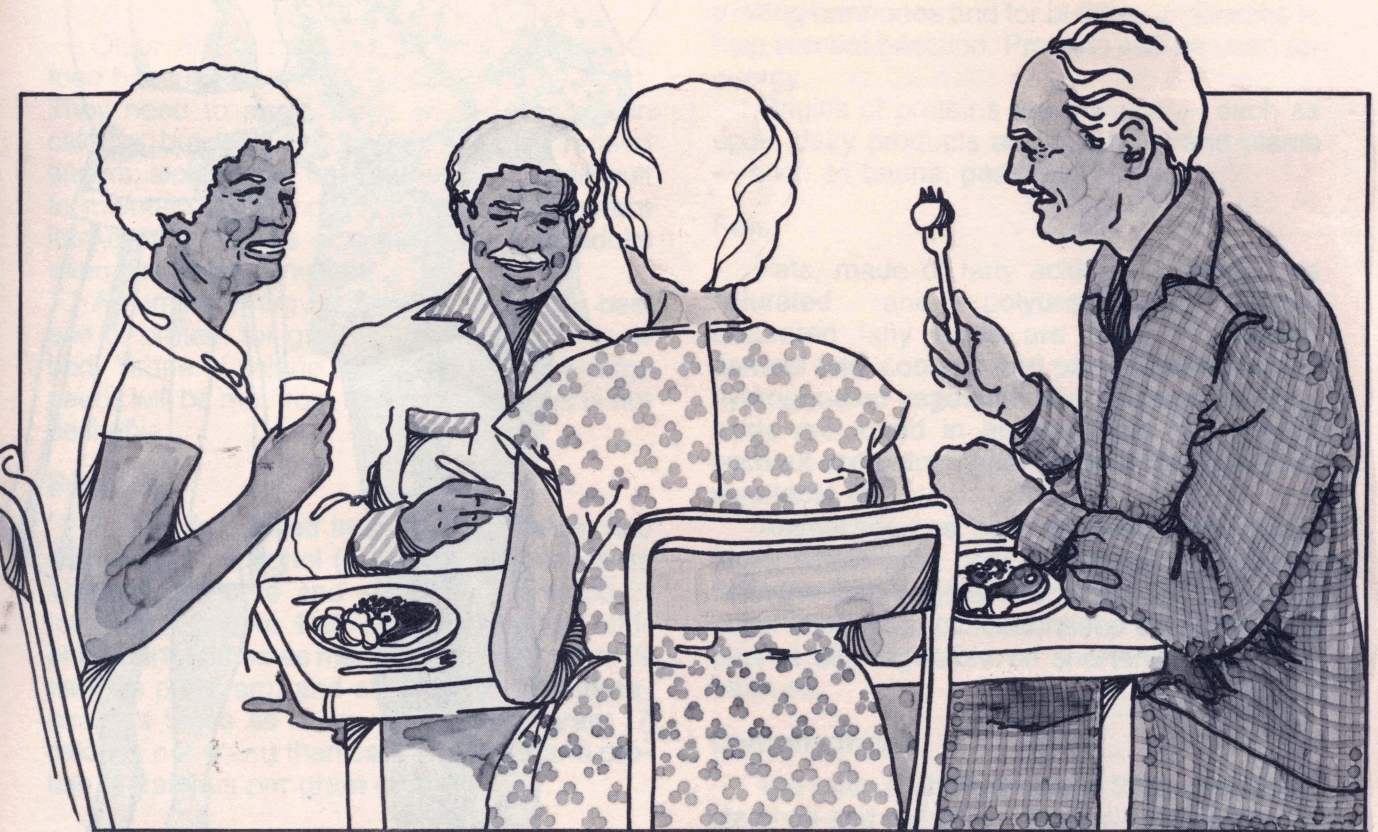
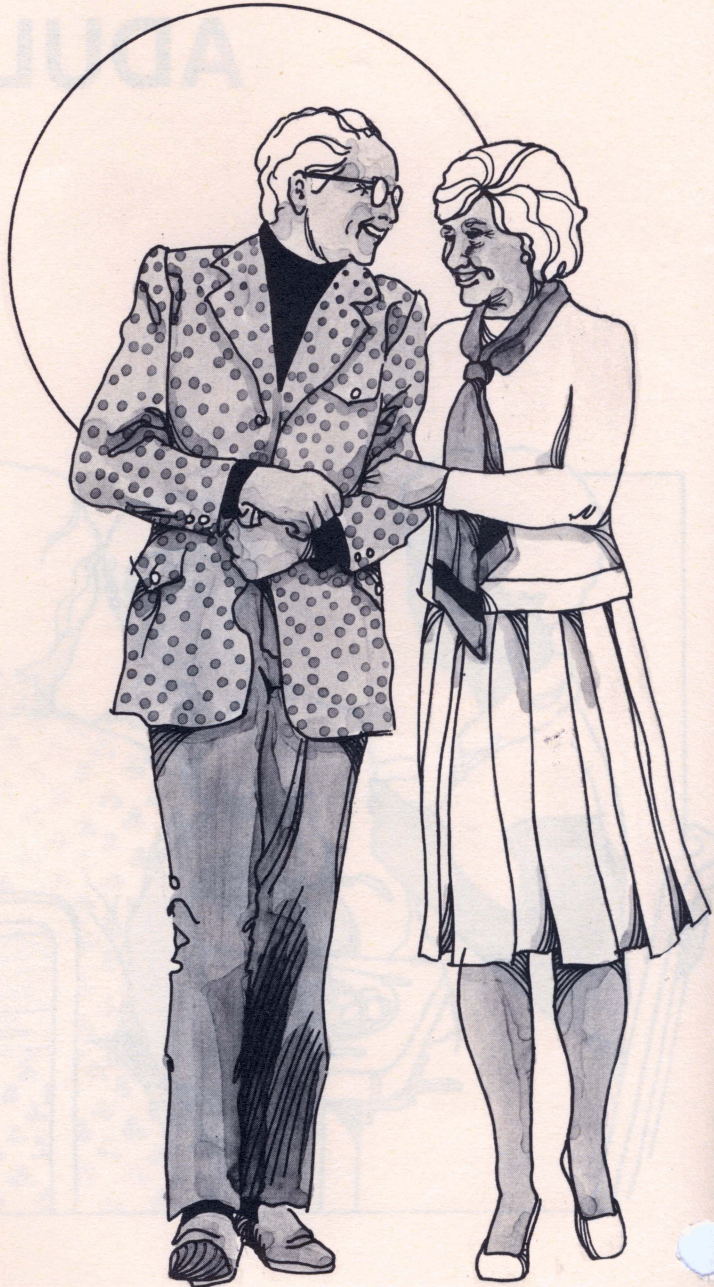


