels sprouts), 1 medium size tomatoes and carrot, 1/2 medium size potato, 1 fist-sized apple, orange, peach, nectarine, 1 small pear or quince, 2 medium tangerines or kiwi, 4 large or 7-8 small apricots, 3-4 dried apricots, plums, figs	Carbohydrates Dietary fibre Vitamins: especially folate, vitamin A (yellow and green vegetables) and vitamin C (dark-green vegetables and most fruit, potatoes), Minerals: magnesium, potassium, calcium, iron
Bread and cereals (includes breakfast cereals, breads, grains, rice and pasta), preferably wholegrain	Eat 3-3 ^{1/2} servings per day (for female), 4-4 ^{1/2} servings per day (for male) (choose wholegrain breads and cereals)	50 g (2 thin slices of bread), 75 g cooked (4-5 tablespoons or 1/2 cup) pasta, 90 g cooked (4-5 tablespoons or 1/2 cup) bulgur or rice, about 30 g or 1 cup of breakfast cereal	Carbohydrates Dietary fibre Protein Vitamins: all B group (except B ₁₂), E (rich in wheatgerm) Minerals (particularly in wholegrain breads and cereals): magnesium, calcium, iron, zinc and selenium

Principles of healthy nutrition in old age

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Food variety should be provided

- For a healthy diet, adequate and balanced intake of all nutrients from various foods is required. Some foods are rich in some nutrients and some are poor.
- In order to provide food diversity, milk and milk products, meat and its products group (includes also eggs and legumes and nuts/seeds), fresh vegetables and fruits, bread and cereals (breads, grains, rice, pasta, etc.), should be consumed together in appropriate amounts for the requirements of the elderly person.
- With the food variety, essential nutrients (carbohydrate, protein, fat, vitamins, minerals, fiber and water) are taken into the body, and the consumption of fat and salt is reduced.

At least three meals a day should be consumed

- At least three meals a day by providing a variety of foods.
- Skipping meals in the elderly is an indicator of malnutrition.
- In a healthy diet, attention should be paid to the choice of foods to be consumed in the meal as well as not skipping the main meals.
- Instead of foods with high energy content, foods rich in protein, vitamins and minerals should be preferred.
- In order to facilitate digestion in the elderly, it is useful to eat small amounts frequently and to chew the food well.

Ideal body weight and muscle strength should be maintained

- In the elderly population, reductions in skeletal muscle mass and strength are common.
- The decrease in muscle mass leads to a decrease in physical activity. As a result, metabolic rate and bone mineral density decrease.
- The decrease in energy expenditure with aging should be balanced with the decrease in energy consumption, ideal body weight should be maintained and obesity and increase in body fat should be prevented.
- Adequate and high-quality protein (low-fat milk and milk products, meats-chicken-fish, eggs and legumes are good quality protein sources.) intake should be provided at each meal to maintain body muscle mass in the elderly.
- Body weight should be monitored at routine intervals in the elderly.

Food must be prepared, cooked and stored correctly

- With aging, the body's self-defense mechanism against food-borne microorganisms decreases.
- Food poisoning is common in the elderly.
- Therefore, it is very important to pay attention to food safety.
- Uncooked and raw foods are risk factors for micro-organisms that cause food poisoning.
- While preparing food, personal hygiene rules should be followed (especially the cleaning of hands), and attention should be paid to the cleanliness of food and tools used in cooking.

Vegetables and fruits should be consumed in abundance and variety

- The abundant and varied consumption of vegetables and fruits; it is known to be effective in the prevention of heart diseases, some cancer types and non-insulin dependent diabetes, prevention and control of hypertension, protection from cataracts and some other eye diseases.
- Food variety should be provided by consuming a different vegetable and fruit at each meal and between meals.
- The elderly with chewing and swallowing difficulties may prefer to consume all vegetables and fruits by cooking.
- In order for the vegetables not to lose their nutritional value, the method of cooking in their own juice should be preferred instead of frying in oil, and cooking water should not be spilled.

Bread and other grains should be consumed in sufficient quantities

- Bread, rice, pasta, bulgur and foods made with flour are rich sources of carbohydrates.
- Cereals are generally low in fat and contain no cholesterol.
- Whole grain products contain B group vitamins, vitamin E, many minerals such as iron, zinc, magnesium and phosphorus. They also provide dietary fiber.
- For this reason, whole grains and its products; It has a role in the prevention of obesity, diabetes, cardiovascular diseases, some types of cancer and constipation.

Saturated fat consumption should be reduced

- Consumption of saturated and trans fats should be reduced in the elderly.
- The increased consumption of saturated animal fats such as butter and tail fat in the diet causes an increase in blood cholesterol levels. High blood cholesterol is a risk factor for cardiovascular diseases.
- Apart from visible fat (sunflower oil, olive oil), margarine, butter, etc.), there is also fat in the natural composition of foods.
- When meat, chicken, milk and cheese are consumed a lot, fat intake increases. Since most of this is saturated fat, vegetable oils (olive oil and sunflower, corn oil, etc.) should be preferred in meals and salads.
- Due to omega-3 fatty acids content, fish should be eaten at least twice a week.

