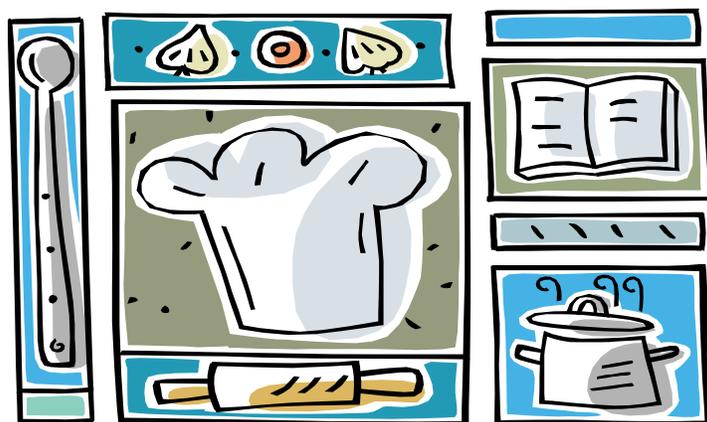


INTRODUCTION

Nutrition plays an important role in promoting good health and preventing disease for all Americans. Providing nutritious, well-prepared meals for older adults is the foundation of Vermont's Older Americans Act (OAA) Nutrition Program. Ensuring that meals are prepared and delivered with the highest food safety standards is of equal importance.

This manual is intended to be a resource for cooks, site managers, contract food service providers and staff who are responsible for providing meals under Title III-C of the Older Americans Act (OAA) of 1965. The Dietary Reference Intakes including the Recommended Dietary Allowances and Dietary Guidelines for Americans drive all federal nutrition policy and programs such as the OAA nutrition program and school meals program. This manual will assist Nutrition Program staff to meet the nutrition requirements and safe food handling standards established by both the Federal government and the State of Vermont.

The manual is divided into 6 sections. **Section 1** describes the OAA nutrition standards, which form the basis of menu planning for the OAA Nutrition Program. **Section 2** includes a meal planning guide as well as detailed information about each of the Dietary Guidelines for Americans. Meal planning tips and suggestions for operating a successful nutrition site are included. **Section 3** addresses food safety issues including best practices for the preparation, serving, delivery and storage of food; kitchen sanitation and safety; and personal sanitation. There is an Appendix in **Section 4** which includes useful references and resources such as a menu review form and a portion control guide. **Section 5** contains the nutrition education plan complete with guidelines, lesson plans and evaluation tools needed to implement nutrition education at meal sites. **Section 6** contains standardized recipes that can be used at meal sites.



Contacts and Telephone Numbers

Contacts and telephone numbers for the OAA Nutrition Program staff at the Department of Disabilities, Aging and Independent Living; and Area Agencies on Aging are listed below.

Vermont Department of Disabilities, Aging and Independent Living (DAIL)

103 South Main Street, Weeks Building

Waterbury, Vermont 05671-1601

802-241-4534

fax: 802-241-4224

TTY: 802-241-3557

Senior Planner

Position Vacant At This Time

You can reach your area Nutrition Program Director or Consulting Dietician by contacting your local Area Agencies on Aging

Champlain Valley Agency on Aging, Inc.

PO Box 158

Winooski, Vermont 05404

802-865-0360

fax: 802-865-0363

Northeast Kingdom Council on Aging, Inc.

1161 Portland Street

St. Johnsbury, Vermont 05819

802-751-0433

fax: 802-748-6642

Central Vermont Council on Aging, Inc.

30 Washington Street

Barre, Vermont 05641

802-479-2670

fax: 802-479-4235

Southwestern Vermont Council on Aging, Inc.
East Ridge Professional Bldg.
1085 US Route 4 East, Unit 2B
Rutland, Vermont 05701
802-786-5991
fax: 802-786-5994

Council on Aging for Southeastern Vermont, Inc.
56 Main Street STE 304
Springfield, Vermont 05156
802-885-2655
fax: 802-885-2665

Helpful Websites

www.dad.state.vt.us

Vermont Department of Disabilities, Aging, and Independent Living

www.aoa.gov

U.S. Administration on Aging

www.nanasp.org

National Association of Nutrition and Aging Service Programs

www.mowaa.org

Meals on Wheels Association

www.fiu.edu/~nutreldr

Florida International University

National Resource Center on Nutrition, Physical Activity & Aging

www.nutrition.gov

U.S. Government nutrition sites

www.foodsafety.gov

Food safety information from U.S. Government

www.diabetes.org

American Diabetes Association

www.fns.usda.gov

USDA commodity foods and nutrition programs

www.eatright.org

American Dietetic Association

www.NIHseniorhealth.gov

National Institutes of Health

Senior Health Information for Older Adults

SECTION 1

NUTRITION PROGRAM STANDARDS

The Older Americans Act (OAA) requires that each meal served in the OAA Nutrition Program provide at least 1/3 of the daily Recommended Dietary Allowances for adults age 60 and older, and comply with the Dietary Guidelines for Americans. The nutrition standards outlined in this manual are based on these requirements. Each meal site shall accommodate special dietary needs of program participants to the best of their ability.

Dietary Reference Intakes

The Dietary Reference Intakes (DRIs) are reference values used for planning and assessing diets for healthy people. The DRIs are established by the Food and Nutrition Board of the Institute of Medicine of the National Academies. The DRI's include the Recommended Dietary Allowances (RDAs), Adequate Intakes (AI), and Tolerable Upper Intake Levels (UL). All three components are updated periodically as scientists learn more about the relationship between nutrients and health. Meal Planning Guidelines will change as DRIs are updated to assure compliance with the OAA.

Recommended Dietary Allowances (RDA)

The RDAs are the average daily level of nutrients that meet the needs of nearly all healthy individuals in a particular age and gender group. There are RDAs specific for older adults. The RDAs for all individuals are revised every 4-5 years to reflect current research about nutrition, health and disease. For example, the RDA for calcium, vitamins C, D, E, B-12 and K, and folate have increased for older adults in recent years. These changes are reflected in the revised menu standards and meal planning guidelines found in Section 2.

Adequate Intakes (AI)

AI is the recommended intake based on scientific estimates of nutrient intake by a group or groups of healthy people that are assumed to be adequate. They are used when an RDA cannot be determined.

Tolerable Upper Intake Levels (UL)

The UL is the highest level of nutrient intake that is likely to pose no risk of adverse health effects for most individuals in the general population. The ULs were established because of the widespread use of fortified foods and dietary supplements. As nutrient intake increases above the UL, the potential risk of adverse effects increases.

Dietary Guidelines for Americans (DGFA)

Unlike the RDA, the Dietary Guidelines for Americans are a set of recommendations promoting healthy food choices that may prevent chronic diseases such as cancer, diabetes and heart disease. The DGFA published by the Department of Health and Human Services, and the Department of Agriculture are also updated every 4-5 years. The DGFA are written in easy to understand language that helps to put the science of nutrition into practical, meaningful terms. The 6th edition of the DGFA was released in January 2005. The highlights are:

- Eat a variety of nutrient dense foods that are at an appropriate calorie level to achieve or maintain a healthy weight.
 - Eat many different types of fruits and vegetables daily.
 - Eat at least 3 servings of whole grain products daily.
 - Eat or drink 3 servings of low-fat or fat-free dairy products daily.
 - Select lean sources of protein-rich foods (meat, poultry, fish, etc).
 - Eat small amounts of fat:
 - Emphasize monounsaturated and polyunsaturated fats
 - Minimize intake of saturated and *trans* fatty acids
 - Choose and prepare foods with as little added sugar and salt as possible.
- Balance calories from food and beverages with calories spent in physical activity.
- Be physically active for at least 30 minutes a day on most days.
- Know how to prepare, handle and store food safely.
- If you choose to drink alcohol, do so in moderation.



MyPyramid

The Food Guide Pyramid is a visual tool to help people make healthy food choices from all of the major food groups. The new MyPyramid was released in 2005 and focuses on physical activity and healthy food choices. It emphasizes the basics.

Keep good nutrition simple; be physically active, stay within calorie limits and enjoy food rich in essential nutrients from all five food groups. MyPyramid is more personal, recognizing that calorie needs vary according to age, sex, activity. MyPyramid recommends that older adults limit calories to 1600-2000 per day.



GRAINS VEGETABLES FRUIT * MILK MEAT &
BEANS

* FAT group

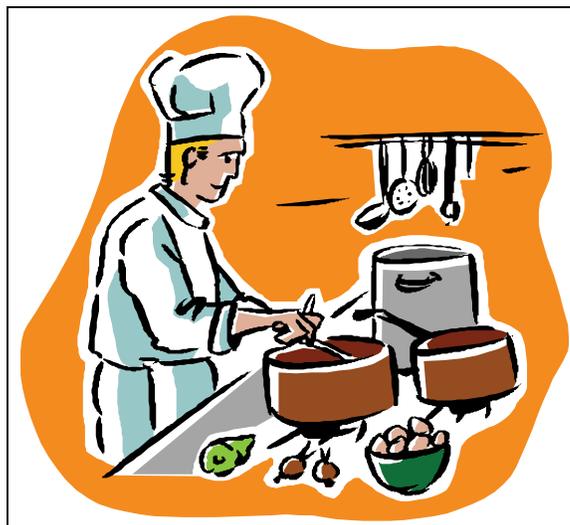
MENU REVIEW

Menus shall be reviewed by a Registered Dietitian (RD) from the Area Agency on Aging (AAA) to assure compliance with the Older American's Act. Menus shall be submitted to the AAA one month prior to use. Menus will be reviewed by an RD on at least a quarterly basis for nutrient content in terms of the RDAs and the DGFA. The RD will prepare written comments and suggestions, and share them with meal site directors and AAA Nutrition Program Directors. Mealsites will receive RD feedback at least 2 weeks prior to serving the menu to allow time to make menu changes. A copy of the Menu Review Form is located in Appendix B.