NUTRITION FOR OLDER ADULTS



NUTRITION FOR OLDER ADULTS



Mary K. Sweeten and V. Cass Ryan-Crowe*

Nutritional needs of older adults differ little from the needs of younger adults. The primary difference is that older adults should reduce energy or calorie intake.

Energy

Older adults may eat smaller amounts of food because of their decreased energy need. They need to avoid foods which are high in calories but low in nutrients such as refined sugars, alcohol and fats. Generally, it is difficult to maintain a balance of energy and nutrient intake at low levels of activity, so older adults often become overweight.

An ample energy supply is needed for best use of protein for growth and maintenance of body tissue. If calorie intake is too low, energy needs will be met from body protein. This is not desirable.

Sources

Energy is derived from carbohydrates, fats and proteins. Alcohol (ethanol) also serves as an energy source and should be included in total calorie intake. Fats supply about two-and-one-quarter times as many calories per gram (9 calories per gram) and alcohol one-and-three-quarters times as many calories per gram (7 calories per gram) than carbohydrates and protein (4 calories per gram each).

Proteins

Proteins are composed of amino acids. They build new tissues and upkeep other tissues. They regulate your internal water and acid-base balance. Some protein is needed for making hormones and for building antibodies to help combat infection. Proteins can be used for energy.

Origins of proteins are animals — such as eggs, dairy products and meats — and plants — such as beans, peas and nuts.

