

## More Information on the Nutrient Analysis

Using the nutrient analysis, you can see at a glance what an individual serving of each recipe provides in terms of the following 12 nutrients:

Calories  
Protein  
Carbohydrate  
Total Fat  
Saturated Fat  
Cholesterol  
Vitamin A  
Vitamin C  
Iron  
Calcium  
Sodium  
Dietary Fiber

**This information can help you plan balanced, nutritious meals. For example, if you decide to serve Stir-Fry Chicken (D-18):**

- You may wish to select an item higher in iron to serve as a second choice since one serving of the Stir-Fry contains only 1.59 mg of iron.
- And, since the vitamin A content of the Stir-Fry Chicken (D-18) is high, you may decide to offer a fruit dish that is high in vitamin C for dessert.

**The nutrient analysis was done by computer, using:**

- A USDA-approved nutrient analysis software program
- The National Nutrient Database for Child Nutrition Programs, Version 8
- The USDA's National Nutrient Database for Standard Reference, Release 16

**Here is some additional information on the nutrient analysis that may be helpful as you work with the recipes:**

- Each recipe was analyzed for its nutritive value using **primary ingredients only**. Alternate and optional ingredients were not included.
- The type and quantity of each primary ingredient was entered into the nutrient analysis software program based on the **market form** or purchase state given in the recipe — for example, fresh, frozen, or canned.
- Adjustments for yield, nutrient retention, and moisture/fat changes were also calculated using the *yield factor method*. As a result, the final nutrient analysis of the recipe reflects the final “cooked or prepared” product.

**Yield Factor Method:**

To illustrate this process, let us look at some of the steps involved in doing the nutrient analysis using the yield factor method for the Stir-Fry Chicken (D-18) recipe, using carrots as an example. The yield factor method uses the nutrient profile of food “as consumed” and the yield from the *Food Buying Guide for Child Nutrition Programs*.

The recipe calls for “fresh carrots” as a primary ingredient but the carrots are consumed in the cooked form. The food code selected from the USDA-approved nutrient analysis software program — and entered into the computer — was “Carrots, cooked.”

The quantity of “cooked carrots” was entered based on the yield of cooked carrots from the amount of “fresh carrots” based on the *Food Buying Guide*.

# Tips on Modifying and Standardizing Recipes

Fat can be reduced in many recipes without losing flavor.

**As you work with these recipes, you will find that many have reduced levels of fat compared to the traditional version of the recipe. This is one important way the recipes are consistent with the *Dietary Guidelines*. The recipes successfully minimize fat without losing flavor because of careful attention given to both:**

- Ingredients, and
- Cooking techniques.

**In developing and testing the recipes, USDA made sure that many ingredients were purchased in a low-fat form, provided the overall quality of the product was not affected. For example:**

- All raw meat ingredients were specified to be low-fat. The ground beef, for instance, had no more than 20 percent fat. Where possible, it was cooked prior to adding it to the product so the fat could be drained.
- Chicken was either purchased skinless or the skin was removed prior to cooking.
- Mayonnaise and dairy products, such as milk, yogurt, and cheese, were purchased in the low-fat form provided this did not lessen the final quality.

**In addition, main entrees were prepared with a minimal amount of fat. For example:**

- No products were fried.
- All sautéed items were prepared with a small amount of oil.

**Baked goods were also specially prepared. For example:**

- The amount of margarine or butter was reduced by substituting low-fat yogurt and applesauce for a percentage of the fat.
- Whole eggs were replaced with egg whites.
- Baking pans were either ungreased or lightly sprayed with pan release spray.

You can use these same techniques to reduce fat without losing flavor in the recipes you already have.

**Here are some ways to keep *trans* fat low:**

- Choose margarine that has little or no *trans* fat.
- See the “Ingredient Substitutions” table on page 48 for ideas to replace fat.

**Some tips on modifying and standardizing recipes:**

**Any** recipe can be modified to reflect new tastes or changing needs. The recipes in this collection may give you ideas for modifying the recipes you are already using — for example, by adding or substituting new

ingredients or changing your cooking techniques.

As you make changes, it is important to modify first, then standardize.

**Standardized recipes have many advantages:**

They have been tried, adapted, and retried several times for use by a given foodservice operation and have been found to produce the same good results and yield every time when the exact procedures are used with the same type of equipment and the same quantity and quality of ingredients.

**Using a standardized recipe ensures that:**

- The same amount of product is produced each time.
- The same portion size is provided each time.

**Menu planning can be more consistent because:**

- There is a predictable yield.
- Costs are easier to control.
- Inventory is easier to control.

**In addition, when the same good results can be produced time after time:**

- Your foodservice preparers have more confidence in what they are doing and need less supervision, and

# Tips on Modifying and Standardizing Recipes

continued

- Food preparers can be sure the nutrient analysis of a recipe will be accurate as long as ingredients and preparation methods remain the same.

**When you decide to modify a USDA-standardized recipe, start by making 25 portions. In addition:**

- Change **only one ingredient** at a time. Keep other ingredients the same as in the original recipe.
- Record clear descriptions of foods substituted in exact amounts.
- If increasing or decreasing an ingredient, do so in increments of  $\frac{1}{4}$  to  $\frac{1}{2}$  of the amount called for in the original recipe.
- Follow preparation instructions closely and record any changes you may make.

- Do not make further changes or a larger size recipe until the first modification has produced a high-quality product.

**Once you have successfully prepared the smaller portions of a recipe you are modifying:**

- Set up taste panels using the children in your care to evaluate the product for appearance, consistency, texture, flavor, and overall acceptability.
- Reproduce at 25 and 50 servings before increasing or decreasing the recipe to the number needed for your meal service.
- Your foodservice preparers will then understand how and why recipes have been modified.



**It is important to also:**

- Weigh the total volume of recipes at 25 and 50 servings and record the weight.
- Weigh each serving and record the weight.

The weight of the total recipe and the weight of each serving are important for nutrient analysis.

For more information about standardizing recipes:

See *Measuring Success for Standardized Recipes* available from the National Food Service Management Institute. The complete manual is available online at [www.nfsmi.org](http://www.nfsmi.org). Type in Measuring Success in the search box at the top of the page. Or contact the NFSMI at:

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The University of Mississippi  
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[www.nfsmi.org](http://www.nfsmi.org)

# Converting Common Measures, Common Weights, and Metric Equivalents

The tables on pages 35 and 36 will help you convert parts of tablespoons, cups, quarts, gallons, and pounds to accurate measures, weights, or metric units.

Use the Volume Measures of Equivalency table to change teaspoons to tablespoons, tablespoons to cups, cups to quarts, quarts to gallons, or any combination.

Use the Common Weights Table to change ounces to parts of pounds, or parts of pounds to ounces. The following examples show how this works.

## **Example 1: Common Measures**

Using the “Volume Measures of Equivalency” table on page 36, determine the number of cups in  $\frac{1}{8}$  gallon, using these steps:

1. Look down the gallon column to  $\frac{1}{8}$  gal.
2. Next, move across the table to the cups column. The table shows that:  
 $\frac{1}{8}$  gal = 2 cups

These steps can be followed in reverse order to find, for example, the part of a gallon which equals 2 cups.

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## **Example 2: Common Weights**

Using the “Common Weights (Ounces to Pounds)” table on page 35, change ounces to parts of pounds or parts of pounds to ounces.

1. To determine what part of a pound 8 ounces is, look down the table to 8 oz.
2. Note that the table shows that 8 oz =  $\frac{1}{2}$  lb.

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## **Example 3: Metric Weights**

Using the “Common Weights to Metric Weights” table on page 35, change ounces to grams.