Approved menus shall be posted in advanced, in the dining area of each meal site. Meal sites are encouraged to send a copy of the approved menu to home delivered meal recipients.

References

1. *Dietary Reference Intakes*. Institute of Medicine, Food and Nutrition Board, *Dietary Reference Intakes*, Washington, DC; National Academy Press. www.nal.usda.gov/fnic/etext/000105.html
2. Cuberto Garza, M.D., Ph.D et al. *Year 2005 Dietary Guidelines for Americans*. The U.S. Department of Agriculture and the U.S. Department of Health and Human Services www.health.gov/dietaryguidelines/dga2005/documents
3. MyPyramid. U.S. Department of Agriculture, Center for Nutrition Policy and Promotion, 2005.



SECTION 2

MEAL PLANNING

The goal of the OAA Nutrition Program is to provide nutritious meals for older adults. Important nutrients for this age group include protein, calcium, magnesium, zinc, and vitamins A, C, B-6, B-12, and D. Each meal must provide at least 1/3 of the RDA for older adults and comply with the Dietary Guidelines for Americans. A meal pattern based on the OAA Nutrition Program standards is provided below and is designed to meet the recommendations. A more detailed meal pattern is in Appendix A. The highlights of Vermont's OAA Nutrition Program meal pattern are summarized below:

- Each meal must provide 2-3 ounces of protein-rich meat, fish, poultry, eggs, cheese, legumes, or nuts.
- At least two ounces of grains, one of which is whole grain, must be served at each meal.
- Each meal must provide a total of 1½ cups of fruit and/or vegetable.
- One serving of milk must be offered at each meal.
- Butter, margarine, other fats and desserts are optional (unless the dessert is part of the fruit requirement).
- A maximum of one high sodium food may be served each week.
 - High sodium foods are listed in Appendix F.
- One good source of vitamin A must be served at least every other day.
 - For sites serving 2 days or less per week, one vitamin A-rich food must be served at each meal.
 - Food sources of vitamin A are listed on page 15.
- One vitamin C-rich food must be served daily.
 - Food sources of vitamin C are listed on page 16.

In summary, each meal must provide the components of the meal plan below.

2-3 ounces cooked meat, fish, poultry; eggs, cheese, beans or nuts

1 ½ cups fruit and/or vegetable

2 ounces grains: an average of one whole grain per meal

1 cup skim or low fat milk

0-2 teaspoons fats/oils

MEAL PLANNING: GENERAL GUIDELINES

Meal planning to meet the menu standards of the OAA Nutrition Program requires the ability to put foods together in such a way that older adults enjoy a variety of flavorful, nutritious meals. This section focuses on each food group and provides information about nutrition, serving sizes and suggestions for increasing variety. Tips for preparation, presentation and meal planning are also covered.

The staff responsible for meal planning is encouraged to include regional food favorites, seasonal and home grown produce, and events and holidays with special food traditions. For example, a regional favorite in Vermont is New England boiled dinner. Although corned beef is very salty, the water can be changed an extra time. The rest of the meal (potato, carrots, turnip, cabbage) is very low in sodium. One high sodium food may be served each week, or for every 5 meals served. Refer to Appendix F for a list of foods high in sodium. **When a high sodium meal is served, a low sodium option must be available for people on low sodium diets.**

The OAA Nutrition Program serves meals that most people can eat regardless of special dietary needs. In order to comply with the Dietary Guidelines for Americans, meals are generally low in sodium and fat, high in fiber, and can easily be included as part of a meal plan for people with diabetes or heart disease.

MEAL COMPONENTS AND AMOUNTS

Meat, Fish, Poultry, Eggs, Cheese, Beans and Nuts

Serve 2-3 ounces of meat, fish, poultry, eggs, cheese, nuts or beans.
This is the cooked weight portion, without fat or bone.

One ounce of meat is equal to:

- 1 egg
- 1 ounce cheese
- ¼ cup cottage cheese or ricotta cheese
- ½ cup cooked dried beans, peas or lentils
- 2 tablespoons peanut butter
- 1 ½ ounces raw, firm tofu (calcium fortified)
- ¼ cup nuts
- ¼ cup tuna

See page 21 for additional details.



Vegetables

One ½ cup of vegetable is equal to:

- ½ cup cooked or raw vegetables
- 1 cup raw, leafy greens
- ½ cup tomato sauce
- ¾ cup vegetable or tomato juice



Fruits

One ½ cup of fruit is equal to:

- 1 medium whole fruit (size of a tennis ball)
- ½ cup fresh, cooked, frozen or canned fruit
- ½ cup 100% fruit juice
- ¼ cup dried fruit



See page 22 for additional vegetable and fruit details.

Grains/Whole Grains

The 2005 Dietary Guidelines for Americans recommend eating 3 ounces of whole grains each day, with the remainder of grains being enriched or whole grain. Two ounces of grain must be served at each meal with an average of one ounce of whole grain. If a whole grain is not served each day, averaging 5 whole grain servings per week (for daily programs) will meet the recommendations. For example, serving spaghetti and Italian bread in a meal provides no whole grains; the next day a sandwich on 2 slices of whole grain bread provides 2 whole grains. One ounce of grain is equal to:

1 slice (1 oz) bread	*1 biscuit, 2 ½ inch diameter
1 cup dry cereal	½ hotdog or hamburger bun
½ cup cooked cereal	*2 inch square cornbread
*1 small muffin (2 oz)	1 tortilla, 6 inch diameter
*1 waffle, 4-5 inch diameter	4-6 crackers (saltine size)
*1 pancake, 4 inch diameter	¼ cup stuffing
1 slice French toast	½ cup cooked pasta, rice, couscous
½ English muffin	*Quick breads (banana, pumpkin etc)
½ small bagel	¾ inch x 4 inch slice

Grains commonly used in cooking that equal one ounce of grain:

- 2 Tablespoons flour
- 1/3 cup oats
- ¼ cup breadcrumbs
- ¼ cup wheat germ

* *These items contain more fat*

Examples of commonly used whole grains include whole wheat flour, oatmeal, brown rice, cornmeal and barley.

(See page 23 for additional details.)



Milk

One serving of milk is equal to:

- 1 cup skim or low fat milk
- 1 cup low fat yogurt

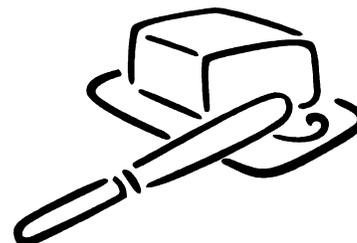
See page 24 for additional details.

Fat

Serving fat with a meal is optional; up to two servings is acceptable.

One teaspoon of fat/oil is equal to:

- 1 teaspoon oil
- 1 teaspoon soft tub margarine
- 1 teaspoon mayonnaise
- 1 Tablespoon salad dressing
- 1 Tablespoon light cream cheese
- 1 strip bacon
- 2 Tablespoons light sour cream
- 2 Tablespoons whipped cream



See page 25 for additional details.

Desserts

Desserts using fruit, whole grains, and low fat or low sugar products are encouraged. Desserts can be used to meet requirements for certain components of the meal plan as follows:

1. When a dessert contains $\frac{1}{2}$ cup of fruit per serving, it may be counted as one portion of fruit.
2. When a dessert contains a source of grain, it may be counted toward the grain equivalent as outlined below.

Examples:

Pie, 9-inch, 8 servings/pie: 1 crust pie = 1 ounce of grain
2 crust pie = 2 ounces of grain

*Oatmeal raisin cookies: 2 cookies = 1 ounce of grain

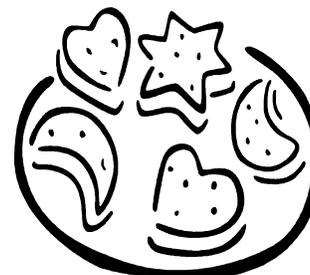
*Peanut butter cookies: 3 cookies = 1 ounce grain

Brownies, 2 $\frac{1}{2}$ x 3 inches: 1 brownie = $\frac{1}{2}$ ounce grain

Gingerbread, yellow cake,
carrot cake, 2 $\frac{1}{2}$ x 3 inches: 1 piece = 1 ounce grain

Apple crisp, 2 $\frac{1}{2}$ x 3 inches: 1 portion = $\frac{1}{2}$ ounce grain

*Size of cookie equals $\frac{3}{4}$ oz or 1 $\frac{1}{2}$ tablespoons cookie dough.



Specific Nutrient Sources for Vitamin A and Vitamin C

Vitamin A

The RDA for vitamin A is 900 RE (retinal equivalents) for older men, and 700 RE for older women. Deep orange and dark green vegetables and fruits are good sources of this vitamin. Vitamin A rich foods must be served 2-3 times per week. For meal sites serving 2 days or less per week, one vitamin A-rich food must be served at each meal. Meal sites may serve one food from the “good” list or 2 foods from the “fair” list to meet the requirement. **All portions are ½ cup unless indicated otherwise.**

“Good” List = at least 266 RE/serving (Select 1 serving to meet the RDA)	“Fair” List = at least 133 RE/serving (Select 2 servings to meet the RDA)
*Carrots Chinese cabbage Greens: beet, dandelion, mustard, Kale Mixed vegetables Peas and carrots *Pumpkin Spinach, cooked Sweet potato Winter squash Cantaloupe (1 cup cubes or ¼ melon) Tropical fruit salad	Broccoli Carrot, grated, 1 Tbsp. Romaine lettuce (1 cup) Spinach, ½ cup raw Swiss chard Tomato sauce, ¾ cup Tomato paste, ¼ cup V-8 Juice, ¾ cup Apricots Apricot nectar Cantaloupe, ½ cup cubes or 1/8 melon

**For the occasional use of carrots or pumpkin in a baked product, the amounts listed below will provide one-third (1/3) of the RDA for vitamin A.*

Carrots, grated	2 Tablespoons/serving
Pumpkin, canned	1 Tablespoon/serving

For example, each serving of pumpkin bread must contain 1 tablespoon of canned pumpkin. Most pumpkin bread recipes call for 1 cup of pumpkin (1 cup =16 tablespoons).