Fats

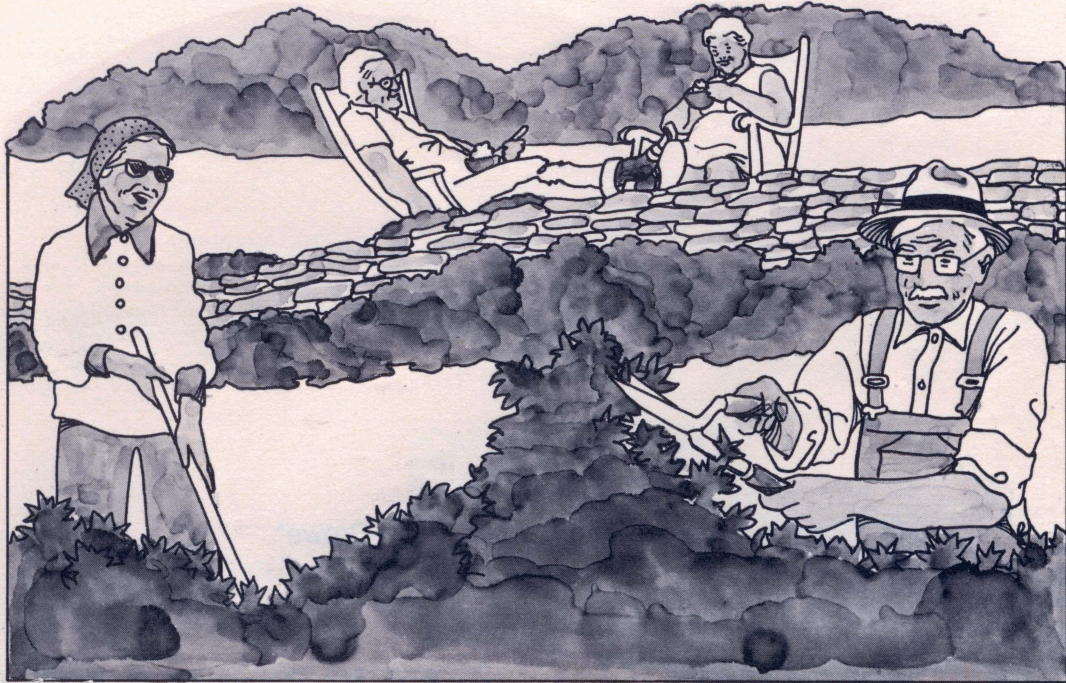
Fats, made of fatty acids, are classed as saturated and polyunsaturated acids. Saturated fatty acids are found in animal-derived fats, coconut and palm kernel oils and hydrogenated vegetable oils. Unsaturated fatty acids are found in all vegetable fats except coconut and palm kernel oils and hydrogenated vegetable fat.

Animal sources, such as, beef, butter, eggs, lamb, whole milk, pork and some fish provide fat in the diet. Vegetable sources rich in fats are coconut oil, corn oil, cottonseed oil, margarine, peanut oil, vegetable oil shortening and soybean oil.

Carbohydrates

The main carbohydrates in food, are sugar, starches and cellulose. Sugars in the diet come from refined sugars, jams, jellies, syrups, honey, fruits and milk. Starches are provided in cereals, flour, potatoes and other vegetables.

*Extension food and nutrition specialists, The Texas A&M University System.



Cellulose or fiber is a nondigestible carbohydrate and is found in some fruits and vegetables. They are largely indigestible substances that provide bulk in the diet and aid elimination.

Dietary Fiber

Dietary fiber provides bulk necessary for the efficient function of the gastrointestinal tract. Food sources of fiber are fresh fruits and vegetables, whole grain cereals, dried legumes, dried fruits and nuts. There is no reason to add extra fiber to foods unless recommended by your physician.

Water

Water is an important part of all body cells. It helps regulate body temperature and the removal of waste products. Much water is consumed in food, beverages and soup. Liquid intake needed varies with the individual and the food eaten, but older persons should get at least 1 quart a day.

Sodium and Potassium

Sodium and potassium play a major role in maintaining fluid balance in the body. Many people retain liquids because of excessive salt intake or improper kidney functioning. Persons with this problem should be under the care of a physician, who may prescribe medication. Salt

substitutes should not be used unless suggested by a physician. Sometimes doctors restrict salt intake and suggest salt substitutes and products low in salt. Many older persons can continue to season foods with moderate amounts of salt.

The Basic Food Groupings

Plan nutritious meals by using the familiar food group guide. Examples of foods in each group and the number of servings recommended per day are listed.