1. To determine how many ounces are equivalent to 100 grams, look down the table to 1 oz.
2. Note that the table shows that 1 oz = 28.35 grams.
3. Divide 100 grams by 28.35 grams/ounce.  
 $100 \text{ g} \div 28.35 \text{ g/oz} = 3.53 \text{ oz.}$

# Converting Common Measures, Common Weights, and Metric Equivalents continued

## Fractions To Decimal Equivalents

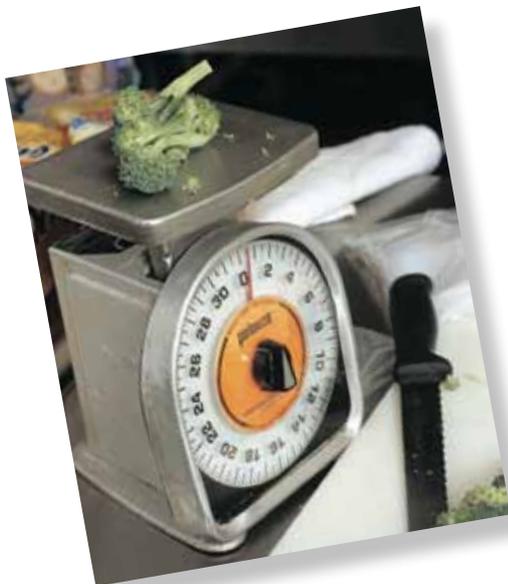
Fraction	to	Decimal
$\frac{1}{16}$	=	0.0625
$\frac{1}{8}$	=	0.125
$\frac{1}{4}$	=	0.25
$\frac{1}{3}$	=	0.333
$\frac{3}{8}$	=	0.375
$\frac{1}{2}$	=	0.50
$\frac{5}{8}$	=	0.625
$\frac{2}{3}$	=	0.666
$\frac{3}{4}$	=	0.75
$\frac{7}{8}$	=	0.875
$\frac{8}{8}$	=	1.0

## Common Weights (Ounces to Pounds)

Ounces (oz)	to	Pounds (lb)
16 oz	=	1 lb
14 oz	=	$\frac{7}{8}$ lb
12 oz	=	$\frac{3}{4}$ lb
10 $\frac{2}{3}$ oz	=	$\frac{2}{3}$ lb
10 oz	=	$\frac{5}{8}$ lb
8 oz	=	$\frac{1}{2}$ lb
6 oz	=	$\frac{3}{8}$ lb
5 $\frac{1}{3}$ oz	=	$\frac{1}{3}$ lb
4 oz	=	$\frac{1}{4}$ lb
2 oz	=	$\frac{1}{8}$ lb
1 oz	=	$\frac{1}{16}$ lb

## Common Weights To Metric Weights

Common Weight	to	Metric Equivalent
2.2 lb	=	1 kilogram (kg)
2 lb	=	907 grams (g)
1 lb	=	453.6 g
8 oz	=	226.8 g
4 oz	=	113.4 g
1 oz	=	28.35 g
$\frac{3}{4}$ oz	=	21 g
$\frac{1}{2}$ oz	=	14 g
$\frac{1}{4}$ oz	=	7 g



## Common Volume To Metric Volume

Common Volume	to	Metric Equivalent
1.05 qt	=	1 liter (l)
1 quart	=	946 milliliters (ml)
1 cup	=	237 ml
$\frac{1}{2}$ cup	=	118 ml
$\frac{1}{4}$ cup	=	59 ml

# Converting Common Measures, Common Weights, and Metric Equivalents continued

## Volume Measures of Equivalency

Teaspoons tsp		Tablespoons Tbsp		Cups c		Quarts qt		Gallons gal		Fluid Ounce fl oz
3/4 tsp	=	1/4 Tbsp	=	1/64 c	=	1/256 qt	=	1/1024 gal	=	1/8 fl oz
<b>1 tsp</b>	=	1/3 Tbsp	=	1/48 c	=	1/192 qt	=	1/768 gal	=	1/6 fl oz
1-1/8 tsp	=	3/8 Tbsp	=	3/128 c	=	3/512 qt	=	3/2048 gal	=	3/16 fl oz
1-1/2 tsp	=	1/2 Tbsp	=	1/32 c	=	1/128 qt	=	1/512 gal	=	1/4 fl oz
1-7/8 tsp	=	5/8 Tbsp	=	5/128 c	=	5/512 qt	=	5/2048 gal	=	5/16 fl oz
2 tsp	=	2/3 Tbsp	=	1/24 c	=	1/96 qt	=	1/384 gal	=	1/3 fl oz
2-1/4 tsp	=	3/4 Tbsp	=	3/64 c	=	3/256 qt	=	3/1024 gal	=	3/8 fl oz
2-1/2 tsp	=	7/8 Tbsp	=	7/128 c	=	7/512 qt	=	7/2048 gal	=	7/16 fl oz
3 tsp	=	<b>1 Tbsp</b>	=	1/16 c	=	1/64 qt	=	1/256 gal	=	1/2 fl oz
6 tsp	=	2 Tbsp	=	1/8 c	=	1/32 qt	=	1/128 gal	=	1 fl oz
12 tsp	=	4 Tbsp	=	1/4 c	=	1/16 qt	=	1/64 gal	=	2 fl oz
16 tsp	=	5-1/3 Tbsp	=	1/3 c	=	1/12 qt	=	1/48 gal	=	2-2/3 fl oz
18 tsp	=	6 Tbsp	=	3/8 c	=	3/32 qt	=	3/128 gal	=	3 fl oz
24 tsp	=	8 Tbsp	=	1/2 c	=	1/8 qt	=	1/32 gal	=	4 fl oz
30 tsp	=	10 Tbsp	=	5/8 c	=	5/32 qt	=	5/128 gal	=	5 fl oz
32 tsp	=	10-2/3 Tbsp	=	2/3 c	=	1/6 qt	=	1/24 gal	=	5-1/3 fl oz
36 tsp	=	12 Tbsp	=	3/4 c	=	3/16 qt	=	3/64 gal	=	6 fl oz
42 tsp	=	14 Tbsp	=	7/8 c	=	7/32 qt	=	7/128 gal	=	7 fl oz
48 tsp	=	16 Tbsp	=	<b>1 c</b>	=	1/4 qt	=	1/16 gal	=	8 fl oz
64 tsp	=	21-1/3 Tbsp	=	1-1/3 c	=	1/3 qt	=	1/12 gal	=	10-2/3 fl oz
72 tsp	=	24 Tbsp	=	1-1/2 c	=	3/8 qt	=	3/32 gal	=	12 fl oz
96 tsp	=	32 Tbsp	=	2 c	=	1/2 qt	=	1/8 gal	=	16 fl oz
120 tsp	=	40 Tbsp	=	2-1/2 c	=	5/8 qt	=	5/32 gal	=	20 fl oz
128 tsp	=	42-2/3 Tbsp	=	2-2/3 c	=	2/3 qt	=	1/6 gal	=	21-1/3 fl oz
144 tsp	=	48 Tbsp	=	3 c	=	3/4 qt	=	3/16 gal	=	24 fl oz
168 tsp	=	56 Tbsp	=	3-1/2 c	=	7/8 qt	=	7/32 gal	=	28 fl oz
192 tsp	=	64 Tbsp	=	4 c	=	<b>1 qt</b>	=	1/4 gal	=	32 fl oz
256 tsp	=	85-1/3 Tbsp	=	5-1/3 c	=	1-1/3 qt	=	1/3 gal	=	42-2/3 fl oz
288 tsp	=	96 Tbsp	=	6 c	=	1-1/2 qt	=	3/8 gal	=	48 fl oz
384 tsp	=	128 Tbsp	=	8 c	=	2 qt	=	1/2 gal	=	64 fl oz
480 tsp	=	160 Tbsp	=	10 c	=	2-1/2 qt	=	5/8 gal	=	80 fl oz
512 tsp	=	170-2/3 Tbsp	=	10-2/3 c	=	2-2/3 qt	=	2/3 gal	=	85-1/3 fl oz
576 tsp	=	192 Tbsp	=	12 c	=	3 qt	=	3/4 gal	=	96 fl oz
672 tsp	=	224 Tbsp	=	14 c	=	3-1/2 qt	=	7/8 gal	=	112 fl oz
768 tsp	=	256 Tbsp	=	16 c	=	4 qt	=	<b>1 gal</b>	=	128 fl oz