By cutting the pumpkin bread into 16 equal slices, each slice will contain 1/3 of the RDA for vitamin A. Likewise, if carrot cake or coleslaw is served, each serving must contain 2 tablespoons of grated carrot. One pound of grated carrots yields 37 servings of the vitamin A requirement.

Vitamin C

The RDA for vitamin C is 90 milligrams (mg) for men, and 75 mg/day for women. One vitamin C rich food must be served at each meal. Meal sites may serve one food from the “good” list or two foods from the “fair” list to meet the requirement. **All portions are ½ cup unless listed otherwise.**

“Good List” = 30 mg/serving (Select 1 serving daily to meet RDA)	“Fair List” = 15-30 mg/serving (Select 2 servings daily to meet RDA)
Broccoli, raw or cooked Brussels sprouts Cauliflower Kale, Sweet pepper, red or green, ¼ cup, raw or cooked Sweet potato, ½ cup mashed or 1 small Tomatoes, fresh, 1 whole Tomatoes, puree, ¼ cup #Tomato Juice, ¾ cup #Vegetable Juice cocktail, ¾ cup Cantaloupe Grapefruit Honeydew melon Kiwi fruit Mandarin oranges Mango Orange Strawberries Tangerine or clementine, 1 small 100% fruit juice, vitamin C added	Asparagus Cabbage Coleslaw Potato, baked (1) Potato, mashed, boiled, scalloped Rutabaga #Sauerkraut Snow peas Squash, butternut Tomatoes, stewed or sauce Cranberry-Orange Relish (1/3 cup) Pineapple Watermelon, 1 cup

High in Sodium

Sodium

Do not serve high sodium foods more than once a week. Tips for reducing the sodium content of foods include:

- Limit use of high-salt meats and fish and processed meats (such as ham, bacon, hot dogs, sausage).
- Drain and rinse canned tuna.
- Limit use of cheese because it contains a lot of sodium.
- Avoid adding salt when cooking meats, vegetables, pasta or rice.
- Prepare homemade soups or buy low sodium canned soups.
- Rinse and drain canned vegetables and meats.
- Use fresh and frozen fruits and vegetables.
- Serve unsalted or low-salt crackers and chips.
- Use reduced sodium products when possible.
- Enhance flavor of foods without adding sodium by using herbs and spices.

See page 27 for additional details.

Fat

Limit fat to 0-2 teaspoons per meal. Tips for preparing and serving low fat foods include:

- Serve more skinless poultry, fish and beans.
- Serve lean cuts of red meats.
- Remove skin from poultry before cooking.
- Drain fat from cooked ground beef; rinse with hot water.
- Serve menu items using dried beans, peas, and lentils in place of meat.
- Use soft tub margarine instead of stick margarine or butter.
- Use monounsaturated oils: olive, canola, or peanut.
- Substitute low fat milk or evaporated skim milk for whole milk and cream in recipes.
- Substitute low-fat cheeses in recipes when possible.
- Serve fresh and frozen fruits and vegetables frequently.

See page 25 for additional details.

Meal Preparation Guidelines

Here are some suggestions and tips for planning nutritious menus that are colorful, tasty, cost effective and easy to prepare.

The Art of Meal Planning

- ❑ Develop cycle menus- usually done seasonally for 4-6 weeks.
- ❑ Set aside enough time to plan one month of menus.
- ❑ Block out any special holidays or events that will occur during the month.
- ❑ Sit down with the meal standards, the vitamin A and C food list, and the high sodium food list.
- ❑ Begin by choosing the main entrée. Add in grains/whole grain items; then vegetables and fruits.
- ❑ Limit high sodium foods to one item per week
- ❑ Look carefully at the color, texture and variety of foods selected.
- ❑ Include foods from all food groups.
- ❑ Evaluate which foods, if any, are missing.
- ❑ Check to see if some menus are “too heavy” or “too light” and shift menu items around where necessary.
- ❑ Consider staff time available for preparing the meal. Is there too much prep work in one meal? Are there too many items that need last minute preparation?
- ❑ Use written, standardized recipes with clear directions for every prepared item on the menu. See Appendix J for Standardized Recipe form.

Variety

- ❑ Include a variety of foods each day.
- ❑ Include a variety of protein foods including poultry, fish, pork, beef and beans throughout the week.
- ❑ Avoid using the same form of meat several times in one week such as ground beef in spaghetti sauce, meatloaf and tacos.
- ❑ Include familiar foods prepared in different ways. For example, potatoes can be baked, scalloped, mashed, sweet, boiled, hash brown.
- ❑ Introduce a new food such as couscous or kiwi fruit with a meal that is well accepted.

Texture

- ❑ Include a variety of food textures within a meal.
- ❑ Balance crispy foods with soft foods; include crunchy foods with smooth textures. For example, serve quiche with a tossed salad to vary textures and colors.
- ❑ Balance a meal that has a “heavy entrée” with a light salad and fruit for dessert. For example, lasagna might be served with a spinach salad and a fruit cup
- ❑ Avoid serving multiple forms of the same flavor group at one meal. For example, two items from the cabbage family such as coleslaw and broccoli should not be served at the same meal.

Color

Eye appeal is critical to food acceptance! People eat with their eyes!

- ❑ Serve foods with a variety of colors.
- ❑ Use garnishes to add color.
- ❑ Use colorful fruits and vegetables; they provide nutrients as well as eye appeal. For example, hash browns are very colorful and more nourishing when sautéed with green and red peppers.

Food Cost

- ❑ Buy competitively.
- ❑ Know the cost of food.
- ❑ Investigate local buying options. Some small grocers and food companies will deliver food with a small minimum order.
- ❑ Compare prices of similar items between vendors.
- ❑ Consider forming a buying cooperative with other meal sites such as nursing homes or local schools.
- ❑ Use standardized recipes for food preparation, portion control and cost savings. Too many leftovers are wasteful and costly.
- ❑ Serve foods with standard measuring utensils: use scoops, ladles and cups. See Appendix K for common measurements and serving utensils.
- ❑ Be mindful of inventory levels. Carrying too much inventory adds to food costs. Purchase amounts that are appropriate to the size of the meal site.
- ❑ Include fruits and vegetables that are in season for fresh flavor and lowest prices.
- ❑ Purchase from farmers markets and local vendors when possible.
- ❑ Be aware of factors contributing to food cost including meal participation and food waste.
- ❑ Balance high cost meals with low cost meals each week.

Food Purchasing

- ❑ Serve the freshest, highest quality food that the budget will allow. Be fussy! Don't settle for a low quality product.
- ❑ Inspect foods received upon delivery. Refuse any inferior product. For example, check the temperature of the milk; if it is $> 40^{\circ}$ F, refuse delivery.
- ❑ Buy according to intended use of a product. For example, use all-purpose potatoes for mashed and scalloped, baking potatoes for baked potatoes.
- ❑ Keep records of food purchased.
- ❑ Purchase food according to the storage capacity of the site.

Meal Presentation

The presentation of food can greatly enhance the acceptance and enjoyment of the meal.

Consider the colors and textures of foods when planning meals. For example, baked fish served with mashed potato and cauliflower lacks color, and has poor eye appeal. Instead, serve the fish with a chunky tomato sauce and add broccoli and carrots to the cauliflower. Use garnishes such as lemon wedges, parsley, chicory or spiced apple rings to dress up the appearance of meals.



Vary the style of meal service. Include:

- salad, potato and/or pasta bars.
- theme meals.
- buffets.
- picnic lunches.

Enhance the dining experience with flowers or centerpieces on the table, colorful napkins, or quiet dinner music.

Look for creative menus, recipes and meal service ideas from other meal sites, in a newsletter, or at a workshop.

MEAT, FISH, POULTRY, EGGS, CHEESE, BEANS, and NUTS

Protein rich foods are important components of a healthy diet. Protein helps build and repair body tissue. Many older adults eat less protein because these foods are expensive and can be difficult to chew. Meat, poultry, fish, eggs, cheese, legumes and beans, tofu, nuts and nut butters are the main sources of protein in the diet. These foods also provide iron, B vitamins and zinc. Grains and vegetables also contain small amounts of protein.



In order to provide 1/3 of the RDA for protein, 2-3 ounces of meat, poultry, fish, eggs, cheese, beans and nuts must be served at each meal (this is the cooked weight portion, without fat or bone).

Meal Planning and Preparation

- Protein-rich foods may be served alone or combined with other foods in casseroles, soups, salads and sandwiches. For example, fish chowder (2 oz fish) may be served with a spinach salad and sliced hard cooked egg to provide the equivalent of 2-3 ounces of protein.
- Casseroles may provide too little protein. Check the recipes to make certain the protein content is adequate. Add or supplement the meal with additional protein if needed. For example, American chop suey may need some kidney beans added to provide 2-3 ounces of protein.
- Milk is a good source of protein: one 8 ounce glass has the same amount of protein as one ounce of meat. Milk served as a beverage does not count toward the protein requirement. However, when milk is included in other foods such as cream soup, cream sauce or custard, it contributes to the overall protein content of the meal.
- Shredded cheese increases the protein content of a meal when added to soups, salads or sandwiches.
- Cheese contains sodium, and contributes a significant amount of sodium especially when more than one ounce is served. For example, macaroni and cheese served with ham or hotdogs is very high in sodium. See Appendix F for a list of high sodium foods.
- Beans and legumes are low fat and protein rich vegetables. They may satisfy both the vegetable and protein requirement in the same meal. For example, in chili the beans count as a vegetable and part of the protein requirement.

