



Nutrition in Later Years

EXTENSION

April 2021

Janice Hermann, PhD, RD/LD

Nutrition Specialist

Nutrition can not delay aging; however, good nutrition may lower the risk of some conditions which can occur in later years. Good dietary patterns can contribute to both good health and survival in middle age and beyond. There is a relationship between diet, physical activity, and well-being. Diets associated with good health contain adequate vitamins and minerals, limited fat, and adequate calories, primarily from complex carbohydrates.

Nutritional Considerations

The nutritional needs of older adults are not much different from those of younger adults. However, the aging process gives each age group special characteristics. This is true for older adults as well as teenagers or expectant mothers. Some changes that occur with aging affect food intake and the body's use of food and nutrients. The major change in dietary recommendations for older adults is a decrease in the amount of calories needed. Nutritional needs for most vitamins and minerals remain about the same. To get an adequate amount of vitamins and minerals in fewer calories requires careful meal planning.

Calories

Energy needs decline progressively throughout adult life as physical activity decreases and as the body's metabolism slows down. Consuming more calories than the body actually uses can result in weight gain. Excess weight increases risk of developing many health problems. Some conditions associated with excess weight include high blood pressure, heart disease, stroke, type 2 diabetes, and certain cancers.

Calories come from fats, carbohydrate, protein, and alcohol. There are nine calories per gram of fat, and four calories per gram of carbohydrate and protein. Alcohol contains seven calories per gram. This means that for equal weights, fats and alcohol have about twice the calories as carbohydrates and protein. Alcohol calories are sometimes called "empty calories" since alcohol provides no other nutritional benefits. The easiest way to decrease calories is to decrease the amount of fat eaten and/or alcohol consumed. Increasing physical activity will also use more calories and can help in weight control. Walking is an effective exercise, as are swimming, bowling, cycling, and dancing.

Protein

Protein needs remain approximately the same for individuals 51 years or older as for younger adults. Protein is

Oklahoma Cooperative Extension Fact Sheets
are also available on our website at:
extension.okstate.edu

needed to maintain healthy cells and to help build resistance to infection. Protein is also needed for wound healing and to make enzymes and hormones. The Dietary Reference Intake (DRI) for protein for persons 51+ years of age is 0.8 grams protein/kg body weight or approximately 56 grams for males and 46 grams for females.

Fat

Fat is a nutrient that gives energy. Fats are the most concentrated source of food energy, providing nine calories per gram. Fat helps form cell membranes and carries the fat-soluble vitamins A, D, E, and K. Fat also provides the essential fatty acids that the body cannot make. The Dietary Reference Intakes (DRI) recommend a diet low in saturated fat and trans fat and one which provides 20 to 35 percent of the daily calories from fat. Although fat is important in the diet, many adults eat more fat than they should. High fat diets are considered a risk factor for heart disease, cancer, and obesity. By increasing the risk of obesity, high fat diets may indirectly increase risk of type 2 diabetes and high blood pressure.

When trying to lower fat in the diet, don't omit meats and dairy products. These foods contribute nutrients that are part of a well balanced diet. Choose lean meats and low-fat dairy products, use low-fat preparation methods, and watch portion size to reduce the fat content of these foods. Limit use of added or hidden sources of fat that don't contribute nutrients to a well balanced diet. Some examples of added or hidden sources of fat are margarine, oils, salad dressings, chips, snack foods, and high-fat bakery items.

Tips for Reducing Fat

- Cut down on portion size of high fat foods.
- Boil, broil, bake, or stew meat instead of frying.
- Use lean cuts of meat, fish, and poultry.
- Remove fat from meat, poultry, stew, or soup.
- Poach or boil eggs instead of frying.
- Cut down on pastries and breads with added fat such as sweet rolls.
- Use low-calorie fruits and vegetables for desserts and snacks.
- Use low-fat or skim milk dairy products.

Carbohydrates

Carbohydrates provide energy for body cells and the central nervous system. The Dietary Reference Intakes recommend that 45 to 65 percent, or about half of daily calories, should come from carbohydrate foods. Most should come from complex carbohydrate foods: fruits; vegetables; whole grains; beans, peas and lentils. Consumption of simple carbohydrates or sugar-rich foods should be limited.

Many people think carbohydrate rich foods are fattening. Actually the “fattening” part has usually been added. For example, a medium baked potato has approximately 80 calories. Adding 1 tablespoon of margarine and 2 tablespoons of sour cream, adds approximately 225 calories for a grand total of 305 calories of which almost 75% are fat calories.