Milk Group (two 1-cup servings)

Milk is the leading source of calcium, which is needed for bones and teeth. Milk also provides protein, riboflavin, vitamin A and many other nutrients.

Milk group foods include:

- Milk — fluid whole, skim, low-fat, evaporated, dry and buttermilk.
- Milk alternates on the basis of calcium content —
 Cheddar cheese, a 1-inch cube = ½ cup milk
 Cream cheese, 2 tablespoons = 1 table-
 spoon milk
 Cottage cheese, ½ cup = ⅓ cup milk

Table 1. Sample meal plan for a day

	Milk	Meat	Vegetable-Fruit	Bread-Cereal	Other
Breakfast					
Cooked prunes			X		
Puffed rice with milk (1/2 cup)	X			X	
Toast with margarine				X	X
Coffee or tea					
Midday Meal					
Chicken a la king		X		X	
Parsley potato with margarine			X		X
Asparagus			X		
Chocolate pudding (1/2 cup)	X				
Coffee or tea					
Evening Meal					
Cream of pea soup (1/2 cup)	X				
Tuna sandwich with mayonnaise		X		2X	X
Celery sticks			X		
Crushed pineapple			X		
Skim milk (1 cup)	X				
Snack					
Oatmeal-raisin cookie				X	
Orange juice			X		

Ice cream, 1/2 cup = 1/4 cup milk

Ice milk, 1/2 cup = 2/5 cup milk

Two or more cups of milk or the equivalent in a milk alternate every day is recommended for an older adult.

Vegetable-Fruit Group (four 1/2-cup servings)

Vegetable-fruit group foods include all vegetables and fruits. Vegetables and fruits contain vitamins, minerals, fiber and bulk. The *Basic*

Food Groups emphasize those that are valuable sources of vitamin C and vitamin A.

Vitamin C is needed for healthy gums and body tissues. Vitamin A is needed for growth, vision and healthy skin.

Rich sources of vitamin C include cantaloupe, grapefruit or grapefruit juice, guava, honeydew melon, lemon, mango, orange or orange juice, papaya, raw strawberries, tangerine or tangerine juice, watermelon, as-



half a medium grapefruit or cantaloupe; or the juice of one lemon.

Meat Group (two 2½ to 3-ounce servings)

Foods in this group supply protein, which is needed for growth and repair of muscle, organs, blood, skin and hair. These foods also provide iron, thiamin, riboflavin, niacin and several other nutrients.

Meat group foods include beef; veal; lamb; pork; organ meats such as liver, heart and kidney, poultry and eggs; fish and shellfish; meat alternates such as dry beans, dry peas, lentils and peanut butter.

Two or more servings every day are recommended. An average serving is 2 to 3 ounces (without bone) of lean cooked meat, poultry or fish. Equivalent in protein to 2 ounces of meat are two eggs; 1 cup cooked beans, dry peas or lentils; or 4 tablespoons of peanut butter.

Bread-Cereal Group (four servings)

Foods in this group furnish worthwhile amounts of protein, iron, several of the B-vitamins and food energy. Bread-cereal group

paragus tips, broccoli, brussels sprouts, collards, garden cress, green pepper, kale, kohlrabi, mustard greens, potato and sweet potato cooked in the jacket, raw cabbage, spinach, sweet red pepper, tomato or tomato juice and turnip greens.

Good sources of vitamin A include apricots, broccoli, cantaloupe, carrots, chard, collards, cress, kale, mango, persimmon, pumpkin, spinach, sweet potato, turnip greens, winter squash and other dark green leaves.

The daily servings should include:

- One serving of a source of vitamin C.
- One serving, at least every other day, of a source of vitamin A (If the food chosen for vitamin C is also a source of vitamin A, the additional serving of a vitamin A food may be omitted.)
- Two or more servings of any vegetable or fruit, including those that provide vitamin C and vitamin A.

An average serving is ½ cup of vegetable or fruit or a portion as ordinarily served, such as one medium apple, banana, orange or potato;



foods include all breads and cereals that are whole grain and enriched. Check labels to be sure products are whole grain and enriched.

Bread-cereal group foods include breads, cooked cereals, ready-to-eat cereals, cornmeal, crackers, flour, grits, macaroni, spaghetti, noodles, rice, rolled oats, parboiled rice and wheat, and quick breads and other baked goods made with whole grain or enriched flour.