- Cured meats such as ham, chipped beef, corned beef, hot dogs and sausage are very high in sodium. Limit the serving of these foods and other high sodium foods to once a week. See Appendix F.
- Bacon is high in fat and does not contain enough protein to count as meat, unless it is Canadian bacon.
- Meats can be a significant source of saturated fat; the kind of fat that clogs arteries. Choose lean meat and poultry. Trim any visible fat. Bake, broil, grill or stew meat to get rid of excess fat. When making soup, prepare in advance, chill overnight, and skim off fat.
- Some older adults have difficulty chewing meat. Meats that are easier to chew include ground beef; stewed meats and poultry; moist meats in a soup or casserole; sandwich fillings (egg, tuna, chicken salad); tofu; or cheese.
- Tofu is a soybean product that is easy to use in cooking. Tofu has a bland, slightly nutty flavor that takes on the flavor of the food with which it is cooked. Its texture is smooth and creamy but firm enough to slice. Tofu can be sliced, diced or mashed and used in a variety of dishes including soups, stir fry, salads, sandwiches and sauces.
- Consider serving some meatless entrees that contain tofu, cheese or beans.
- Breaded and battered fish may contain only small amounts of fish. **Read the nutrition label of all fish products.** Fish fillets are preferable to breaded and battered products such as fish sticks.



VEGETABLES/FRUITS



Vegetables and fruits contribute to a healthy diet. The DGFA emphasize eating more of and many different types of vegetables and fruits. In addition to providing color and texture, they also provide essential vitamins, minerals, fiber, phytochemicals, carotenoids and antioxidants. Eating the current recommendation of at least 9 servings a day may help protect against cancer, high blood pressure and other chronic diseases. According to the National Cancer Institute, people who eat diets rich in fruits and vegetables, particularly those rich in vitamins A and C, have significantly lower rates of all types of cancer.

Vegetables and fruits are:

- high in fiber and help promote healthy bowel function.
- rich in many nutrients such as vitamins A and C, folacin and potassium.
- naturally low in fat and calories.
- naturally low in sodium.

Fruit juices contain many vitamins but little or no fiber, and can be high in calories. Juices served in the OAA Nutrition Program must be 100% fruit juice. Fruit juice may be served 2 times per week and count as a fruit.

Meal Planning and Preparation

- Include a variety of fresh, frozen canned or dried fruits.
- Serve fruit for dessert at least 2 out of 5 meals.
- Include fruits such as kiwi, melon and strawberries for variety in color and texture.
- Include fruit in salad such as spinach salad with mandarin oranges or a carrot/raisin/pineapple salad.
- Purchase canned fruits in their own juice instead of heavy syrup.
- Rinse canned fruit under cold water if packed in heavy syrup.
- Include fruits as dessert items in fruit crisps, baked apples, poached pears.
- Use a variety of fresh, frozen and canned vegetables.
- Rinse canned vegetables under running water to reduce sodium content. They are high in sodium but convenient and economical to use.
- Serve vegetables raw or cooked.
- Prepare vegetables in a variety of ways- baked, stir-fried, roasted or steamed. Add to soups, casseroles and salads.
- Serve vegetables in a variety of shapes. For example, try stir- frying julienne (cut up in thin strips) carrots, zucchini, red pepper and onions.
- Serve dried beans, peas and lentils in soups, salads and main dishes. The legumes are a vegetable and contribute to the protein content of the meal.

GRAINS/WHOLE GRAINS

The DGFA recommend eating 3 ounces of whole grains a day. Grains such as wheat, rice and oats form the foundation of a nutritious diet. Grains provide vitamins, minerals, and carbohydrates in the form of starch. Grain products are naturally low in fat, unless it is added during preparation, processing, or at the table. Whole grains are high in fiber which helps to promote proper bowel function and prevent constipation.

Two ounces of grains must be served at each meal, one of which should be whole grain. It may not always be possible to serve a whole grain at each meal, but over the course of a week, half the grains served should be whole grain. For example, if you serve a sandwich on 2 slices of whole wheat bread, the next day you do not have to serve a whole grain.

Read the ingredient list to see if the grain is a WHOLE grain.

INGREDIENTS: <u>Whole-wheat flour</u> , water, wheat gluten, soybean and or canola oil, yeast, salt, honey
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Meal Planning and Preparation

- Serve brown rice instead of white rice; it has a chewy texture and is higher in fiber.
- Serve whole wheat, rye or oatmeal bread more often than white.
- Add wheat germ to muffins or quick breads and meatloaf or meatballs. Mix with breadcrumbs, Parmesan cheese and herbs to top fish or a casserole.
- Introduce couscous as an alternative to pasta or rice. It is a grain that resembles rice; is quick and easy to prepare, and provides texture.
- Add dried beans, peas and lentils to soups, salads and main dishes such as chili.
- Experiment with other whole grains such as millet, quinoa and kasha.
- Select whole grain products that are 100% whole grain.

MILK/MILK PRODUCTS

Milk supplies many essential nutrients including calcium, phosphorus, riboflavin, vitamins A and D, protein and water. Including 3 cups of low fat milk and dairy products daily contributes to bone health and may help lower blood pressure. To comply with the OAA Nutrition Program meal standards, each meal must provide 400 mg of calcium. **Milk must be offered at each meal.**

The fat and calorie content of milk varies, depending on the type - whole, 2%, 1% or skim. Milk contains saturated fat, the kind of fat that clogs arteries. Removing the fat does not reduce the level of vitamins, minerals or protein in the milk. Serving low fat or skim milk is desirable.

Yogurt, cheese, cottage cheese, buttermilk, frozen yogurt and ice cream are all included in the milk group. Use low fat or skim milk and low fat dairy products to help lower the fat content of meals. Butter, cream cheese, sour cream and cream contain mostly fat and add minimal amounts of calcium. See Appendix C for additional information on the calcium content of foods.

Meal Planning and Preparation

- Serve milk in a pitcher as long as it is kept on ice during the meal to keep the temperature at 40° F. Glasses must be large enough to accommodate an 8 ounce serving.
- Do not re-serve leftover milk from glasses.
- Use leftover milk from pitchers in cooking if it has been held on ice, dated and used within 3 days. Do not add milk to an existing pitcher.



- Serve puddings and custards as a dessert to increase the amount of milk provided. Older adults enjoy tapioca, bread and rice puddings.
- Offer yogurt or frozen yogurt to increase the calcium content of meal.
- Serve desserts which include more than one food group: pumpkin custard combines dairy with vegetable; Indian pudding combines dairy and grain.
- Make soups with milk.
- Be aware that lactose intolerant people may not be able to tolerate milk but might be able to tolerate yogurt or hard cheese.
- Make a nice topping for fish or casseroles using shredded, low fat cheese mixed with breadcrumbs.
- Combine vegetables with cheese in eggplant parmesan or broccoli cheese quiche to add variety and increase calcium.

FATS/OILS

Fat is an essential component of the diet. It provides energy and essential fatty acids; and is also necessary for the absorption of the fat-soluble vitamins A, D, E and K. It also contributes to the texture and flavor of many foods. Some kinds of fat, especially saturated and trans fats, increase the risk for coronary heart disease by raising blood cholesterol. Saturated and trans fats are found in meat, cheese, butter, whole milk dairy products, stick margarine, and hydrogenated fats. Healthy fats are poly- and monounsaturated fats found in oils and nuts and tub margarine. Eating too much fat of any type provides extra calories. A little fat goes a long way!

Meal Planning and Preparation

- Serve meats that are baked, stewed, grilled or broiled instead of fried.
- Remove the skin from chicken and turkey.
- Serve lean meats and remove all visible fat before cooking.
- Serve fresh or frozen fish. Breaded fish products are often low in protein and high in sodium and fat.
- Serve meat alternates on a regular basis. For example, a stir fry with tofu, chili with beans, quiche or lasagna can be low in fat when prepared without meat.
- Skim fat off soups and gravies after they have been refrigerated.
- Use low fat dairy products, salad dressings and mayonnaise.
- Use oil more often than butter, stick margarine or shortening.
- Drain fat from ground meat after it is browned.
- Read labels of ground turkey or beef to find the lowest fat content.
- Season vegetables, potatoes, rice or pasta with herbs, spices or low fat sauces instead of butter or margarine.



- Limit use of high fat commercially prepared products and mixes.
- Modify recipes by using lower fat ingredients.
- Thicken gravy with cornstarch instead of fat and flour.
- Serve 1% or skim milk at meals.
- Use evaporated skim milk in chowders and casseroles.

FIBER

Fiber refers to complex carbohydrates that cannot be digested or absorbed into the bloodstream. The diets of most Americans are low in fiber, primarily due to the many highly processed foods that are eaten. The recommended daily intake for fiber is 20-35 grams per day. Each meal served in the OAA Nutrition Program should provide 7-11 grams of fiber. The best food sources of fiber include fruits, vegetables, beans, legumes, and whole grain products. The fiber content of selected foods is listed in Appendix E. Fiber provides many positive health benefits. A high fiber diet promotes healthy bowel function and prevents constipation. Fiber rich foods can help with weight loss because they are naturally low in calories and are filling. A high fiber diet also promotes heart health by helping to lower cholesterol and saturated fat levels, and may reduce the risk for colon cancer. High fiber foods are digested more slowly and cause a lower rise in blood sugar, beneficial to people with diabetes.

Meal Planning and Preparation

- Include a variety of raw vegetables and fruits at meals. Older adults enjoy tossed salad, coleslaw, Waldorf salad, grapes, melons, and oranges.
- Serve whole grain breads and muffins.
- Sprinkle wheat germ on tossed salads; mix it with bread crumbs when coating fish or chicken; add it to meatballs; or add it to baked goods such as muffins or quick breads.
- Add beans and chick peas to salads and entrees such as chili.
- Serve fruit as dessert at least twice a week.
- Serve desserts made from fruit or vegetables such as carrot cake or fruit cobbler.
- Add vegetables to soups, sauces and baked goods such as zucchini bread.

SODIUM

In general, the American diet contains too much sodium. The minimum amount of sodium needed by healthy people is about 500 milligrams (mg) per day. Most people eat 10 times this amount. It is recommended that older adults limit sodium to

1500mg per day. Sodium helps regulate blood pressure and fluid balance; and helps muscles relax and contract. Eating too much sodium may contribute to high blood pressure and cause calcium loss from the bones.