Vitamins and Minerals

Nutritional needs for most vitamins and minerals remain the same for older as for younger adults; however, some differences in nutrient needs do occur with age. Calcium needs increase to 1,200 mg/day at 51+ years of age for women and at 71+ years of age for men. Older adults maybe susceptible to low vitamin D if they are not out in the sunlight. Between 10% to 30% of older adults lose their ability to absorb the naturally occurring form of B₁₂ found in food. On the other, side vitamin A needs decrease with age, and iron needs decrease for women after menopause. Because older adults require fewer calories, it is important that foods selected are nutrient rich and contribute to a well balanced diet. Normally, a well balanced diet using a variety of foods will provide adequate vitamins and minerals for any age. No single food can supply all nutrients in the amounts you need. Vegetables and fruits are important sources of vitamins A and C, folate and fiber. Grains provide B vitamins, iron, and other minerals. Whole grain breads and cereals also supply fiber. Milk provides calcium, protein, riboflavin, and vitamins A and D. Meat and beans provide protein, B vitamins, iron, zinc, and other minerals. To have a healthy diet, you must eat a variety of foods.

Dietary restrictions that are self-imposed can result in low intakes of certain vitamins and minerals. Most deficiencies among older adults involve vitamins and minerals associated with perishable fruits and vegetables, meat, and milk. These are foods often omitted from the diet due to cost, storage, long-term poor eating habits, chewing difficulty or poor appetite.

Water

Water is more critical to life than food. Lack of water will result in death sooner than lack of food. The sensation of thirst tends to decline with age. As a result, despite the availability of fluids, many older adults become dehydrated. Recommended fluid intake is 13 cups a day for males and 9 cups a day for females. Water can be taken in many forms such as water, fruit juice, milk, soups, coffee, tea, or soft drinks.

Fiber

There are many different types of fiber. In general, they are divided into soluble fibers and insoluble fibers. Both types of fiber are necessary for good health. Dietary fiber has been related to many health conditions. Increasing dietary fiber may be beneficial with constipation, diarrhea, diverticulitis, cardiovascular disease, colon cancer, and diabetes. However,

one should be cautious in assuming that dietary fiber is the only factor involved in these conditions.

The best way to increase fiber in the diet is from food sources. Food sources of fiber include fruits; vegetables; whole grains; beans, peas and lentils; nuts and seeds. Cooking, processing, and removing peels can reduce the fiber in foods. The Dietary Reference Intake for dietary fiber is 14 grams dietary fiber per 1,000 calories. Fiber intake may have to be modified in older adults who have problems with chewing, swallowing, or other medical conditions.

There are some tips to consider when increasing fiber in the diet. Increase fiber slowly. Increasing fiber too rapidly may cause unpleasant side effects such as bloating and gas. Since fiber absorbs water it is important to drink plenty of fluids when increasing dietary fiber. Too much dietary fiber can decrease mineral absorption. It is possible to get too much fiber with concentrated fiber supplements. Obtain adequate dietary fiber from foods without using fiber supplements.

Nutrient Supplements

Vitamin and mineral supplements have their place in the medical treatment of certain nutrition-related diseases. However, growing older does not mean that you are unhealthy and need extra nutrients above those a varied diet can provide. Americans spend millions of dollars on vitamin and mineral supplements that they do not need. A well-chosen diet using a variety of foods can provide all needed nutrients. However, many older adults do not consume adequate diets. Other physical, psychological and social factors can affect food intake of older adults putting them at nutritional risk. Therefore, while it is possible to get all the nutrients for good health from food, many older adults are not able to do so.

While recommendations for routine nutrient supplements for all older adults is still debatable, taking amounts above the upper limit is clearly unwarranted without specific medical recommendations. One might think that more is better when taking nutrient supplements. However, a nutrient taken in amounts above the upper limit can be dangerous. Overdoses can happen easier with supplements than with food. Minerals in large amounts can be toxic as can vitamins. The fat-soluble vitamins (vitamins A, D, E, and K) are stored in the bodies. Excessive amounts of these vitamins can accumulate and be harmful. Dangerous levels can produce such symptoms as nausea, vomiting, and other serious side-effects. Toxicity from water-soluble vitamins, such as vitamin C, is unlikely since excess amounts are flushed from the body in the urine. However, serious side effects can occur even with water-soluble vitamins. Because nutrients interact with each other, a balance of all nutrients is important. If the body has too much or too little of any nutrient, the body's use of these nutrients may be altered.

Supplements are required to have the percent (%) of the DRI on the label. If a single dose supplies 100% or less of the DRI, then a single dose is enough to ensure dietary adequacy. But, supplements which supply nutrients in amounts greater than 100% of the DRI are not beneficial. Additional supplements should never be used to replace a missed meal. Do not rely on a supplement to balance a poor diet. If fact, no supplement contains all the essential nutrients the body needs. The basis for good health depends on an adequate diet containing a variety of foods which supply sufficient amounts of calories and nutrients.