# Basic Cuts and Shapes

**Small dice:**

$\frac{1}{4}$  inch cube



**Medium dice:**

$\frac{1}{2}$  inch cube



**Large dice:**

$\frac{3}{4}$  inch cube



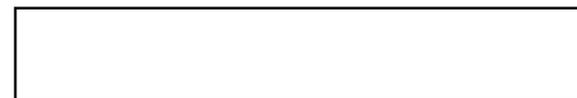
**Julienne:**

$\frac{1}{4}$  inch square by 1 to 2 inches long



**French fry:**

$\frac{1}{4}$  to  $\frac{1}{2}$  inch by 3 to 4 inches and longer



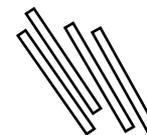
**Mince:**

To chop into very fine pieces



**Shred:**

To cut into thin strips by using a grater or chef's knife



**Chop:**

To cut into pieces of roughly the same size



# Decimal Equivalents for Fractions (of 1 Pound, 1 Cup, or 1 Gallon)

Here is a way to convert between ounces and pounds, tablespoons and cups, and cups and gallons.

decimal equivalents are part of 1 cup. If the units are cups, the decimal equivalents are part of 1 gallon.

same horizontal line to the column headed “+ 1/2 unit,” which shows that 10 1/2 ounces is equal to 0.66 pound.

To use the table, read whole units at the left side and the fraction or part of the unit at the top of the table. If the units are ounces, the decimal equivalents in the table are parts of 1 pound. If the units are tablespoons, the

**Examples:**  
**Ounces to pounds:** To convert 10 1/2 ounces to the corresponding decimal equivalent of a pound, find 10 in the first column on the left. Next, follow right on the

**Pounds to ounces:** To convert 0.53 pound to ounces, find 0.53 in the body of the table. Follow left on the same horizontal line to the whole number, i.e., 8. Next, read the fraction of an ounce from the top number of the column in which 0.53 was found, i.e., 1/2. Thus, 0.53 pound equals 8 1/2 ounces.

**Whole** units are on the left. The fraction or part of the unit is to the right.

If the whole units are:      the decimal equivalents are part of:  
 ounces ..... 1 pound  
 tablespoons ..... 1 cup  
 cups ..... 1 gallon

FRACTION OR PART OF THE UNIT

NUMBER OF UNITS	Unit	+ 1/4 of unit	+ 1/3 of unit	+ 1/2 of unit	+ 2/3 of unit	+ 3/4 of unit
0	-----	0.02	0.02	0.03	0.04	0.05
1	0.06	.08	.08	.09	.10	.11
2	.12	.14	.15	.16	.17	.17
3	.19	.20	.21	.22	.23	.23
4	.25	.27	.27	.28	.29	.30
5	.31	.33	.33	.34	.35	.36
6	.38	.39	.40	.41	.42	.42
7	.44	.45	.46	.47	.48	.48
8	.50	.52	.52	.53	.54	.55
9	.56	.58	.58	.59	.60	.61
10	.62	.64	.65	.66	.67	.67
11	.69	.70	.71	.72	.73	.73
12	.75	.77	.77	.78	.79	.80
13	.81	.83	.83	.84	.85	.86
14	.88	.89	.90	.91	.92	.92
15	.94	.95	.96	.97	.98	.98
16	1.00	1.02	1.02	1.03	1.04	1.05

# Keeping Food Safe To Eat

## Know and Follow Health Department Codes

Food handling, sanitation, and safety in child care operations are regulated by State, county, and city health department codes. Become familiar with the regulations to prevent foodborne illness.

## Use Safe Handling and Storage Techniques

- Be aware of the condition in which perishable foods are purchased and delivered. Inspect foods to make sure frozen foods are frozen solid and refrigerated foods are at the appropriate temperatures.
- Improper temperature control before and after purchasing or delivery can shorten a food's shelf life.
- Date incoming food items. Rotate stock properly. Placing oldest food out front will encourage the use of foods on a "first-in, first-out" (FIFO) basis.
- Keep a daily log of temperature readings. Temperature logs should be maintained for cooking, cooling, holding, and reheating procedures and for refrigerators and freezers.

How quickly do bacteria grow? The following numbers will give you an idea.

## BACTERIA DOUBLE...

At this temperature:	In this amount of time:
Room	90 °F every 30 minutes
	70 °F every hour
	60 °F every 2 hours
	50 °F every 3 hours
Refrigerator	40 °F every 6 hours
	32 °F every 20 hours
Freezing	28 °F every 60 hours

The four core messages of Clean, Separate, Cook, and Chill will help you keep foods safe to eat.



## CLEAN

### Practice good personal hygiene

- Adequately restrain hair by using a hairnet or hat.
- Wash hands frequently and properly, for at least 20 seconds with soap and hot water. Use a separate hand sink, not sinks used for food preparation or dishwashing. Always wash hands after touching hair or face.
- Use disposable towels when drying hands. Discard disposable towels after each use.
- Cough or sneeze into disposable tissues ONLY, and wash hands afterwards. If you sneeze on food or food production areas, discard the food and clean and sanitize the food production area.
- Persons with colds or other communicable diseases should **not** be permitted to work in food preparation areas.

# Keeping Food Safe To Eat

continued

- All superficial cuts should be covered with a bandage and a disposable glove.
- Any person with an infected cut or skin infection should **not** be permitted to work with food.
- Use disposable gloves properly. Wash hands before putting on gloves and avoid touching skin, carts, refrigerator, freezer, or oven doors or any unclean surfaces. Throw the gloves away after using or touching anything other than food.

## Keep equipment and facilities clean and sanitized

- Keep all equipment such as cutting boards, can openers, grinders, slicers, and work surfaces clean and sanitized. Sanitize equipment and work surfaces between use with raw and cooked foods. Check with local health department codes for a list of sanitizing agents.
- Use plastic cutting boards. Purchase an adequate number of cutting boards to prevent cross-contamination during food production.

- Wash and sanitize cutting boards in a dishwasher whenever possible. Air dry.
- Use a “three-compartment sink” (described below) to manually wash and sanitize dishes, pots, pans, and utensils.

Commercial sanitizers can be used instead of bleach. Test the chemical sanitizer concentration by using an appropriate test

kit. Check local health department codes for a list of sanitizing agents.

- When using a mechanical dishwasher, follow manufacturer’s directions for proper wash and rinse temperatures.
- *Air drying is recommended:* drying with a towel swabs contaminants over the surface.

## WASH AND SANITIZE WITH THREE SINKS

Scrape and pre-rinse items before placing in the three-compartment sink.

Use a three-compartment sink to wash and sanitize dishes, pots, pans, and utensils:

SINK 1: **WASH** with detergent in water that is 110 °F or above, or the temperature specified by the detergent manufacturer.

SINK 2: **RINSE** in *clean* water.

SINK 3: **SANITIZE** with a commercial sanitizing solution mixed at a concentration specified on the manufacturer’s label or for 1 minute in a 120 °F solution of appropriate concentration of chlorine bleach (1 tablespoon unscented bleach per gallon of water). Or sanitize by immersing in hot water at or above 171 °F for 30 seconds.