Processed foods are the leading source of sodium in the diet. For example, a 3-ounce pork chop has about 50 mg of sodium; a 3-ounce slice of ham has 1200 mg. The salt shaker is the other main source of sodium in the diet. One teaspoon of salt contains 2300 mg of sodium.

The Dietary Guidelines for Americans suggest choosing and preparing foods with as little added salt as possible. **Meal sites may include one high sodium food per week.** This allows for variety and inclusion of favorite foods on the menu such as beans and franks or macaroni and cheese. **If a meal site is serving a high sodium meal, a lower sodium alternative must be available for people following a low sodium diet.**

Generally speaking, eating small amounts of sodium is not a concern for healthy people. People with hypertension (high blood pressure), congestive heart failure or edema (swelling in legs) usually must limit the amount of sodium they eat. A diet rich in calcium, potassium, and magnesium, and low in sodium can help lower blood pressure. Serve these foods often. Food sources of these nutrients may be found in: Appendix C (calcium), Appendix F (sodium), Appendix G (potassium), and Appendix H (magnesium).

SUGAR

Sugars are simple carbohydrates that provide energy. They occur naturally in foods such as fruit and milk. Sugars are also added to many foods during processing and preparation. Foods with added sugars often have little nutritional value but do provide calories. Eating too many high sugar foods may decrease consumption of more nourishing foods and contribute to weight gain. **In order to limit the sugar content of meals, serve plain fruit as a dessert at least 2 days per week.**

Meal Planning and Preparation

- Choose fresh, frozen or canned fruit packed in juice or light syrup when serving fruit or using fruits in recipes.
- Serve desserts such as fruit cobbler, puddings, gingerbread or quick breads; cookies such as fig newtons or oatmeal raisin; and fruit squares; baked apples; frozen yogurt.
- Avoid frequent substitutions of fruit juice for fruit.
- Rinse fruits canned in heavy syrup with cold water.

DIABETES

Diabetes is a chronic disease that affects at least 40,000 Vermonters. There are two major types of diabetes: type 1 and type 2. Approximately 25% of older adults have diabetes; most have type 2 diabetes. Many people with type 2 diabetes can control their diabetes by eating healthy foods and being physically active.

People with diabetes can eat meals provided in the OAA Nutrition Program with a few minor changes. The new menu standards include more fruits, vegetables and whole grains making the meals served in the Nutrition Program likely to contain 6 carbohydrate foods.

Foods that contain carbohydrate include:

- Grains: breads, cereals, rice, pasta, cereal, crackers
- Fruit and fruit juice
- Starchy vegetables such as potato, corn, peas
- Milk and yogurt
- Sugars and sweets

What is a carbohydrate serving?

One carbohydrate serving contains 15 grams of carbohydrate. Whether the carbohydrate comes from sugar, wheat, fruit or the lactose in milk makes no difference in terms of blood sugar. It is important for older adults with diabetes to know how much carbohydrate they can eat at a meal.

Most people with diabetes limit the carbohydrate foods (carbs) to 3-5 per meal. Individuals may have to avoid eating some of the carbohydrate served in one OAA Nutrition Program meal. Certain foods such as bread, crackers, fruit and dessert may be appropriate to take home and eat at a later time. For example: a meal may consist of meatloaf, mashed potato, winter squash, whole wheat roll, milk, fresh fruit cup and oatmeal cookie. If a woman with diabetes limits her carbs to 4 at each meal, she may choose to eat the potato, squash, fruit and milk for dinner, and take the roll and cookie home for another time. People with diabetes may benefit from more education about carbohydrates and meal planning. For the carbohydrate content of common foods see Appendix I of this manual.

Meal Planning and Preparation

- Have sugar substitute available.
- Include desserts that everyone can eat: fruit, puddings, plain cakes.
- Serve a vegetable or tossed salad with fruit as the dessert to lower the overall

carbohydrate content of a meal that includes pasta as the entrée.

- Avoid serving bread or cake on pasta days.
- Serve an alternative dessert for individuals with diabetes if a very sweet dessert is served. For example, if frosted cake is on the menu, set aside some unfrosted cake for those with diabetes.
- Serve fruit for dessert at least twice a week.
- Include puddings, custards, fruit desserts made with little or no added sugar.
- Read labels to determine the carbohydrate content of packaged foods.

SECTION 3

FOOD SAFETY AND SANITATION

Introduction

Providing nutritious, well balanced meals to older adults is the cornerstone of the OAA Nutrition Program. Of equal importance is ensuring that these meals are safe to eat, free from contamination and delivered at the correct temperature. Many frail older adults, especially the homebound, are particularly vulnerable to bacteria in food. Prevention is the key to keeping food safe.

Food safety concerns have increased over the past 5 years due to an increased number of outbreaks of foodborne illness throughout all areas of the foodservice industry. Pathogenic (disease-causing) microorganisms are the most common cause of foodborne illness. They include bacteria, viruses, parasites and molds. Bacteria are everywhere, including in our food, and are responsible for over 90% of foodborne illness.

Most foodborne illness results from improper handling and storage of food, including temperature abuse, cross contamination, and/or poor personal hygiene. When food is prepared, served or held without attention to safe food practices, bacteria can grow, multiply and make people sick. **Keeping food safe requires careful attention to detail and on-going education and training for staff and volunteers who work in the Nutrition Program.**

Because of the increase in foodborne illness, the Federal Government developed a system called **Hazard Analysis Critical Control Point (HACCP)** for use in foodservice operations, food processing plants and meat packing plants. A HACCP system examines food and its flow through the operation, from purchasing through serving. At each step in the flow of food handling and preparation there is potential for contamination. Attention to HACCP principles extends even further in the

Nutrition Program: food must be safely delivered to the homebound population.

Sanitation and safety standards for the OAA Nutrition Program are based on HACCP principles and should be clearly defined and understood at each meal site. There are eight rules of safe food handling that should be followed at all times. Adherence to these basic rules will help keep food safe throughout preparation, service and delivery. Any person who handles or serves food, whether paid staff or volunteer, needs to know and understand these rules. Because **all foods** may contain harmful bacteria that can cause illness, it is important to follow the eight basic rules of safe food handling.

Eight Basic Rules of Safe Food Handling¹

1. Practice strict personal hygiene.
2. Monitor the time and temperature of food and prevent cross contamination during food preparation and storage.
3. Keep raw products separate from ready-to-eat foods.
4. Avoid cross-contamination by cleaning and sanitizing all food contact surfaces, equipment and utensils before and after every use.
5. Cook foods to their required minimum internal temperature or higher.
6. Keep hot food hot (135° F or higher) and cold food cold (41° F or colder).
7. Cool cooked food to 41° F within four (4) hours.
8. Reheat foods to an internal temperature of 165° F for 15 seconds within two (2) hours.

In addition to these eight basic rules, food service staff and volunteers must be careful when handling potentially hazardous foods—foods which support rapid bacterial growth and cause foodborne illness. These foods have either been implicated in prior outbreaks of foodborne illness or possess characteristics, such as high moisture or low acidity, that allow bacteria to flourish.

Potentially hazardous foods include:

- *Bread Stuffing*
- *Cream filled products*
- *Custards*
- *Cut melon*
- *Egg and egg products*
- *Fish and shellfish*
- *Garlic in oil products*
- *Gravies, sauces*
- *Meat and milk products*
- *Onions*
- *Cooked pasta, potatoes, rice*
- *Seed sprouts*
- *Winter squash*
- *Tofu*

¹ Eight Basic Rules adapted from ServSafe Essentials by the National Restaurant Association, 2004.

Staff and volunteers at meal sites must:

- Understand the eight basic rules of safe food handling,
- Identify the potentially hazardous foods,
- Know the danger zone for temperatures (41° F to 135° F) where bacteria multiply rapidly and increase the risk of foodborne illness.

Section 3 provides guidelines and tips for maintaining food safety and sanitation standards in the OAA Nutrition Program. It is not all inclusive nor is it a substitute for ongoing education and training necessary for safe food handling practices.

KEEPING FOOD SAFE

A. Receiving

- Purchase foods from a reliable supplier.
- Purchase foods from local farms and farmer's market when available.
- Inspect foods immediately upon delivery.
- Schedule deliveries during 'off peak' hours, not at serving time
- Mark all items for storage with delivery date.
- Put perishable foods away immediately.
- Check temperatures of potentially hazardous foods with a stem probe thermometer.

Milk and Milk Products All milk and milk products must be made from pasteurized milk. Do not accept milk if the expiration date has passed or temperature at the time of delivery is above 41° F.

Eggs Eggs must be clean and have no cracks or chips. Sites may use eggs from a reputable source of locally raised chickens. Pasteurized liquid or dry eggs are recommended by the Vermont Department of Health. Never serve foods containing raw or partially cooked eggs.

areas.

C. Preparation

- Follow the printed menu as written.
- If a menu substitution is made, record the change (see form in Appendix M).
- Use standardized recipes.
- Use a stem probe thermometer to check food temperatures before serving.



internal

Cross Contamination

Cross contamination occurs when bacteria are transferred from one surface or food to another. Fifty percent of food borne illness is caused by cross contamination. Common examples of cross contamination include:

- Using the same knife or cutting board to prepare raw and cooked foods.
- Raw, contaminated food touching or dripping on cooked or ready to eat food.
- Using a cooking surface that has not been properly sanitized.
- Practicing poor personal hygiene during food preparation. For example, not washing hands, touching open cuts or sores, sneezing or coughing.

Thawing Food Properly¹

- Thaw food in the refrigerator at 41° F, in shallow pans on the lowest possible shelves.
- Thaw food in a water-proof bag under clean, drinkable running water 70° F or below for no more than 2 hours.
- Thaw food in the microwave only when the food will be immediately transferred to conventional cooking facilities as part of a continuous cooking process
- **Thawing food at room temperature is unacceptable.**

Preparation and Cooking

Poultry

- Cook to a minimum internal temperature of 180° F.
- Avoid cooking stuffing inside poultry as it is difficult to maintain safe temperature control.
- Never interrupt the cooking process.