USDA MyPlate Plan

Recommended amounts from the USDA MyPlate Plan each day for a reference 2,000 calorie diet are:

- 6 oz. of grains
- 2 1/2 cups of vegetables
- 2 cups of fruit
- 3 cups of dairy
- 5 1/2 oz. of protein foods
- 6 teaspoons of oil
- Calories for other uses limit to 270 calories
- Sodium limit to less than 2,300 milligram a day
- Saturated fat limit to 22 grams a day
- Added sugars limit to 50 grams a day

What counts from each USDA MyPlate food group?

In general, a 1-ounce equivalent from the grains group is:

- 1 slice of bread
- 1 cup of ready-to-eat cereal
- 1/2 cup cooked rice, cooked pasta, or cooked cereal

In general, one cup from the vegetable group is:

- 1 cup of raw or cooked vegetables or vegetable juice
- 2 cups of raw leafy greens can be considered as 1 cup from the vegetable group

In general, one cup from the fruit group is:

- 1 cup of fruit or 100% fruit juice
- 1/2 cup of dried fruit

In general, one cup from the dairy group is:

- 1 cup of milk or yogurt
- 1 1/2 oz. natural cheese
- 2 oz. processed cheese

In general, a 1-ounce equivalent from the protein foods group is:

- 1 oz. of meat, poultry, or fish
- 1/4 cup cooked beans



- 1 egg
- 1 Tablespoon peanut butter
- 1/2 oz. nuts or seeds

References

- Whitney, E.N. & Rolfes, S.R. (2015). *Understanding Nutrition*, 14th ed., Wadsworth, Cengage Learning, Belmont, CA.
- Bernstein, M., & Munoz, N. (2016). *Nutrition for the Older Adult*, 2nd ed., Jones and Bartlett Publishers, Sudbury, MA.
- Brown, J.E. (2014) *Nutrition through the Life Cycle*, 5th ed., Cengage Learning, Stamford, CT.
- United States Department of Agriculture. Dietary Guidelines for Americans 2015-2020. Accessed at <https://health.gov/dietaryguidelines/2015/guidelines/>
- United States Department of Agriculture. ChooseMyPlate.gov. Accessed at www.choosemyplate.gov

The Oklahoma Cooperative Extension Service

WE ARE OKLAHOMA

The Cooperative Extension Service is the largest, most successful informal educational organization in the world. It is a nationwide system funded and guided by a partnership of federal, state, and local governments that delivers information to help people help themselves through the land-grant university system.

Extension carries out programs in the broad categories of agriculture, natural resources and environment; family and consumer sciences; 4-H and other youth; and community resource development. Extension staff members live and work among the people they serve to help stimulate and educate Americans to plan ahead and cope with their problems.

Some characteristics of the Cooperative Extension system are:

- The federal, state, and local governments cooperatively share in its financial support and program direction.
 - It is administered by the land-grant university as designated by the state legislature through an Extension director.
 - Extension programs are nonpolitical, objective, and research-based information.
 - It provides practical, problem-oriented education for people of all ages. It is designated to take the knowledge of the university to those persons who do not or cannot participate in the formal classroom instruction of the university.
- It utilizes research from university, government, and other sources to help people make their own decisions.
 - More than a million volunteers help multiply the impact of the Extension professional staff.
 - It dispenses no funds to the public.
 - It is not a regulatory agency, but it does inform people of regulations and of their options in meeting them.
 - Local programs are developed and carried out in full recognition of national problems and goals.
 - The Extension staff educates people through personal contacts, meetings, demonstrations, and the mass media.
 - Extension has the built-in flexibility to adjust its programs and subject matter to meet new needs. Activities shift from year to year as citizen groups and Extension workers close to the problems advise changes.

Oklahoma State University, as an equal opportunity employer, complies with all applicable federal and state laws regarding non-discrimination and affirmative action. Oklahoma State University is committed to a policy of equal opportunity for all individuals and does not discriminate based on race, religion, age, sex, color, national origin, marital status, sexual orientation, gender identity/expression, disability, or veteran status with regard to employment, educational programs and activities, and/or admissions. For more information, visit <https://eeo.okstate.edu>.

Issued in furtherance of Cooperative Extension work, acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture, Director of Oklahoma Cooperative Extension Service, Oklahoma State University, Stillwater, Oklahoma. This publication is printed and issued by Oklahoma State University as authorized by the Vice President for Agricultural Programs and has been prepared and distributed at a cost of 20 cents per copy. Revised 04/2021 GH.