# Keeping Food Safe To Eat

continued

## Wash Fresh Fruits and Vegetables

- Wash your hands properly before preparing fresh fruits and vegetables.
- Wash all fresh fruits and vegetables thoroughly with cold running water.
- Since many fresh fruits and vegetables are served without being cooked, thorough cleaning is critical in preventing foodborne illness.
- For more information on purchasing, preparing, and storing fruits and vegetables, see the *Food Buying Guide for Child Nutrition Programs* at [teamnutrition.usda.gov/Resources/foodbuyingguide.html](http://teamnutrition.usda.gov/Resources/foodbuyingguide.html), and *Fruits and Vegetables Galore: Helping Kids Eat More* at [www.fns.usda.gov/tn/Resources/fv\\_galore.html](http://www.fns.usda.gov/tn/Resources/fv_galore.html).



## SEPARATE

### Avoid cross-contamination

- Use appropriate utensils to pick up and handle food.
- Never touch ready-to-eat foods with your bare hands.
- If using hands, wear disposable plastic gloves and do not touch anything unclean with the gloves. Throw the gloves away after using or touching anything other than food.
- As a food safety precaution, you may want to use two sets of cutting boards: one for

meats, and one for vegetables and fruits. Buying plastic cutting boards in different colors will help to keep them straight.

- Prevent juices from raw meat, poultry, or seafood from dripping on ready-to-eat foods, such as salad greens, either in the refrigerator or during preparation.
- Store raw foods that must be cooked prior to serving on the refrigerator's *bottom* shelf to prevent their juices from coming in contact with other foods.
- Store ready-to-eat foods *above* raw uncooked foods.



## **COOK**

### **Follow directions**

- Follow the directions on the food labels to ensure that proper cooking methods, time, and temperature are used. Also, refer to recipes for specific cooking instructions.

### **Cook thoroughly**

- Cook meat and poultry to the doneness temperature and time recommended by the label or recipe.
- To make sure that meat and poultry are cooked all the way through, use a food thermometer.
- Calibrate thermometers on a regular basis.

### **Cook completely**

- DO NOT partially cook foods. Partial cooking may encourage bacteria to grow before cooking is completed.
- Cook foods to minimal required internal temperatures for safety.

## **Minimum Internal Temperatures for Safety**

(Based on the 2005 FDA Food Code)

165 °F for 15 seconds	Poultry, stuffing, stuffed fish, pork or beef; pasta stuffed with eggs, pork, casseroles, reheating leftovers.
155 °F for 15 seconds	Ground meats, beef, lamb, veal, pork, pasteurized eggs held on steam table, cubed or Salisbury steaks, fish nuggets or sticks
145 °F for 15 seconds	Seafood, beef, pork, veal steaks, & roasts (medium rare), eggs cooked to order and served immediately.
135 °F for 15 seconds	Fresh, frozen, or canned fruits and vegetables that are going to be held on a steam table or in a hot box.

### **Keep hot foods above 135 °F**

- Bacteria can grow rapidly between 41 °F and 135 °F, which includes room temperature. This is known as the danger zone.
- Avoid holding foods in this temperature danger zone. If the serving of a hot food must be delayed, keep it at a holding temperature of 135 °F or above.

- In addition, limit the amount of holding time. Do not hold a food in the temperature danger zone for longer than 2 hours. After **2 hours** discard the food.

## **CHILL**

### **Refrigerator storage - keep cold foods at 41 °F or below**

- Check refrigerators and freezers frequently with an appliance thermometer. The refrigerator should register 41 °F or below. Keep a daily log of temperature readings.
- Cool hot food from 135 °F to 70 °F within 2 hours. If during the cooling process food temperatures do not reach 70 °F, immediate action is required or food must be discarded. Cool foods from 70 °F to 41 °F or below within 4 hours. DO NOT ALLOW ANY FOODS TO COOL AT ROOM TEMPERATURE.
- Refrigerate or freeze properly cooled leftovers in covered, 2-inch shallow containers.
- Divide large containers of soups, sauces, or vegetables so that the smaller portions will cool more quickly. Stirring throughout the chilling process will shorten the total cooling time. An ice paddle or ice bath will also help to rapidly cool foods.
- Leave airspace around containers or packages to allow circulation of cold air so that rapid cooling is ensured.

# Keeping Food Safe To Eat

continued

- Date foods so that the length of storage time is easily known. DO NOT taste old leftovers. *When in doubt, throw it out!*

## Freezer storage

- Freeze all food items that you don't plan to use within 2 days.
- While "freezer burn" will not cause illness, it does make certain foods tough and tasteless. To avoid "freezer burn" wrap freezer items in heavy freezer paper.
- Label and date freezer packages so that the oldest products can be used first, using the first-in, first-out (FIFO) method.
- Place new items to the rear of the freezer, and older items to the front.
- Be sure that thermometers are clearly visible, from the outside of the freezer, so that they can be read and recorded in a log daily.
- The freezer should read 0 °F or lower.
- It is safe to freeze foods in their supermarket wrappings, but, if storing for longer than 2 months, rewrap in foil, plastic, or freezer paper.
- Freezing *does not destroy bacteria*. Bacteria become active again once food is thawed.

## Thawing

- Thaw frozen meat, poultry, and fish in the refrigerator until pliable (easy to separate).
- DO NOT THAW FOODS AT ROOM TEMPERATURE.
- More information on proper thawing techniques can be found in the Supplemental Information section on the enclosed *USDA Recipes for Child Care* CD-ROM. Information can also be obtained from USDA's Meat and Poultry Hotline at 1-888-MPHotline (1-888-674-6854), or on the Food Safety and Inspection Service Web site at [www.fsis.usda.gov/](http://www.fsis.usda.gov/).

## Terms Used To Describe Oven Temperatures

	Between
<b>Very slow oven</b>	250 °F and 275 °F
<b>Slow oven</b>	300 °F and 325 °F
<b>Moderate oven</b>	350 °F and 375 °F
<b>Hot oven</b>	400 °F and 425 °F
<b>Very hot oven</b>	450 °F and 475 °F
<b>Extremely hot oven</b>	500 °F and 525 °F

Some things to keep in mind:

1. **Always preheat your oven.** At least 10 to 15 minutes prior to putting foods in the oven to cook or bake, turn the oven on and set it to the temperature specified in the recipe.
2. **Calibrate ovens regularly and check them often.** Check ovens frequently with oven thermometers to make sure preset temperatures are being reached. In the event of an unstable temperature, your local utility company will be able to recalibrate the oven temperature correctly for you.

## Common Cooking Abbreviations

Abbreviations	
<b>tsp</b>	teaspoon
<b>Tbsp</b>	tablespoon
<b>oz</b>	ounce
<b>fl oz</b>	fluid ounce
<b>lb or #</b>	pound
<b>c</b>	cup
<b>pt</b>	pint
<b>qt</b>	quart
<b>gal</b>	gallon
<b>wt</b>	weight
<b>No.</b>	number
<b>pkg</b>	package
<b>°F</b>	degree Fahrenheit
<b>°C</b>	degree Celsius
<b>x</b>	multiply
<b>÷</b>	divide

## Glossary of Terms for Processes and Methods

**Al dente** – an Italian cooking term meaning to cook until tender but still slightly firm. Translated literally from Italian “to the tooth” the term is usually used to describe cooking pasta, but it can also apply to vegetables.

**A.P.** – an abbreviation for “As Purchased” weight (in other words, before trimming or preparation).

**Bake** – to cook by dry heat, usually in an oven. A suitable cooking method for meat, bread, and many other foods.

**Barbecue** – to roast or broil a food that is usually brushed with a highly seasoned sauce.

**Baste** – to spoon liquids, sauce, or meat juice over a food to keep it moist during cooking and to add flavor.

**Batch cooking** – to cook smaller “batches” of food (rather than cooking one large amount and holding it throughout the meal). Also, cooking in smaller batches to meet the demand of children who eat at different times. Batch cooking is often done with foods (such as pasta, steamed spinach, and hamburgers) that will not retain fresh qualities if large quantities are made and held.