Choose four or more servings daily. If you do not eat cereals, have an extra serving of bread or baked goods. Count as a serving one slice of bread; 1 ounce of ready-to-eat cereal; $\frac{1}{2}$ to $\frac{3}{4}$ cup cooked cereal, cornmeal, grits, macaroni, noodles, rice or spaghetti.

Other Foods

To round out meals and meet energy needs, almost everyone will consume some foods not specified in the basic food groups. These foods include fats, oils, unenriched refined sugar and sweets and alcohol. Eating these foods will increase calorie intake.

Meal Planning with the Basic Food Groups

There is nothing magic about three meals a day. Five small meals a day are fine, as long as the appropriate number of servings from each food group are consumed daily and the calorie intake maintains reasonable body weight.

Plan your daily menus based on the food groupings to insure variety. You will rarely have to take a vitamin supplement if you do.

How to Deal with the Special Nutrition Problems of Older Adults

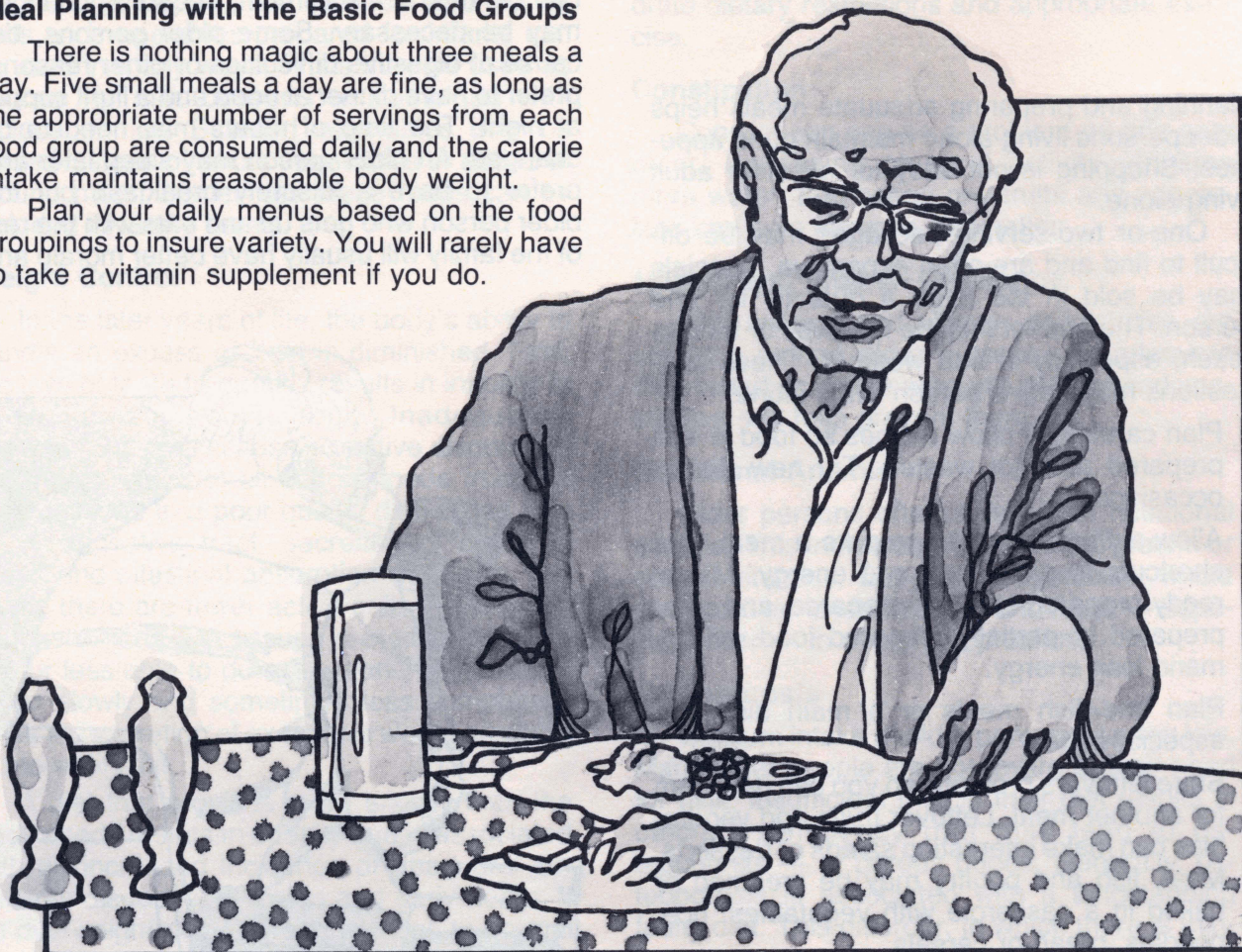
Many older persons have problems that require some adjustments in meals. Consider these problems when planning meals for older adults.