Pork

- Cook to a minimum internal temperature of 160° F.
- Never interrupt the cooking process.

Beef

- Cook to a minimum internal temperature of 160° F.
- Never interrupt the cooking process.
- Handle ground beef patties carefully to assure that the internal temperature reaches 160° F.

Protein Salads and Sandwiches

- Chill all ingredients prior to preparation to 41° F or below. For example, store the canned tuna fish and mayonnaise in refrigerator overnight for preparation of tuna salad the following day.
- Check and record temperature of protein salad before serving.

Egg-based Mixtures

- Keep all egg products at temperatures either below 41° F or above 135° F, except during brief periods of preparation.
- Serve hot egg dishes immediately or chill and promptly refrigerate at 41° F.

Batter and Breaded Products

- Prepare batter in small batches.
- Thoroughly cook breaded and battered foods.

Fruits and Vegetables

- Wash all raw fruits and vegetables thoroughly before preparing or serving.

D. Holding Food²

- Hold both hot and cold foods at proper temperatures throughout the holding period.
- Prepare and cook only as much food as needed for immediate service.

Holding Hot Foods

- Use only hot-holding equipment such as a steam table that can keep foods at 140° F or higher.
- Stir food at regular intervals to help distribute the heat evenly throughout the food.
- Keep food covered to retain heat and prevent contaminants from falling into food.

Meat and Meat Products Meat and meat products must be inspected and approved by the Vermont Department of Agriculture or the United States Department of Agriculture (USDA).

- The internal temperature of fresh meat should be 41° F or lower.
- The temperature of frozen meat must be 0° F or below with no signs of thawing.
- Discoloration of meat (brown, green, or purple blotches) are signs of microbial attack. Black, white or green spots may indicate molds or freezer burn.
- Slime or sour smell indicates deterioration; the meat should not be used.

Poultry and Poultry Products All poultry and poultry products must be inspected and approved by the Vermont Department of Agriculture or the USDA.

- The internal temperature of fresh poultry should be 41° F or lower.
- Frozen poultry should be 0° F or lower with no sign of thawing.
- Poultry products must be handled with care as government inspection does not mean the product is salmonella free.
- Slime or discoloration indicates deterioration; the poultry should not be used.

Fresh Fish and Shellfish Fresh fish must be purchased from a state-approved supplier. It is highly perishable and should arrive at temperatures between 32° F and 45° F. Do not serve any raw fish or shellfish.

Fresh Produce Check cartons for any sign of insect infestation. Check produce for bruising, wilted leaves or discoloration. Cut melon, a potentially hazardous food, must be received and stored at 41° F.

Frozen Foods The temperature of frozen food should be 0° F. Ice cream may be 6° F-10° F. Reject any delivery showing signs of thawing or refreezing such as fluid or frozen liquid at the bottom of container or presence of large ice crystals.

Canned Foods Carefully inspect canned goods to prevent the deadly foodborne illness botulism. Reject all cans with:

- Swollen ends
- Leakage
- Flawed seals
- Rust
- Dents along top or side seams
- No label

Dry Goods When delivered, dry food packages should be intact and free of punctures, tears, moisture and mold.

B. Storage

- Follow the rule of First in First Out (FIFO). Put the most recently delivered items behind the existing products or items. Date food packages on receipt to better guarantee FIFO.
- Keep potentially hazardous foods—those containing eggs, meat, poultry or milk— out of the danger zone of 41° F to 135° F.
- Store foods in areas designated for storage.
- Keep storage areas clean and dry.
- Wrapping and packaging must be clean and undamaged.
- If original package is open, its remaining contents must be kept in containers with tight fitting lids, labeled as to content and dated.
- Home delivered meals stored in the freezer must be labeled with permanent marker in large print to identify contents and date of preparation.

Refrigeration

- Temperature of refrigerator must be 40° F. or lower.
- Check and record temperatures daily (see form in Appendix L).
- Cover, label and date all stored food.
- Store raw food products below cooked foods.
- Do not overload refrigerators.
- Keep refrigerators clean and free from spills.
- Do not store food directly on floor.

Freezer Storage

- Freezer temperature must be 0° F or below.
- Check and record temperatures on a daily basis (see form in Appendix L).
- Frozen food inventories should be FIFO.
- Packaging should be moisture proof.
- Store boxes up off the floor.

Dry storage

- The room must be cool, dry, well ventilated and clean.
- The temperature of the dry storage room should be 50° F to 70° F.
- Keep all containers of food tightly covered.
- Store food away from cleaning supplies and other chemicals.
- Food items must be stored at least 6 inches above the floor; do not place any food items directly on the floor.
- Food items must be stored away from splash, dust or other contamination.
- Store trash or garbage cans in a designated location away from food storage

- Measure the internal food temperature using a probe thermometer at least every two hours.
- Discard hot foods after four hours if they have not been held at or above 135° F.
- Never use a steamtable or other hot-holding equipment to reheat foods. Reheat foods first to 165° F then transfer to holding equipment.
- Do not exceed two hours of holding time between the completion of cooking and the beginning of food served at a congregate meal site or delivery of last home delivered meal.

Holding Cold Foods

- Hold cold foods at 41° F or colder.
- Measure internal food temperatures at least every two hours. If above 41° F take corrective action (see page 37).
- Use covers or food shields to protect food from contaminants.

E. Serving Food³

- Food servers need to be just as careful as kitchen staff to promote food safety.
- Food servers must always practice good personal hygiene.
- Servers must wash their hands before handling place settings or serving food.

Utensils, Glasses and Dishes

- Be sure that servers do not touch the parts of a dish, glass or utensil that come in contact with a person's mouth.
- Use utensils and gloves. Staff and volunteers shall use appropriate serving utensils such as forks, ladles, scoops or single service plastic gloves to minimize food handling. Use long handled utensils when possible.
- Use separate serving utensils for each food item.
- Clean and sanitize utensils before and between uses.
- Store utensils so that servers will grasp the handles, not the food-contact surfaces.
- Hold flatware and utensils by the handles.
- Never touch cooked or ready-to-eat foods with bare hands.

Milk

- Serve milk from refrigerated bulk dispensers or in single-serve cartons.
- Hold pitchers of milk used on the table in an ice bath.
- Keep temperature of milk at 40° F or colder.
- Remove milk from table promptly. Refer to page 22 for guidelines on re-using milk properly.

Ice

- Use plastic or metal scoops or tongs for handling ice.
- Do not leave scoop in the ice container.
- Do not store foods directly on ice. Place foods in pans or on plates first. (Whole fruits and vegetables are the only exceptions). Ice used on a display must be self-draining.
- Wash and sanitize drip pans after each use.

Pot Luck and Picnics

Some meal sites may elect to provide a pot luck meal or hold a picnic. These meals shall be limited to a maximum of one time per month. The meal served for home delivered clients on that day must be specified on the menu. The following foods or dishes may be provided by participants:

Salads- Any green salad which does not contain protein-rich foods such as tuna, eggs, cheese or cottage cheese; or mayonnaise. Salad dressings should be served on the side.

Vegetables- Any hot or cold vegetable dish which does not contain protein foods such as cheese, eggs, milk, meat or poultry products.

Desserts- Any dessert except for cream pies, custard pie, meringue, home-made eggnog. Cakes or cookies which contain eggs are allowed. Toppings or ice cream must be refrigerated at proper temperature and added just prior to serving.

Breads- Any breads, crackers, rolls etc. Participants may provide butter or margarine.

Re-serving Food⁴

- Re-serve only unopened, prepackaged foods such as condiment packets, wrapped crackers and other sealed foods.
- Do not combine leftovers with fresh foods. For example, opened portions of mayonnaise or butter should be thrown away.
- Change linens used to line bread baskets each day.
- Do not re-serve leftover milk from pitchers. Leftover milk may be used in cooking where temperatures reach 135° F or higher.

F. Cooling Cooked Foods⁵

- Chill as quickly as possible any cooked food that will not be served immediately.
- Cool cooked food to 41° F or lower within four hours.
- Be aware of several factors which affect how fast food will cool:
 - The size of the food being cooled. For example, a large stockpot of beef stew may take four times as long to cool as a smaller kettle.
 - The quantity and type of food being cooled. The consistency and volume of food also influence how fast food cools. For example, baked beans take longer to cool than vegetable soup.
 - The container in which a food is stored. Stainless steel transfers heat from foods faster than plastic. Shallow pans allow the heat from food to disperse faster than deep pans.
- Hot food placed in the refrigerator or freezer to cool may not move through the temperature danger zone quickly enough. Chill foods properly before placing in the refrigerator according to the following steps:
 - Reduce the quantity of the food to be cooled. Cut large food items such as roasts into smaller pieces or divide large containers of food into smaller containers.
 - Use ice water baths. Divide the cooked food into shallow pans or smaller pots. Place the pans in ice water and stir frequently.
 - Stir foods to cool them faster and more evenly.
 - Use a cold paddle to stir foods and chill quickly.

G. Storing Cooked Food⁶

- Place foods which have not been completely cooled in shallow pans; store on the top shelves of the refrigerator. Leave uncovered if they are protected from overhead contamination. Once cooled to 41° F. or lower, they can be covered tightly and positioned so air can circulate around them.
- Follow the first in first out (FIFO) rule.
- Label all items with date and name of item.

H. Leftovers

- Handle leftovers with care. They carry the risk of foodborne illness!
- Do not save or return to the kitchen, leftovers from buffet or family style service.
- Discard immediately or store safely for later use any food that has not left the kitchen.
- Use leftover food held in refrigerator within 2 days; foods held in the freezer should be used within 1 month.

- Be aware: the appropriate use of leftovers requires professional judgment by a person trained in nutrition or safe food handling.

