

CHAPTER 20

FRUITS AND VEGETABLES

GENERAL

Fruits and vegetables are a good source of fiber and provide a large part of the vitamins and minerals needed in a well-balanced diet. Therefore, they should be prepared so that they retain maximum nutritive value. Fruits and vegetables may be eaten raw, but they are often cooked to improve digestibility, palatability, and acceptability.

FRUITS

Fruits of all kinds are excellent for salads or dessert and should be served fresh at every meal in the dining facility. Fruits are purchased, canned, frozen, and dehydrated for use as toppings and fillings and in gelatins. Fruits are a large part of the breakfast fitness bar. When certain fresh fruits are out of season, canned or frozen fruits can be served for variety. Water-packed or unsweetened fruits should be offered when possible.

VEGETABLES

Vegetables are purchased fresh, frozen, canned, and dehydrated for use in dining facilities. Various methods of serving can be used. Table 20-1 (page 20-2) contains some of the most popular ways to add variety to your vegetables.

PREPARATION

Follow certain procedures to prepare fruits and vegetables for cooking or serving raw. If there is a delay between the preparation and cooking or serving times, they must be cleaned, prepared, cut, and preserved. These procedures are discussed below.

Cleaning

Thoroughly clean all fresh fruits and vegetables before using them. Trim vegetables, and remove all undesirable leaves and coarse stems. Wash

usable leaves several times to remove sand and grit. Wash greens in a sink with enough cool water to cover the vegetables. If greens have insects, add 1 tablespoon of salt per gallon of water. Wash the vegetables by lifting in an up-and-down motion. Since some minerals and vitamins in fresh fruits and vegetables are water soluble they should not be left in the water for more than six to seven minutes. Use a vegetable brush to clean celery, carrots, beets, and potatoes when they are not peeled. Also, use disinfectant on fruits and vegetables purchased in oversea areas where unapproved fertilizers are used. To use the disinfectant, follow the instructions on the disinfectant container.

Preparing

Fruits and vegetables are prepared for serving by simply washing, peeling, or chopping. Vegetables can be peeled manually or with a mechanical vegetable peeler.

Cutting

Recipe directions may call for vegetables to be sliced, diced, cubed, shredded, or cut in some other manner before serving or cooking.

Preserving

Do not use sulfiting agents to preserve food. Refrigerate vegetables until cooked or served.

COOKING METHODS

During cooking, care must be taken to preserve the color, texture, and nutritional value of vegetables. They should be cooked only until tender, at which point nutritional value, flavor, and appearance are maximized. Cook them in small batches as close to serving time as possible.

Stagger the starting time of each batch to maintain a continuous cooking operation up to and throughout the serving period. Use various seasonings as directed in the recipe.

Table 20-1. Ways of adding variety to vegetables

METHOD	PROCESS
With Fats	Margarine or bacon or pork is added.
With Sauce	Sauce may be combined with, poured over, or served on the side.
Panfried	Vegetables, cooked or uncooked, may be panfried. Some vegetables may be rolled in seasoned flour before being put in the frying pan.
Scalloped	Layers of raw vegetables are placed in a buttered baking dish and sprinkled with seasoning, margarine, and flour. Milk is then added, and the vegetables are baked. If vegetables are already cooked, white sauce is used.
Au Gratin	White sauce with cheese added is poured over cooked vegetables in a baking pan. The mixture is sprinkled with buttered bread crumbs and baked at the temperature specified on the recipe card.
Fritters	Chopped or diced vegetables are mixed with a thick batter and deep-fat fried.
Glazed	Vegetables are sliced and placed in a baking or roasting pan. Syrup is poured on top. Vegetables are baked in a moderate oven and basted several times during cooking.
Stuffed	Various mixtures may be used to stuff vegetables. Stuffed vegetables are baked until tender or served fresh (for example, stuffed celery and stuffed tomato salad).
Deep-fat Fried	Vegetables to be deep-fat fried may be raw, precooked, frozen, or blanched. They may be sliced, crinkle cut, french-fry cut, sectioned, or preformed, depending upon the type of vegetable.

Boiling and Simmering

Both boiling and simmering are methods commonly used to cook vegetables. Guidelines for boiling and simmering vegetables are in TM 10-412 series. The amount of liquid needed and the approximate cooking time are also given. If cooked vegetables must be held for any length of time, they should be refrigerated. Liquids from cooked vegetables should be used in soups, sauces, or gravies for added flavor and to prevent loss of nutrients from the vegetables. Additional hints for cooking vegetables include the following:

- Green vegetables can be cooked covered or uncovered. Follow the cooking times in the appropriate recipe.
 - Yellow vegetables such as squash, wax beans, and corn, should be covered. This reduces the cooking time and reduces the loss of nutritional value and color in the vegetables.
 - White vegetables should be cooked covered or uncovered as required by the recipes in TM 10-412. Overcooking may cause them to turn a grayish or brownish color.
 - Red cabbage should be cooked uncovered.
- Cook beets in their skins. Beets will retain their color if the taproots and about 2 inches of stem are left intact. The skin is easily removed after cooking. Also, adding a small amount of vinegar or lemon juice to beets or red cabbage, after cooking, can improve the flavor and color.

Baking

Baking vegetables in their skins preserves their flavor and nutrients. Do not overbake as this destroys nutrients and flavor. Proper peeling of vegetables also helps reduce the loss of nutrients. White potatoes, sweet potatoes, and tomatoes are particularly adaptable to baking. Potatoes should be scrubbed thoroughly, dried, and pricked with a fork before baking. Follow baking temperatures in TM 10-412.