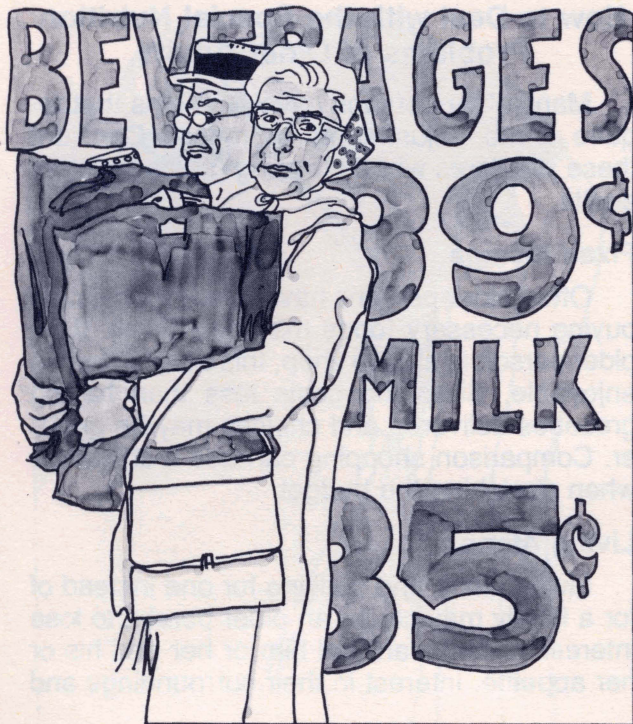
Fixed Income

Often older persons have fixed incomes, so buying necessary foods may be difficult. If an older person is able to shop, this activity can be enjoyable. Shopping costs less than having groceries delivered and choices may be greater. Comparison shopping can add a challenge when stretching the budget.

Living Alone

Living alone and cooking for one instead of for a family may cause an older person to lose interest in things around him or her and his or her appetite. Interest in their surroundings and





planning and preparing adequate meals helps older persons living alone maintain good appetites. Shopping is not easy for an older adult living alone.

One- or two-serving packages may be difficult to find and are often expensive. Specials may be sold in too large a quantity for one person. The market may be far away or hard to reach, especially in bad weather. These suggestions may help a person living alone:

- Plan carefully. Follow recipes so food is well prepared and not wasted. Try new dishes occasionally.
- Allow sufficient time to prepare a meal. Use shortcuts to save time and energy. Mixes, ready-prepared or home-prepared, and other prepared or partially prepared food will demand less energy.
- Plan one-dish meals or a main dish you especially like.
- Store leftovers promptly so you can use them for another meal. Leftover fruits and vegetables can make interesting salads or desserts. Meat, fish and poultry may be creamed or baked in a casserole with vegetables, rice, noodles, bread or cereals.

- Store enough food in the freezer, refrigerator or cupboard shelves to keep shopping to a minimum.
- Consider garnishes, unusual ways of serving and additions such as herbs and other seasonings to make food taste better.
- Be aware that a person's attitude is very powerful. You can learn to enjoy dining alone.
- For serving, use attractive trays, pretty place mats and other decorations to make the meal enjoyable. Listen to the radio or play favorite records while eating.
- If your budget allows, invite friends and relatives to some of your meals. Dine out occasionally.