Water and other liquids should be consumed in sufficient quantities

- Inadequate consumption of fluids due to decreased sense of thirst in elderly can cause dehydration.
- As a result of frequent urination and less fluid retention in the body, total body water decreases.
- For the elderly, they should consume at least 2000 mL of fluid per day.
- To meet the requirements, it is necessary to consume 8-10 glasses of water a day.
- Freshly squeezed juices, milk, ayran and soups are suitable liquid sources for the elderly, and they also contain other nutrients.
- Caffeinated beverages (coffee, tea and cola/carbonated drinks etc.) should be consumed moderately, herbal teas should be preferred.

Dietary fiber consumption should be increased

- Dietary fiber has protective and therapeutic effects in the elderly.
- The foods with the highest fiber content are respectively; legumes, cereals, vegetables and fruits.
- The fiber in fruits (apple, pear, strawberry, etc.), vegetables, dried beans, oily seeds, nuts (walnuts, hazelnuts, etc.), rice, oats, barley bran lowers cholesterol and regulates blood glucose. It reduces the risk of diabetes, cancer and coronary heart disease, as well as has therapeutic properties in the elderly with these diseases.
- The other fiber types in wheat bran, corn bran, cereals, vegetables, breads made from whole wheat flour prevent constipation and are important in regulating intestinal activities in the elderly. It also reduces the risk of colon cancer.

Foods high in calcium should be consumed

- Calcium absorption decreases with aging due to changes in the absorption of calcium and the metabolism of vitamin D.
- Sufficient calcium intake reduces bone mineral loss and maintains bone health.
- Therefore, foods with high calcium content (milk, yoghurt, cheese, cottage cheese, etc.) should be consumed.
- Vitamin D is needed to use calcium in the body.
- Since the daily requirement of vitamin D cannot be met with food, the older people should be provided with adequate sun exposure.
- However, since the rate of vitamin D formation in the skin decreases in the elderly, vitamin D supplementation with calcium is recommended when necessary.

Salt and sodium consumption should be reduced

- Excessive salt consumption can cause hypertension, cardiovascular diseases and osteoporosis (due to increased urinary calcium excretion).
- Sodium in the composition of salt is naturally found in the structure of foods. Sodium in foods of animal origin is higher than in foods of plant origin. Salt is also used in the processing of some foods.
- Salt consumption should be reduced and less salty foods should be preferred.
- Salt should not be added to the food at the table.
- Adding various spices to the dishes cooked with less salt and without salt will increase the taste and thus facilitate consumption.

Sugar consumption should be reduced

- Added sugar consumption should be reduced in the diet of the elderly.
- Complex carbohydrates sources (cereals, legumes, potatoes, etc.) should be preferred instead of simple sugars (tea sugar, jam, honey, etc.).
- Excessive consumption of simple sugars can cause an increase in serum triglyceride and low-density lipoprotein (LDL) cholesterol levels.
- While simple sugars only provide energy, complex carbohydrates sources provide energy, as well as protein, vitamins, minerals and dietary fiber necessary for body functioning.

No alcohol and no smoking

- Excessive consumption of alcohol, which has negative effects on health; It causes liver, brain, heart muscle damage, ulcer, pancreatitis, digestive system cancers, hypertension and depression.
- Cigarette; it causes osteoporosis, some types of cancer and malnutrition due to loss of nutrients from the body.
- It is recommended that the elderly should not consume alcohol and cigarettes in their adequate and balanced diet.

Do regular exercise

- Aim to be physically active every day.
- At least **150 minutes a week** (for example, 30 minutes a day, 5 days a week) of moderate intensity activity such as **brisk walking**, cycling, climbing stairs
- At least **2 days a week** of activities that **strengthen muscles**.
- Activities to **improve balance** such as standing on one foot.
- When older adults cannot do 150 minutes of moderate-intensity aerobic activity a week because of chronic conditions, they should be as physically active as their abilities and conditions allow.

Do regular exercise

Moderate-intensity aerobic activity	Vigorous-intensity aerobic activity	Muscle-strengthening activities
Brisk walking	Jogging or running	Lifting weights
Riding a bike	Swimming laps	Working with resistance bands
Climbing stairs	Riding a bike fast or on hills	Heavy gardening, such as digging and shovelling
Playing doubles tennis	Playing singles tennis	Climbing stairs
Dancing	Playing basketball	Hill walking
Hiking		Riding a bike
		Push-ups, sit-ups and squats

Key points

- The older population experiences a greater burden of chronic diseases than young and middle-aged adults.
- Nutrition and physical activity are well established as major modifiable determinants of chronic disease.
- Health and nutritional status in older people is influenced by the ageing process and the cumulative effects of exposure to various risk factors and determinants of health throughout the life span.
- Food and eating are part of social life, and social isolation is associated with increased nutritional risk.
- Sharing meals with family or friends may increase the amount and variety of food consumed.
- Energy requirements can vary widely according to gender, body size and physical activity, but generally decrease with advancing age due to an age-associated loss of lean body mass (sarcopenia).
- Water is an essential nutrient. Older people may be at greater risk of dehydration than younger adults. Protein requirements increase with age.
- Eating at least three meals a day, and adding snacks that are both energy- and nutrient-dense, is considered to be a healthy eating pattern.
- Older people have been exposed to risk factors for chronic diseases throughout the life course but can experience health benefits from adopting a healthy lifestyle.



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