**Batter** – a thin mixture of flour and liquid that can be poured or dropped from a spoon, such as for pancakes. Also, “to batter” means to coat with batter.

**Beat** – to vigorously mix by hand or with mixing equipment to make the mixture light, fluffy, or smooth.

**Blend (combine)** – to mix two or more ingredients together.

**Boil** – to cook rapidly in water or liquid so that bubbles rise and break on the surface.

**Braise** – to cook slowly in a covered container with a small amount of liquid or water. A suitable cooking method for less tender meat cuts.

**Bread (dredge)** – to coat food with bread crumbs, cracker crumbs, or flour before cooking.

**Broil** – to cook by direct heat from a flame, electric unit, or glowing coals; a suitable cooking method for tender meat cuts.

**Brown** – to cook food, generally meat, until it is uniformly brown on all sides.

**Chill** – to cool a food with ice water or refrigeration.

**Chop** – to cut food into small equal pieces with a knife or chopping equipment.

**Coat (crumb)** – to cover with crumbs, flour, or sugar.

**Combine (blend)** – to mix two or more ingredients together.

**Convection oven** – a more rapid way of cooking and browning foods due to a strong circulation of hot air.

**Cream** – to work foods (such as shortening and sugar) together with a spoon or mixer, until soft and fluffy or until thoroughly blended.

**Crumb (coat)** – to cover with crumbs, flour, or sugar.

**Cut in** – to mix solid fat, such as butter or margarine, into dry ingredients with a cutting motion so that the fat remains in small pieces.

**Dice** – to cut into small cubes with a knife or chopping equipment.

**Dough** – a stiff batter, such as for bread or cookies.

**Dredge (bread)** – to coat food by dipping in crumbs, flour, cornmeal, sugar, or other coatings.

**Fold** – to combine several food ingredients into a mixture by gently turning the mixture, with a minimum of motions, until the ingredients are blended.

**Fry** – to cook food in a small amount of fat over heat in a skillet, pan, or griddle. This can also refer to “deep frying” or “French frying” in preheated fat or oil.

**Glaze** – to coat with a mixture to produce a glossy appearance on the food.

**Grill** – to cook uncovered over direct heat on a griddle or pan, removing fat as it accumulates.

## Glossary of Terms for Processes and Methods

continued

**Grind** – to chop or pulverize food, such as meat, into small particles by using a food chopping device or meat grinder.

**IQF** – an acronym for “Individually Quick Frozen.”

**Julienne** – to cut into thin, short strips.

**Knead** – to work dough, such as bread dough, by pressing, folding, and stretching to develop the dough structure.

**Leaven** – to cause food such as bread to rise and increase volume by adding a leavening agent such as yeast or baking powder.

**Marinate** – to soak a food, such as meat or vegetables, for a period of time in a sauce with herbs, spices, and condiments to enrich its flavor and/or to tenderize it.

**Melt** – to turn a solid food into a liquid by heating.

**Mince** – to finely chop food, such as garlic, into very small pieces.

**Mix** – to blend or combine two or more ingredients.

**Parboil** – to boil in water briefly as a preliminary cooking step. May be used with vegetables and meat.

**Pare** – to thinly trim off the outer covering or skin of a food, such as potatoes.

**Peel** – to strip off the outer covering of a food, such as oranges.

**Punch down** – to remove air bubbles from risen yeast dough by pushing the dough down with the fist.

**Reconstitute** – to bring back a concentrated food, such as a juice concentrate, to the original strength – or a dry food, such as nonfat dry milk, to the original state – by adding liquid.

**Rehydrate** – to add fluids back into a dried food such as dehydrated onions.

**Roast** – to cook by dry heat, uncovered, in an oven. A suitable cooking method for tender meat roasts.

**Sauté** – to cook in a small amount of fat at a very high heat until tender.

**Scald** – to heat a liquid, such as milk, to a temperature just below the boiling point. Tiny bubbles will appear around the edge of the pan.

**Score** – to make shallow cuts lengthwise and crosswise on the surface of a dough or meat.

**Shred** – to cut or grate foods into narrow strips.

**Simmer** – to cook in liquid that is kept just below the boiling point.

**Slice** – to cut a food with a knife or slicing equipment.

**Steam** – to cook food in steam generated by boiling water or in steam equipment.



**Stir** – to mix ingredients with a circular motion without beating.

**Stir-fry** – to quickly cook, in a small amount of oil on high heat, tossing and stirring lightly to preserve the shape of the food.

**Stock** – a natural soup or gravy base made from cooking vegetables, meat, fish, or poultry in water.

**Tender-crisp** – to cook vegetables until they are just beginning to become tender. Vegetables cooked this way remain bright in color.

**Whip** – to rapidly beat a food, such as eggs or cream, incorporating air to lighten the mixture and to increase its volume. Usually whipping is done with a whisk, fork, or mixing equipment.

# Weighing and Measuring Ingredients

Both weight and volume measures are listed for most ingredients in each recipe. (For ingredients in amounts less than 2 ounces, and for liquids, only volume measures are given.) Keep in mind that **weighing** is more accurate than measuring. The recipes were standardized using weight measurements unless only a volume measurement is provided. Whenever possible **weigh the ingredients**. If scales are not available, be sure to use the correct methods of **measuring** as suggested below:

## To Measure Liquid and Dry Ingredients

- Use standard measuring equipment and/or utensils.
- Make measurements level.
- Use the largest appropriate measure to save time and to reduce margin of error. (Example: use a 1-quart measure once rather than a 1-cup measure four times.) Exception: To measure flour, use no larger than a 1-quart measure. Otherwise, flour will pack. Note, however, as mentioned previously, that flour is best weighed rather than measured by volume.

## Measuring Procedures for Common Foods

### Flour (white or whole-grain), or meals:

- Spoon flour lightly into measure and level off with straight-edged knife or spatula.
- Do not shake or tap measure.
- Be sure flour does not pack. (Flour should be measured in nothing larger than a 1-quart measure.)

### Nonfat dry milk:

- Stir lightly. Spoon into measure and level off with a spatula.

### Dried whole eggs:

- Spoon lightly into measure and level off with a spatula.

### Sugar, granulated, white or brown:

- Spoon into measure and level off with a spatula. If lumpy, sift before measuring.

### Brown sugar, packed:

- If lumpy, roll out lumps with rolling pin. Pack regular brown sugar firmly into measure. The sugar should take the shape of the container when turned out.

### Baking powder, baking soda, and dry spices:

- Stir lightly. Fill measuring spoons to heaping. Level off with a spatula.

### Butter, margarine, and shortening:

- Press solid fat firmly into measure and level off with a spatula. When formed in measurable sticks or pounds, simply slice off the amount needed. For easy measuring:
  - 1 stick ( $\frac{1}{4}$  pound) measures about  $\frac{1}{2}$  cup.
  - 4 sticks (1 pound) or 1-pound block measure about 2 cups.