The Vermont Department of Disabilities, Aging and Independent Living

Policy on Leftovers

Leftovers must be handled carefully; and they may not be counted as a meal served. **Mealsites are not responsible for any leftovers stored improperly once they have left the building.**

For Central Kitchen, On-site Kitchen or Caterer's Kitchen

- Store leftovers for a maximum of 2 days in the refrigerator at 41° F or less in shallow containers less than 4 inches deep. Date and label contents.
- Store leftovers for a maximum of 1 month in the freezer at 0° F in shallow containers less than 4 inches deep. Date and label contents.
- Heat all leftover food to an internal temperature of 165° F for 15 seconds within 2 hours before serving.
- Discard any potentially hazardous food leftovers suspected of contamination immediately.
- Discard foods served that are not consumed unless they are in individual containers, unopened (for example, a half package of crackers) and maintained at proper temperatures.

For Satellite Meal Sites

- Serve leftovers as seconds or discard at the site.
- Send food back to the prep kitchen only if in their original containers, maintained at correct temperature and unopened (for example: canned fruits or vegetables, half gallon of milk etc.).

I. Reheating Food

- Rapidly reheat previously cooked foods to an internal temperature of 165° F for fifteen seconds within two hours. Discard any food which doesn't reach 165° F for 15 seconds within 2 hours.
- Never mix leftovers with fresh foods.
- Never reheat more than once.
- Use leftovers within 2 days, except for seafood, cooked patties or nuggets which must be used in less than 2 days.

J. Taking Corrective Action⁷

Corrective actions need to be taken if time and temperature standards are not met when cooking, cooling, and reheating food.

- Discard food that spends more than four hours total in the temperature danger zone(41° F to 135° F) This includes time spent during receiving, storage, preparation and cooking, and again during holding, cooling and reheating.
- Be cautious when cooling food: if food has not reached 41° F within four hours, it must be reheated to 165° F for fifteen seconds within two hours or discarded
- Be cautious when reheating food: discard food that is being reheated if it has not reached 165° F for fifteen seconds within two hours.

K. Transporting Food

Central Kitchen to Satellite Site

- Protect all foods against spoilage and contamination while being transported.
- Be aware of time and distance. The greater the time and distance from the point of preparation to the point of consumption, the greater the risk that food will be exposed to contamination or reach unsafe temperatures.
- Pre-chill cold foods to a temperature of 41° F or below.
- Pre-heat hot foods to 165° F or above and hold at 135° F or above throughout delivery.
- Clean the inside of delivery vehicles regularly.
- Practice good personal hygiene when delivering food.
- Check the temperature of foods leaving the central kitchen; record in a log each day. (See Appendix N)
- Measure and record in a log the time and temperature of foods received in the satellite kitchens each day (See Appendix N). If the food temperatures are between 41° F and 135° F notify the meal site manager immediately.

Home Delivered Meals⁸

- Protect all foods against spoilage and contamination while being transported.
- Practice good personal hygiene when delivering food.
- Clean the inside of the delivery vehicles regularly.
- Do not leave any meal (hot, cold or frozen) at a client's home if no one is there to receive it. No exceptions!**
- Provide written food safety guidelines. Identify which foods should be eaten immediately and which may be saved for later. Provide directions for reheating foods.
- Monitor and assure safe temperature by bringing an extra meal on each delivery

route. Check and record the temperature of the hot and cold foods following the last delivery (See Appendix P).

Hot Home Delivered Meals

- Package hot foods at 165° F or higher to ensure that the temperature does not fall below 135° F during transport.**
- Serve, package, seal and place meals into insulated food carriers rapidly as possible. The most rapid heat loss in a home delivered meal occurs between packaging meals and loading them into carriers.
- Preheat transport carriers before packing. Fill carriers with boiling water or run them through a dishmachine before loading.
- Place a supplemental heat source in the bottom of the carrier in order to maintain safe food temperatures. Some sites use a “Temp-Tech Heatstone” which is heated in the oven and placed on the bottom of the carrier. Others use hot water bottles.
- Arrange delivery routes should be arranged so that meals are delivered as quickly as possible. **Delivery routes shall never exceed two hours from time of serving to time of delivery.**
- Serve foods that retain heat best for home delivered meals. Portion size, consistency and shape all influence the temperature retention of the food.

Cold Home Delivered Meals

- Maintain cold foods at 40° F or lower during transport.**
- Serve, package, seal and place cold foods into cooler or cold chests as soon as possible.
- Be sure that coolers or cold chests have tight fitting lids. Lids should be closed between deliveries.
- Use coolers which are only as large as necessary to pack cold food. Large coolers packed nearly full maintain temperature better than partially full chests or small coolers filled to capacity.
- Place ice packs on top of food in coolers or chests.

Frozen Home Delivered Meals

- Assess all clients receiving frozen meals to be sure they have the proper equipment (freezer, oven, microwave, refrigerator) and skills to store and re-heat meals.
- Instruct drivers and/or clients to put the meal in the freezer immediately.
- Provide clients with written instruction about proper storage and reheating of frozen meals.
- Portion, package, label and freeze meals for home delivery immediately.
- Spread newly packaged meals, without stacking, on freezer shelves to achieve

proper temperature as soon as possible.

- Maintain freezers at a temperature from 0° F to –10° F.
- Label in large print and identify the contents and date packaged.
- Maintain the temperature of frozen meals at 0° F during transport.
- Transport frozen meals in chest or cooler with tightly fitted lid. Place ice packs on top of frozen meals.

Thermometers

- Be sure that each facility has a stem probe thermometer to record food temperatures.**
- Keep thermometers and their storage cases clean. Wash, rinse, sanitize and air dry thermometers before and after each use to prevent cross contamination. If on the road, wipe thermometer with a paper towel or clean napkin then wipe with an alcohol swab.
- Calibrate thermometers regularly for accuracy. Fill a glass with ice and add tap water. Submerge the probe stem in the ice water for 30 seconds. Temperature should be 32° F. Correct by turning the adjusting calibrating nut.
- Do not use glass or mercury filled thermometers.
- Wait at least 15 seconds after inserting the thermometer probe into the food before recording the temperature.
- Insert the thermometer probe into the thickest part of the meat to take the temperature.
- Keep a thermometer in each refrigerator and freezer in a visible location.
- Record temperatures on a log every day (see Appendix L).
- Review the following questions if cold food temperatures are too warm or hot food temperatures too cold:

Home Delivered Meals:

- Is heat stone hot enough?
- Is cooler packed too tightly or too lightly?
- Are ice packs placed on top of cold foods?
- Was food adequately chilled prior to serving/packing?
- Is the length of delivery route too long?

Congregate site meals:

- Is food stored at proper temperature?
- Are foods held at proper temperature?
- Have temperatures of foods been checked?
- Have cold ingredients been chilled prior to preparation?
- Does serving line take too long?
- Is equipment functioning properly?

References:

¹ Resource Guide for the Consultant Dietitian, The American Dietetic Association, 1993.

² ServSafe Essentials, From section 9-4, 8-14, National Restaurant Association, 2004.

³ ServSafe Essentials, Section 9-5, National Restaurant Association, 2004.

^{4, 5} ServSafe Essentials, Section 9-8, 8-14, National Restaurant Association, 2004.

⁶ ServSafe Essentials, Section 8-16, National Restaurant Association, 2004.

⁷ ServSafe Essentials, Section 5-7, National Restaurant Association, 2004.

⁸ Adapted from “Home Delivered Meals Safety Recommendations”, Dorothy Diggins, New York State Office on Aging.

SANITATION: FACILITIES AND EQUIPMENT

It is important to understand the difference between cleaning and sanitizing.

Cleaning is the process of removing food and other types of soil from a surface such as a countertop or plate. *Sanitizing* is the process of reducing the number of microorganisms on that surface to safe levels. To be effective, cleaning and sanitizing must be a two step process. Surfaces must be cleaned and rinsed before being sanitized.

A. Cleaning²

- Keep everything in your operation clean.
- Wash, rinse, and sanitize all food contact surfaces:
 - After each use.
 - When you begin working with another type of food.
 - Any time you are interrupted during a task and the tools or items you have been working with may have been contaminated.
- Use cleaning agents to remove soil, food, rust or minerals and grease.
- Use a variety of cleaning agents: detergents, degreasers, acid cleaners or abrasive cleaners.
- Be sure that cleaning agents are stable, non corrosive and safe for employees to use. They can be ineffective or dangerous if misused.

Wiping Cloths and Sponges

If not handled properly, dish cloths and sponges may harbor large numbers of potentially harmful bacteria. Moist cloths or sponges used for wiping food spills should be stored in sanitizing solution between uses. Sponges can go through the dishwasher. There are anti-bacterial sponges and cloths available as well. Cloths must be washed and dried between uses. Keep cloths for wiping up spill separate from cloths used to wipe down tables and counters.

B. Rinsing

Rinsing is an important step to include before sanitizing. Rinse by immersion or spray hose with warm water at less than 100° F. Change rinse water frequently if dirty or cloudy.

C. Sanitizing³

Heat sanitizing and chemical sanitizing are the two methods which can be used to sanitize surfaces and equipment.

Heat Sanitizing

- The higher the heat, the shorter the time required to kill microorganisms.
- The most common way to heat sanitize tableware, utensils or equipment is to immerse or spray the items with hot water.
- High temperature dishmachines rely on hot water to clean and sanitize.
- The temperature of the final sanitizing rinse must be at least 180° F.
- There should be a built in thermometer on the dishmachine to measure the water temperature.
- Check rinse cycle temperatures daily.

Chemical Sanitizing⁴

Chemical sanitizing is done in two ways: by immersing the object in a sanitizing solution for at least one minute or by rinsing or spraying the object with a specific concentration of sanitizing solution. Sanitizing solutions most commonly used in food service industry include:

- Chlorine
 - One tablespoon of chlorine bleach per gallon water.
 - Can be corrosive to some metals.
 - Adversely affected by temperatures above 115° F.
 - Kills a wide range of microorganisms.
 - Least expensive.
- Quats (quaternary ammonium compounds)
 - Works in most temperature ranges.
 - Continues to work for a time after it has dried.
 - Does not kill all microorganisms.