Living with Adult Children

Adult children and their families may need to adjust meals to meet the needs of parents living in their home. It is better for both the family and the older person if meal adjustments can be kept to a minimum, but some changes may be necessary. Some older persons, because of digestive difficulties or other reasons, prefer to have dinner at noon and a light supper at night. The time of meals may need to be changed. An older person may sleep later and prefer to have a leisurely breakfast, but the older person who gets up and eats with the rest of the family will usually have better morale and



appetite. Also, the homemaker does not have to prepare extra meals if the older person eats with the rest of the family. The family's attitude about the older member's eating habits need to be positive, uncomplaining and helpful. The older person should feel that he or she is part of the family. The whole family will benefit from this attitude.

Institutional Meals or Meals Eaten Away from Home

Many older adults live and eat in institutions or may eat away from home. The food is not prepared in the same manner as it is at home and may seem unappetizing. When mealtimes are considered a social hour, food tastes better. When older adults participate in planning menus and service, morale is higher.

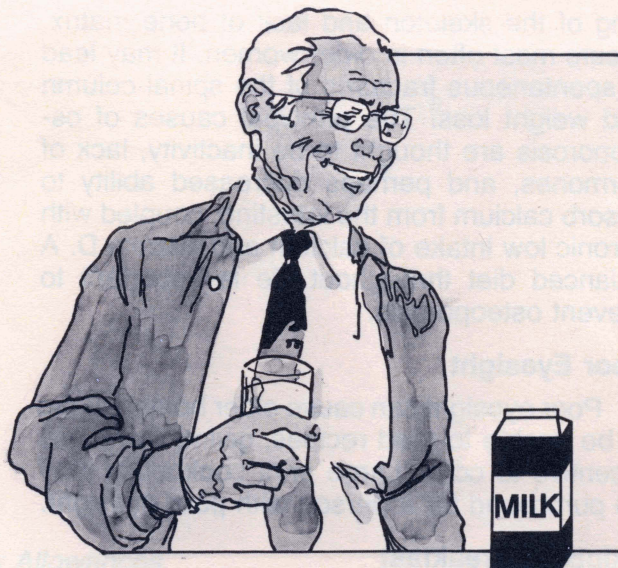
Dental Changes

Adjust family food preparation to make foods easy to chew so an older person with denture problems can eat a well balanced diet. Meat and other protein foods may need to be ground or chopped. The strained or chopped fruits and vegetables prepared for infants can be used in many ways. Fruits may be used as sauces for milk desserts or combined with tapioca or rice. Strained vegetables may be served instead of whole vegetables or added to ground meat. Sometimes these foods can be included in family meals.

Weight Control

In the later years of life, the body's ability to handle an excess of food is diminished. First, the loss of teeth frequently results in inability to chew hard or coarse food. Inadequately chewed foods may cause digestive discomfort, but the omission of all coarse foods from the diet may lead to a poor quality diet. Blood flow to the digestive tract, secretion of digestive juices and intestinal absorption decrease. Because there are fewer active cells in the body, various organs and tissues are either less active or less able to do extra work. Tissues use foods slowly and sometimes less completely, while the excretion of excessive waste products is more difficult.

A diet that provides more energy than the body needs results in obesity and is associated with an increased incidence of heart and circulatory diseases, diabetes and early death. If an overweight older person reduces to normal



or slightly below normal weight, the risk of heart disease decreases. In many cases, adult diabetes may also be controlled by reducing body weight to normal, and by moderate carbohydrate dietary restrictions and appropriate exercise.

Constipation

Constipation can be a problem as one gets older. Increasing physical activity, drinking more water, and eating raw fruits and vegetables can help improve elimination.

Mineral and Vitamin Deficiency

Mild mineral and vitamin deficiencies are common among older persons. An adequate diet, including ample amounts of fruits and vegetables, will help prevent them.

Nutritional Anemia

Older persons often suffer from nutritional anemia. This indicates a lack of iron, protein or certain vitamins. Eat green vegetables, whole grain and enriched cereals, and meat — especially liver — to avoid this problem.

Osteoporosis

Calcium intake of older persons is often low. Many older people are not aware of their need for milk. Insufficient milk in their diet results in calcium deficiency that may lead to osteoporosis — or porous bones. Generally, osteoporosis is associated with a longstanding faulty diet. This disorder, in which there is thin-

ning of the skeleton and lack of bone matrix, occurs most often in older women. It may lead to spontaneous fractures of the spinal column and weight loss. The principal causes of osteoporosis are thought to be inactivity, lack of hormones, and perhaps decreased ability to absorb calcium from the intestine, coupled with chronic low intake of calcium and vitamin D. A balanced diet throughout life is important to prevent osteoporosis.