# Substitutions of Ingredients in Recipes

Be careful when substituting ingredients in recipes. *Ingredients that may be used in place of other ingredients in a recipe are listed below:*

## Ingredient Substitutions

In Place of	Use
1 teaspoon baking powder	$\frac{1}{4}$ teaspoon baking soda <i>plus</i> $\frac{5}{8}$ teaspoon cream of tartar
1 tablespoon double acting baking powder	$\frac{3}{4}$ teaspoon baking soda <i>plus</i> 1 $\frac{1}{2}$ cups buttermilk or sour milk (to replace 1 $\frac{1}{2}$ cups liquid)
1 package active dry yeast ( $\frac{1}{4}$ ounce)	2 $\frac{1}{4}$ teaspoons active dry yeast
1 ounce active dry yeast	$\frac{3}{4}$ ounce instant yeast (check manufacturer's instructions) <b>OR</b> 2 ounces compressed yeast
1 cup flour (for thickening)	$\frac{1}{2}$ cup cornstarch <b>OR</b> $\frac{2}{3}$ cup quick-cooking tapioca
1 cup cake flour	1 cup all-purpose flour <i>minus</i> 2 tablespoons
1 ounce or 1 square of chocolate	3 tablespoons cocoa <i>plus</i> 1 tablespoon fat
1 cup margarine	1 cup butter
1 cup shortening	1 to 1 $\frac{1}{8}$ cups butter and subtract $\frac{1}{2}$ teaspoon salt from the recipe
1 cup shortening or butter	$\frac{1}{2}$ cup shortening or margarine <i>plus</i> $\frac{1}{2}$ cup applesauce
1 cup fluid whole milk	$\frac{1}{3}$ cup instant nonfat dry milk <i>plus</i> 1 cup water <i>plus</i> 2 $\frac{1}{2}$ teaspoons margarine or butter
1 cup sour milk or buttermilk	1 cup milk <i>plus</i> 1 tablespoon lemon juice or vinegar
4 No. 2 $\frac{1}{2}$ cans tomato juice	1 No. 2 $\frac{1}{2}$ can tomato paste <i>plus</i> 3 No. 2 $\frac{1}{2}$ cans water
1 46-fluid-ounce can tomato juice	11 $\frac{1}{2}$ ounces tomato paste <i>plus</i> 34 $\frac{1}{2}$ fluid ounces water (1 qt $\frac{1}{3}$ cup)
8 oz tomato puree	4 ounces tomato paste <i>plus</i> 4 ounces water
1 cup lemon juice	$\frac{1}{4}$ cup lemon juice concentrate (3 to 1) <i>plus</i> $\frac{3}{4}$ cups water

# Can Sizes (Common Weights and Measures)

## Can Sizes (Common Weights and Measures)

Can Size <sup>1</sup>	Average Net Weight or Fluid Measure Per Can <sup>2</sup>	Average Volume Per Can in Cups	Cans Per Case	Approximate No. of Cans Equal to No. 10 Can <sup>3</sup>	Common Products Found in Can Size
<b>Institutional Size:</b>					
No. 10	6 lb (96 oz) to 7 lb 5 oz (117 oz)	12 cups to 13 <sup>2</sup> / <sub>3</sub> cups	6	1	Fruits and vegetables; some other foods
No. 5 Squat	4 lb (64 oz) to 4 <sup>1</sup> / <sub>4</sub> lb (68 oz)	8 cups	16-20	1 <sup>1</sup> / <sub>2</sub>	Tuna fish, sweet potatoes
No. 3 Cyl	51 oz (3 lb 3 oz) or 46 fl oz (1qt 1 <sup>7</sup> / <sub>8</sub> cups)	5 <sup>3</sup> / <sub>4</sub> cups	12	2.1	Condensed soups, some vegetables, meat and poultry products, fruit and vegetable juices
<b>Family Size:</b>					
No. 2 <sup>1</sup> / <sub>2</sub>	26 oz (1 lb 10 oz) to 30 oz (1 lb 14 oz)	3 <sup>1</sup> / <sub>2</sub> cups	24	3.7	Fruits, some vegetables
No. 2 Cyl	24 fl oz (3 cups)	3 cups	24	4	Juices, soups
No. 2	20 oz (1 lb 4 oz) or 18 fl oz (1 pt 2 fl oz)	2 <sup>1</sup> / <sub>2</sub> cups	24	5.3	Juices, ready-to-serve soups, some fruits
<b>Small Cans:</b>					
No. 300	14 oz to 16 oz (1 lb)	1 <sup>3</sup> / <sub>4</sub> cups	24	7.4	Some fruits and meat products
No. 2 (Vacuum)	12 oz	1 <sup>1</sup> / <sub>2</sub> cups	24	8 to 9	Vacuum-packed corn
No. 1 (Picnic)	10 <sup>1</sup> / <sub>2</sub> oz to 12 oz	1 <sup>1</sup> / <sub>4</sub> cups	48	10 to 11	Condensed soups, some fruits, vegetables, meats, and fish
8 oz	8 oz	1 cup	48 or 72	12	Ready-to-serve soups, fruits, and vegetables

<sup>1</sup> Can sizes are industry terms and do not necessarily appear on the label.

<sup>2</sup> The net weight on can or jar labels differs according to the density of the contents. For example: A No. 10 can of sauerkraut weighs 6 lb 3 oz; a No. 10 can of cranberry sauce weighs 7 lb 5 oz. Meats, fish, and shellfish are known and sold by weight of contents.

<sup>3</sup> Number of cans to equal a No. 10 can are approximate measures. More exact measures can be made by using exact volume or weight of contents.

# Instant Nonfat Dry Milk

Several recipes list nonfat dry milk (instant) as an ingredient. Here are some things to keep in mind:

- The weight and volume measures for instant nonfat dry milk are given in the recipes. For best results, dry milk should be weighed rather than measured.
- All of the recipes are standardized using instant nonfat dry milk.
- Where possible, to save preparation steps, dry milk is combined with other dry ingredients in the recipes and the required amount of water is added along with other liquid ingredients.

- If a recipe indicates “Instant nonfat dry milk, reconstituted,” use the ratios of dry milk and water to prepare the amount of reconstituted milk needed for the recipe.
- If desired, fluid milk may be used in place of reconstituted nonfat dry milk in the recipes.

## Directions:

- For small amounts: Mix instant nonfat dry milk and water in a jar with a tight lid or in a large pitcher. Shake or stir with a whisk to mix.

- For larger amounts: Mix nonfat dry milk and water in a mixer or blender or stir with a whisk to mix.
- If reconstituted milk will not be used immediately, *cover and refrigerate*.

## To Prepare Sour Milk:

To prepare 1 quart of sour milk, use 1/4 cup vinegar or lemon juice in place of 1/4 cup of the water in fluid skim milk recipes.

## Reconstituting Nonfat Dry Milk (Fluid Skim Milk = Nonfat Dry Milk + Water)

To Make This Amount of Fluid Skim Milk	Instant Nonfat Dry Milk		Use This Amount of Water at Room Temperature
	Use This Amount of Nonfat Dry Milk by Weight	OR Use This Amount of Nonfat Dry Milk by Measure	
1 cup	1 oz	1/3 cup	1 cup
2 cups	2 oz	2/3 cup	1 7/8 cups
1 quart	3 1/2 oz	1 1/3 cups	3 3/4 cups
2 quarts	7 oz	2 2/3 cups	1 qt 3 1/2 cups
3 quarts	10 1/2 oz	1 qt	2 3/4 qt
1 gallon	14 oz	1 qt 1 1/3 cups	3 3/4 qt
2 gallons	1 lb 12 oz	2 qt 2 2/3 cups	1 gal 3 1/2 qt
3 gallons	2 lb 10 oz	1 gal	2 gal 3 1/4 qt
4 gallons	3 lb 8 oz	1 gal 1 1/4 qt	3 3/4 gal
5 gallons	4 lb 6 oz	1 gal 2 3/4 qt	4 3/4 gal
6 gallons	5 lb 4 oz	2 gal	5 gal 2 1/2 qt

# Shell Eggs

## Purchasing and Storing Fresh Shell Eggs

- Purchase only eggs that are refrigerated, fresh, clean, unbroken, and odor-free with uncracked shells.
- Refrigerate promptly after purchasing or upon delivery to help maintain quality.
- Store away from foods with a strong odor such as onions, cabbage, and broccoli.
- Leave eggs in original shipping container and place in coldest part of refrigerator, not in the door.
- **Do not wash eggs**, it could remove the protective mineral oil coating put on at the plant after the eggs have been washed and sanitized using a special detergent.