Equipment which cannot be immersed should be cleaned with hot, soapy water and rinsed with a clean cloth; then sanitized by using a spray bottle with sanitizing solution or a clean cloth with sanitizing solution and left to air dry.

D. Facilities⁵

The facility should be clean, free from rodents and insects, and in good repair.

Dry Storage

- There must be good air circulation.
- Shelves, walls, floors should be clean and dust free.
- Bins should be covered and clean.

- The area should be free of exposed steam pipes or heating ducts that can cause the temperature of the storage area to be too hot.
- The area should be free of exposed water or sanitation pipes.
- Outside windows and doors must have screens, and outside walls should be free of cracks.

Hand-washing

Hand-washing sinks must be conveniently located so that employees can wash their hands frequently. Running hot and cold water, soap, disposable towels and waste container must be provided. (See hand-washing procedure on page __).



Walls, floors, ceilings

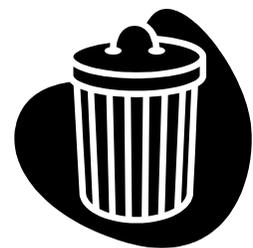
- Floors should be kept clean and in good repair.
- Sawdust or wood shavings should not be used on the floors.
- Cleaning, except emergency cleaning, should be done when the least amount of food is exposed (e.g. end of day).
- Floors should be swept, washed and sanitized on a regular basis.
- Spills should be cleaned up immediately.
- Walls in the kitchen and storage area should be cleaned and washed on a regular basis

Plumbing

Plumbing should convey adequate quantities of clean, safe water, and properly convey sewage so that it does not contaminate food, equipment or utensils or create any other unsanitary condition. The sewage system shall be operated such that sewage does not back up into the facility. A sink that gurgles or backs up when the toilet is flushed should be reported and fixed right away.

E. Garbage/Waste Disposal⁶

- Garbage can be a hazard to any establishment.
- Remove garbage from food preparation areas as quickly as possible.
- Garbage containers should be waterproof with a tight fitting lid.
- Garbage cans with a foot pedal are preferred at the handwashing sink.
- Use plastic liners in garbage containers to make removal easier.
- Garbage containers should be cleaned and sanitized frequently and thoroughly, both inside and out.



- Brushes used for washing garbage containers should be used for no other purpose.
- Garbage should never overflow the container.
- Remove kitchen garbage frequently.
- Store garbage outside in metal containers to prevent the creation of a nuisance or the breeding of insects or rodents.
- Outside garbage/dumpster should be removed from the premises weekly.
- Recycling is encouraged. Rinse and recycle aluminum cans, bottles and plastic containers; flatten cardboard, boxboard and other recyclable products.

F. Pest Control⁷



- Insects and rodents can damage food, supplies and facilities. They can also spread foodborne illness.
- Prevention is the best protection against infestation by insects and rodents.
- Regular cleaning and maintenance of the kitchen is critical to keeping insects and rodents away.
- To prevent insects and rodents from getting into your facility you must deny access, food and shelter.
- Check deliveries carefully and refuse to accept any order that has signs of infestation.
- Windows and doors that open to the outside should have tight fitting screens.
- Be sure pipes are covered or sealed through walls and ceilings
- Check and fill any cracks or crevices in floors and walls.
- Dispose of garbage quickly and correctly. Keep garbage containers clean and sanitized.
- Store recyclables in clean, pest-proof containers away from the building.
- Properly store all food and supplies as quickly as possible.
- Refrigerate foods such as powdered milk, walnuts and cocoa after opening as these foods attract insects.
- Use care if pest control sprays or traps are needed. Never spray in food preparation area or food contact surfaces. Never place a trap above or near food preparation area. Pesticides must be stored in their original container in locked cabinet away from food preparation area.

G. Dishwashing⁸

The purpose of dishwashing is to clean and sanitize silverware, dishes, utensils, pots and pans. Dishwashing can be done with an automatic dishwasher or manually with the three sink method.

Automatic Dishwasher

- These machines rely on hot water to clean and sanitize.
- Follow manufacturer directions for proper amount of detergent and drying agent.
- Check the machine for cleanliness and clean out at least once a day.
- Scrape, rinse or soak items before washing.
- Load racks correctly. Overloading will result in dirty dishes.
- Check and record temperature of commercial dishwashers- final rinse must be 180° F.
- Visually inspect dishes as they come out of machine.
- Air dry all items.



Manual Dishwashing

- There is a three step process to washing dishes manually--- wash, rinse and sanitize.
- Tableware, utensils and pots and pans should be scraped, rinsed and or soaked before washing.
- Sinks should be wide and deep enough to immerse dishes.
- Sinks should be clean and sanitized before using.
 1. Wash items in the first sink with hot soapy water. Wash temperature must be at least 110° F. Use a brush, cloth or nylon scrubber to loosen soil. Replace detergent solution when suds are gone or water is dirty.
 2. Immerse or spray rinse items in the second sink. Water should be at least 110° F. Replace water when it becomes cloudy or dirty.
 3. Immerse items in third sink in hot water or a chemical sanitizing solution. If hot water is used, it must be 180° F and items must be immersed for 30 seconds. This is usually not possible without a steam booster. If a chemical sanitizer is used, it must be mixed at the proper concentration. Mix 1 tablespoon of bleach per gallon of water. Mark or etch a line in the sink high enough that items can be immersed in water and figure out how many gallons of water it takes to reach that level. Determine amount of bleach to add. If using bleach, water should be between 75° F and 115° F. It is not effective if temperature is greater than 115° F. Chemical test kits are available to assure proper level of sanitizing solution.
- Air dry all items on a clean drain board.
- If there are only two sinks, follow step 1 and 2 then drain dishes. Drain, clean and sanitize the rinse sink and refill with sanitizing solution. Immerse dishes for at least one minute and air dry on drain board. A large stock pot could be used as the third sink- fill with sanitizing solution and proceed as above.



Handling Tableware

Clean spoons, knives and forks should only be touched by their handles. Clean cups, glasses, plates and bowls should be handled so that fingers do not make contact with the inside or lip-contacted area. Glassware and cups should be inverted unless scheduled to be used within two hours. Silverware must be covered and wrapped unless set out within two hours of service.

PERSONAL HYGIENE⁹

All staff and volunteers should maintain a high level of personal cleanliness. Good personal hygiene is key to the prevention of foodborne illness.

Food handlers can contaminate food when:

- They have been diagnosed with a foodborne illness.
- They show symptoms of gastrointestinal illness like vomiting or diarrhea.
- They have infected or open wounds or cuts.
- They live with or are exposed to a person who is ill.
- They touch anything that may contaminate their hands.

Simple acts or personal behaviors can contaminate food. These include things like:

- Nose picking.
- Rubbing an ear.
- Scratching the scalp.
- Touching a pimple or open sore.
- Running fingers through hair.
- Coughing or sneezing into the hand.
- Spitting in the workplace.
- Maintaining personal cleanliness
- Wearing clean clothes.
- Avoiding unsanitary habits and actions.
- Maintaining good health.
- Reporting illness.
- Washing hands after using the bathroom or smoking.
- Keeping hair tied back and restrained.
- Keeping nails short and unpainted and free from rings.

Effective Hand washing

Hand washing is the single most effective way to stop the spread of foodborne illness. To be effective, hands must be washed as follows:

1. Wet your hands with hot running water.
2. Apply soap.
3. Rub hands together for at least twenty seconds.
4. Clean under fingernails and between fingers.
5. Rinse hands thoroughly under running water.
6. Dry hands.



Approved hand sanitizers may be used, but should not replace hand washing. Hand sanitizers must completely dry before touching food or equipment. An example of a place where hand sanitizers might be useful would be for the meal delivery person on the road who has no access to a hand sink.

Gloves¹⁰

- Gloves may not be used in place of hand washing.
- Gloves should be used to avoid direct handling of food items
- Gloves used to handle food are for single use only and should never be washed and reused.
- Gloves should be changed:
 - As soon as they become soiled or torn.
 - Before beginning a different task.
 - At least every four hours during continual use.
 - After handling raw meat and before handling cooked or ready-to eat foods.



SAFETY IN THE KITCHEN¹¹

A kitchen contains many pieces of equipment and tools that can pose a safety hazard to people using them unless they are properly trained. Staff should be instructed on proper use of equipment they need to use. Some general guidelines for safety in the kitchen include:

1. Do not use extension cords.
2. Unplug all electrical equipment before cleaning.
3. Be sure guards and attachments are firmly attached.
4. Wipe up spills on floor right away to prevent slipping.
5. Store knives in knife rack.

6. Never put knives in sink.
7. Keep handles of pots and pans turned so they are not sticking out over range.
8. Do not let grease build up under hood.
9. Use dry pot holders.
10. Use a step stool to reach items.
11. Wear gloves when using bleach, oven cleaner, or abrasive cleaners.
12. Use proper lifting techniques: bend knees and use leg muscles to lift.
13. Do not pull out electric plugs with wet hands.

References

1. National Restaurant Association, ServSafe Essentials, 2004, section 11-18.
2. National Restaurant Association, ServSafe Essentials, 2004, section 11-18.
3. National Restaurant Association, ServSafe Essentials, 2004, section 11-18.
4. National Restaurant Association, ServSafe Essentials, 2004, section 11-19.
5. National Restaurant Association, ServSafe Essentials, 2004, section 11-5.
6. National Restaurant Association, ServSafe Essentials, 2004, section 11-16.
7. National Restaurant Association, ServSafe Essentials, 2004, section 11-31.
8. National Restaurant Association, ServSafe Essentials, 2004, section 11-20.
9. National Restaurant Association, ServSafe Essentials, 2004, section 4-4.
10. National Restaurant Association, ServSafe Essentials, 2004, section 4-9
11. The American Dietetic Association, Resource Guide for the Consultant Dietitian.