Poor Eyesight

Poor eyesight can cause older homemakers to be unable to read recipes, giving them less incentive to cook. Large print cookbooks may be purchased for a person with poor eyesight.

Skipping Breakfast

Older adults should eat breakfast. Skipping breakfast makes it difficult to get all of the day's nutrient requirements in the other meals.

Snacks

Older persons should eat snacks that do not interfere with regular meals. They may enjoy a light snack before bedtime. The snacks should be light, such as milk, milk drinks or fruit and vegetable juices with a cracker or two.

Special Diets

Many older persons are on special diets. They may be unable to purchase or prepare the required foods. They should consider supplementary food programs.

Loss of Energy

Lack of energy to cook often causes an older person to not cook at all. He or she may need to eat more frequent, smaller meals.

Low Protein Intake

Some older persons do not get enough protein. Adequate amounts are important for protection in case of a serious operation or bone injury. Adequate protein aids in fast healing. Adequate protein also helps prevent fatigue and lessens susceptibility to infections.

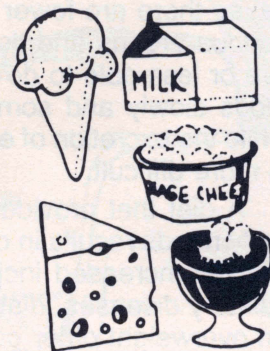
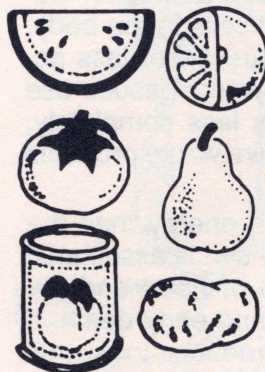
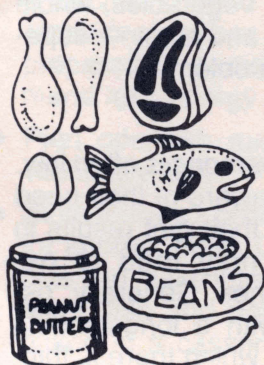
Metabolic and Absorptive Disorders

Metabolic and absorptive disorders may cause fatigue, diarrhea or constipation, anemia, weight loss and loss of appetite that eventually lead to more pronounced under-nutrition. Consult a physician if this occurs.

Food Misinformation

Promoters often dupe older persons by convincing them that their nutritional needs are unique and cannot be met by ordinary foods. The older persons may then spend much money — the money they need for ordinary food — on special foods with exaggerated promises of special benefit. There is no nutritional cure for aging. With the required nutrients having to come from less food because of less energy needs than required at a younger age, there is a great chance that the elderly will rely on "health" foods and special supplements or experiment with unbalanced diets. These will actually do the older person harm.

If you would like more information on nutrients, weight control and other dietary special conditions, read the following publications which are available at your county Extension office.



- L-1452 *Recommended Dietary Allowances*
- L-1232 *Protein*
- L-1357 *Fats in the Diet*
- L-1454 *Carbohydrates*
- L-1455 *Vitamin A*
- L-1519 *B-complex Vitamins*
- L-1382 *Vitamin C*
- L-1441 *Vitamin E*
- L-1362 *Iron*
- L-1381 *Calcium*
- L-1499 *Macrominerals — Phosphorus, Potassium, Sodium, Selenium*
- L-1500 *Trace Minerals*
- L-1453 *Be Wise — Control Your Weight*
- L-1379 *The Truth about Diet and Arthritis*
- L-1502 *Dealing with the Diabetic Diet*
- L-1517 *Food Fads: Fact or Fancy?*
- L-1813 *Hypoglycemia Fact Sheet*

Educational programs conducted by the Texas Agricultural Extension Service serve people of ages regardless of socioeconomic level, race, color, sex, religion or national origin.

Cooperative Extension Work in Agriculture and Home Economics, The Texas A&M University System and the United States Department of Agriculture cooperating. Distributed in furtherance of the Acts of Congress of May 8, 1914, as amended, and June 30, 1914.