## Using Fresh Shell Eggs

Eggs come in different grades and sizes. While the size and grade are marked on the carton or case, the weight is not. Here is more information you'll want to know:

- The grades — AA, A, and B — indicate the *quality* of eggs.
- Grades are based on both interior quality and the appearance and condition of the shell.

- Grades *do not* relate to size.
- Egg sizes are: extra-large, large, medium, and small. While some eggs in the carton may look slightly larger or smaller than the rest, it is the total weight of a dozen eggs that puts them in one of the size groups.
- The chart below shows the weight of different sizes of shell eggs and the number needed to fill 1 cup.

## Comparing Egg Sizes by Weight and Number Per Cup

Size (see note)	Minimum Net Weight of 1 Dozen Eggs (in shell)	Approximate Number per Cup (8 ½ ounces)		
		Whole Eggs	Yolks Only	Whites Only
Extra Large	27 oz (1 lb 11 oz)	4	12	6
*Large	24 oz (1 lb 8 oz)	5	14	7
Medium	21 oz (1 lb 5 oz)	6	16	8
Small	18 oz (1 lb 2 oz)	6	18	10

\*All shell eggs used in the recipes in this publication are *large* size.

# Shell Eggs

continued

- Some recipes specify weight or volume measure for eggs. To determine the correct number of fresh shell eggs to use, use the chart below. This shows the weight and volume measures for fresh *large* eggs (white and yolk) without shells.

## Handling and Cooking Eggs Safely

- Eggs that are not cleaned or that have been damaged should be rejected or discarded.
- **Do not use** cracked or soiled eggs. Eggs that are cracked or soiled may contain

harmful bacteria that can be spread by food handlers.

- Because eggs are an animal product, be sure to wash hands after handling all raw egg products, both in the shell and removed from the shell.
- Wash utensils, equipment, and work areas with hot, soapy water before and after contact with eggs.
- Do not keep eggs out of the refrigerator more than 2 hours.
- **Do not use** uncooked eggs in uncooked foods, including (but not limited to): milk drinks (such as eggnog or milkshakes); uncooked salad dressings; or uncooked puddings.

## Weight And Volume Measures for Large Fresh Eggs

Number of Large Eggs**	Weight	Measure
1	1 <sup>3</sup> / <sub>4</sub> oz	3 <sup>1</sup> / <sub>3</sub> tablespoons
2	3 <sup>1</sup> / <sub>2</sub> oz	<sup>3</sup> / <sub>8</sub> cup
3	5 <sup>1</sup> / <sub>3</sub> oz	<sup>5</sup> / <sub>8</sub> cup
6	10 <sup>3</sup> / <sub>4</sub> oz	1 <sup>1</sup> / <sub>4</sub> cups
11	1 lb 3 <sup>2</sup> / <sub>3</sub> oz	2 <sup>1</sup> / <sub>4</sub> cups
12	1 lb 5 <sup>1</sup> / <sub>2</sub> oz	2 <sup>1</sup> / <sub>2</sub> cups
13	1 lb 7 <sup>1</sup> / <sub>4</sub> oz	2 <sup>3</sup> / <sub>4</sub> cups
19	2 lb 2 oz	1 quart
25	2 lb 12 <sup>3</sup> / <sub>4</sub> oz	1 quart 1 <sup>1</sup> / <sub>4</sub> cups
39	4 lb 5 <sup>3</sup> / <sub>4</sub> oz	2 quarts <sup>1</sup> / <sub>4</sub> cup
50	5 lb 9 <sup>1</sup> / <sub>2</sub> oz	2 quarts 2 <sup>1</sup> / <sub>2</sub> cups

\*\* This shows the weight for fresh *large* eggs (white and yolk) without shells.

# Shell Eggs

continued

- Raw eggs and other ingredients, combined according to recipe directions, should be cooked immediately or refrigerated and cooked within 24 hours.
- Many cooking methods can be used to cook eggs safely including poaching, hard cooking, scrambling, frying, and baking. However, eggs must be cooked thoroughly until yolks are firm. Scrambled eggs should not be runny. Casseroles and other dishes containing eggs should be cooked to 160 °F. Use a food thermometer to be sure.
- Serve cooked eggs and dishes containing eggs immediately after cooking, or place in shallow containers for quick cooling and refrigerate at once for later use. Use within 3 to 4 days.
- For egg storage recommendations, see chart.

## Egg Storage

Product	Refrigerator	Freezer
Raw eggs in shell	3 to 5 weeks	Do not freeze
Raw egg whites	2 to 4 days	12 months
Raw egg yolks	2 to 4 days	Yolks do not freeze well
Hard-cooked eggs	1 week	Do not freeze
Casseroles made with eggs	3 to 4 days	After baking, 2 to 3 months



# Hard-Cooked Eggs

Hard-cooked eggs can be used in a variety of ways, including in hot main dishes, in chilled salads or sandwiches, or as snacks. Below are directions for cooking fresh (shell) eggs in two ways: in water and in the oven.

For more information on shell eggs, including size and grade, see page 51.

## To cook in water:

1. Place eggs (with shell) in a wire basket. Lower basket carefully into gently boiling water. Simmer just below boiling point for 15 minutes.

2. Remove pot from heat and cool eggs quickly under cold running water. (Rapid cooling in cold water stops the cooking process to make a more tender hard-cooked egg. It also prevents the unsightly formation of a darkened ring between the yolk and the white.)
3. Crack shells by rolling lightly. Peel, starting from large end of egg.
4. Cut in halves, or chop. Use immediately in hot main dishes or chill in refrigerator for later use in salads or sandwiches.

## To cook in the oven:

1. Break 25 eggs, one at a time, into oiled baking pans (for example, 12" x 20" x 2"). Add  $\frac{1}{2}$  cup water to each pan.
2. Place each pan of eggs in a pan of hot water; cover and bake at 350 °F (moderate oven) about 30 minutes until eggs are firm.
3. Chop into  $\frac{1}{2}$  inch squares. Use immediately in hot main dishes or chill in refrigerator for later use in salads or sandwiches.

# Cooking Dry Beans, Peas, and Lentils

Dry beans, peas, and lentils may be served as a vegetable or used in a main dish. One pound of dry beans yields 5 <sup>7</sup>/<sub>8</sub> cups to 7 cups cooked beans.

Canned beans may be substituted for cooked dry beans in any recipe. Some or all of the salt in the recipe should be omitted when canned beans are used in place of cooked dry beans.

## To prepare for cooking:

Sort beans, peas, or lentils and remove dirt and foreign matter.

Wash in cold water, if needed. Directions for soaking and cooking are given below.



## Soaking:

### Dry Beans

*Overnight method:* Add dry beans to cold water. Cover. Let stand in refrigerator overnight. Use immediately after soaking period. Longer periods for soaking beans are not recommended.

*Quick-soak method:* Pour dry beans into boiling water and boil for 2 minutes. Remove from heat and allow to soak for 1 hour.

### Split Peas

Dry split peas may be cooked without soaking.

### Lentils

Lentils may be cooked without soaking.

## Cooking:

1. Once dry beans or peas have been soaked, drain and discard the soaking water (this is to reduce the gas-causing sugars).
2. Add <sup>1</sup>/<sub>2</sub> teaspoon salt (optional) for every 1 pound of beans, peas, or lentils. Boil gently (with lid tilted) until tender. Use the cooking time in the table on page 56 as a guide. Add additional boiling water if beans become dry. Cook split peas in small batches — this will help them retain their shape and not be mashed.
3. Drain, if desired. Serve or use in recipes.