Panfrying or Sauteing

Panfrying or sauteing is recommended for cooking juicy vegetables, particularly those that are

shredded. Place them in a covered pan with a small amount of fat. This way they will cook more or less in the steam from their own juices. Serve the liquid with the vegetables so that any minerals and vitamins are consumed with the vegetables. You may panfry or saute vegetables such as cabbage, corn, onions, mushrooms, squash, tomatoes, and white potatoes on top of the range. Do not overcook or cook at too high a temperature or you will destroy vitamins and lose minerals.

Steaming

When vegetables are cooked under pressure in a steam cooker, there is minimal loss of minerals or vitamins. Another advantage of steaming is that the vegetables keep their original shape. Steam them only until they are slightly undercooked. The remaining heat in the vegetables will complete the cooking. TM 10-412 gives guidelines for using steam cookers.

Deep-Fat Frying

Potatoes, onions, and eggplant are often deep-fat fried. These items may be fried without first partially cooking them. Some recipes, such as that for rissole potatoes, call for browning the vegetable in deep fat and then placing them in the oven to finish cooking.

FROZEN VEGETABLES

A variety of frozen vegetables is available year-round. The vegetables come ready to cook. No time is required for cleaning, peeling, or other preparation. Usually, they are boiled or steamed. Some rules for cooking frozen vegetables are given below.

Preparing

Frozen vegetables are perishable. Keep them frozen until cooking time except for leafy green vegetables and corn on the cob. Let these vegetables thaw partially so the outside will not overcook before the inside defrosts.

Cooking

Add frozen vegetables to boiling, salted water. Start the cooking time when the water comes to a boil the second time. Break up solid blocks of vegetables by tapping the package lightly before opening. This will shorten defrosting time in the water. Follow the guidelines on the package or in TM 10-412 for the cooking time and the amount of water to use. Do not overcook.

CANNED VEGETABLES

Commercially canned vegetables are harvested at the peak of their maturity and are processed within a few hours of harvesting. The vegetables are high quality; therefore, with proper heating and seasoning, they are highly acceptable. Canned vegetables require no further cooking. Prepare them in small batches to keep them from breaking up and becoming discolored. For further information on preparing canned vegetables, see TM 10-412.

DRIED LEGUMES

Dried legumes, such as navy beans, kidney beans, lima beans, and black-eyed peas, are a source of protein. Legumes should be simmered and not boiled. Boiling will toughen the protein. TM 10-412 has several recipes for dishes made with dried legumes.

DEHYDRATED VEGETABLES

Vegetables such as white potatoes, peppers, cabbage, and green beans can be dehydrated. Prepare these vegetables as discussed below. Additional information on the use of dehydrated vegetables is on recipe cards Q-G-5 and A-11.

Onions

Dehydrated chopped onions can be used in any recipe which specifies onions, dry or chopped. To use them as raw onions, reconstitute them by adding warm water and letting them stand for 20 to 30 minutes. For seasoning, dehydrated onions can be added directly to stews, soups, and sauces without reconstitution. Reconstituted onions can

be added to meat loaves and coquettes. One pound (1 1/2 quarts loose) of dehydrated onions is equivalent to 8 pounds of prepared onions.

White Potatoes

Dehydrated white potatoes are available in ground, flaked, diced, and sliced form. The methods for preparing potatoes are given below.

Ground or flaked. To prepare instant potatoes from granules or flakes, blend potato granules and nonfat dry milk together. Combine boiling water, butter or margarine, and salt in a mixing bowl. Stir to blend. Rapidly add dry mixture to the liquid, and mix on a low speed for 30 seconds. Stop the machine, and scrape the sides and bottom of the bowl. Add pepper. Whip on high speed for about two minutes or until the potatoes are light and fluffy. Serve mashed potatoes hot.

Diced or sliced. Reconstitute dehydrated sliced potatoes by adding them to salted boiling water. Cover and simmer them for 15 to 25 minutes, until tender. One number 10 can makes 20 servings. They can then be grilled or a sauce added for such items as potatoes au gratin.

Sweet Potatoes

Reconstitute dehydrated sweet potatoes in hot water with butter. One number 10 can makes 40 servings.

Peppers

Dehydrated peppers can be used in any recipe calling for sweet diced peppers or sweet chopped peppers. Dehydrated peppers used in salads or

other uncooked dishes, must be soaked in cold water for two to six hours. They can then be used as fresh peppers. Dehydrated peppers used in soup, stew, or in any other cooked dish containing a large amount of liquid, can be added directly to the other ingredients. They do not need to be soaked first. When used in a cooked dish that contains only a small amount of liquid, they must be soaked in cold water for one hour before they are combined with other ingredients. One pound of dehydrated peppers is equivalent to 6 pounds of fresh, trimmed, sweet peppers. One ounce (three-fourth cup) of dehydrated peppers, when reconstituted, yields 6 ounces (1 2/3 cups) of diced peppers.

Peas

To reconstitute dehydrated, cooked, compressed peas, place them in a pan with salt and butter. Add enough boiling water to cover them. Stir the peas to moisten them, cover the pan, and let them stand for 10 minutes before serving. A number 2 1/2 can yields 25 servings.

Cabbage

Reconstitute dehydrated raw cabbage by soaking it in cold water for three hours. Drain the water before using the cabbage. A number 2 1/2 can equals 2 1/2 pounds of fresh cabbage.

Green Beans

Dehydrated green beans are frozen before dehydration to preserve the natural color, nutrients, and flavor. To reconstitute, place the beans in water, and cook them for 22 minutes.