The amount of water and cooking time needed varies for dry beans, peas, and lentils. Refer to the table on page 56 or package directions for cooking information.

# Cooking Dry Beans, Peas, and Lentils

continued

This table tells you the approximate:

1. Volume of 1 pound of beans/ peas/ lentils in cups;
2. Amount of *boiling* water (in quarts) needed to cook each 1 pound; and
3. Amount of time (in hours) needed to cook.

Type of Dry Bean or Pea	No. of Cups of Dry Beans or Peas to = 1 lb	Quarts of Boiling Water for Each 1 lb of Dry Beans or Peas	Hours Needed To Cook Soaked Dry Beans or Peas
Blackeye peas	2 <sup>3</sup> / <sub>4</sub> cups	1 <sup>3</sup> / <sub>4</sub> qt	<sup>1</sup> / <sub>2</sub> hr
Garbanzos (chickpeas)	2 <sup>1</sup> / <sub>2</sub> cups	1 <sup>1</sup> / <sub>8</sub> qt	1 <sup>3</sup> / <sub>4</sub> hr
Great Northern	2 <sup>1</sup> / <sub>2</sub> cups	1 <sup>3</sup> / <sub>4</sub> qt	1 to 1 <sup>1</sup> / <sub>2</sub> hr
Kidney beans	2 <sup>1</sup> / <sub>2</sub> cups	1 <sup>3</sup> / <sub>4</sub> qt	2 hr
Lima beans, large	2 <sup>5</sup> / <sub>8</sub> cups	1 <sup>3</sup> / <sub>4</sub> qt	1 hr
Lima beans, small	2 <sup>3</sup> / <sub>8</sub> cups	1 <sup>3</sup> / <sub>4</sub> qt	1 hr
Pea beans, Navy beans	2 <sup>1</sup> / <sub>4</sub> cups	1 <sup>3</sup> / <sub>4</sub> qt	1 <sup>1</sup> / <sub>2</sub> to 2 hr
Peas, whole	2 <sup>1</sup> / <sub>3</sub> cups	1 <sup>1</sup> / <sub>2</sub> qt	1 hr
Pinto beans	2 <sup>3</sup> / <sub>8</sub> cups	1 <sup>3</sup> / <sub>4</sub> qt	2 hr
Soybeans	2 <sup>1</sup> / <sub>2</sub> cups	2 <sup>1</sup> / <sub>4</sub> qt	2 to 3 hr
Type of Dry Lentil or Pea	No. of Cups of Dry Lentils or Peas to = 1 lb	Quarts of Boiling Water for Each 1 lb of Dry Lentils or Peas	Hours Needed To Cook Dry Lentils or Peas Without Soaking
Lentils	2 <sup>3</sup> / <sub>8</sub> cups	1 <sup>3</sup> / <sub>4</sub> qt	<sup>1</sup> / <sub>2</sub> hr
Peas, split	2 <sup>1</sup> / <sub>4</sub> cups	1 <sup>1</sup> / <sub>4</sub> qt	<sup>1</sup> / <sub>3</sub> hr

# Using Master Mix for Baked Products

## What is Master Mix?

Master Mix (A-15) is a mixture of dry ingredients and shortening. It is blended in advance for use in baked products without yeast, such as quick breads and pancakes. Using Master Mix can save preparation time.

## How do you store Master Mix?

Since Master Mix stores well, prepare extra batches for later use. When deciding how many batches to prepare, consider storage space available, equipment capacity, and the frequency with which the baked items are prepared.

To store, place prepared Master Mix in a tightly covered container. Keep in a cool, dry, well-ventilated area. For longest shelf life, store in *refrigerator* and **use within 3 months**.

## Which recipes use the Master Mix?

Four child care recipes use Master Mix (A-15). They are:

- Cut Biscuits Using Master Mix (A-9B)
- Muffin Squares Using Master Mix (A-11B)
- Pancakes Using Master Mix (A-12A)
- Banana Bread Squares Using Master Mix (A-13A)

These recipes will produce a product that is similar to the basic recipe. However, by using Master Mix, you can save some preparation time.

## Master Mix

Grains/Breads

Grains/Breads

A-15

Ingredients	25 Servings		50 Servings		Directions
	Weight	Measure	Weight	Measure	
Enriched all-purpose flour	5 lb 4 oz	1 gal 3 ¼ cups	10 lb 8 oz	2 gal 1 ½ qt	1. Place flour, baking powder, salt, cream of tartar, and dry milk in a mixing bowl. Blend for 3 minutes on low speed.  2. Add shortening to dry ingredients and mix for 5 minutes on low speed, or until evenly distributed. Mixture will be crumbly.  3. Store in tightly covered container, in the refrigerator.  4. Use Master Mix in recipes for: Cut Biscuits (A-09B); Muffin Squares (A-11B); Pancakes (A-12A); and Banana Bread Squares (A-13A).
Baking powder	4 ¾ oz	¾ cup	9 ½ oz	1 ½ cups	
Salt		2 Tbsp	2 ½ oz	¼ cup	
Cream of tartar		1 Tbsp 1 ½ tsp		3 Tbsp	
Instant nonfat dry milk	6 oz	2 ½ cups	12 oz	1 qt 1 cup	
Shortening	1 lb 5 oz	3 cups 2 Tbsp	2 lb 10 oz	1 qt 2 ¼ cups	

### SERVING:

1 cup  
(See individual recipes that use Master Mix).

### YIELD:

**25 Servings:** 7 lb 6 oz  
**50 Servings:** 14 lb 12 oz

### VOLUME:

**25 Servings:** 1 gallon 2 ¼ quarts  
**50 Servings:** 3 gallons 2 cups

## How will you use Master Mix in a recipe?

To use Master Mix, weigh or measure the amount of mix specified in the recipe variation. *Do not pack or sift.* Measure mix lightly and level off with a spatula or the straight edge of a knife. Add remaining ingredients and bake according to recipe directions.

## How many servings of baked product will a 6-quart batch of Master Mix produce?

For convenience, the Master Mix recipe has been standardized in batches of 6 quarts. As noted above, this size batch can be prepared

in a 10-quart mixer. Below is an estimate of how many servings you will obtain from one 6-quart batch.

## One 6-quart batch of Master Mix will produce...

- 100 servings of... Cut Biscuits
- 150 servings of... Muffin Squares
- 133 servings of... Pancakes
- 150 servings of... Banana Bread Squares

# Pan Sizes and Capacities

The Pan Sizes and Capacities chart shows the approximate capacity in either volume or weight measure of common sizes of pans.

Measures given in the chart are approximate and may vary according to manufacturer's specifications and the type of food that will be put into the pan. Pans made by different companies may have slightly different total capacities. If used for transporting foods, the pans will have lids and might not be filled to the brim.

Use the chart as a guide to help estimate the number of pans needed to approximate the yield of a full pan. Keep in mind, when baking, to fill the pan only  $\frac{1}{2}$  to  $\frac{2}{3}$  full to allow room for rising.

## Pan\* Sizes and Capacities

Pan	Size (inches)	Approximate Capacity
Steamtable Pans	12" x 20" x 2"	8 qt (2 gal)
Half-Steamtable Pans	12" x 10" x 2"	4 qt (1 gal)
Cake Pans	26" x 18" x 2"	8 to 10 lb
Sheet Pans	26" x 18" x 1"	4 to 6 lb
Half-Sheet Pans	13" x 18" x 1"	2 to 3 lb
Quarter-Sheet Pans	13" x 9" x 1"	1 to 1 $\frac{1}{2}$ lb
Cake Pan	9" x 13" x 2"	1 to 1 $\frac{1}{2}$ lb
Bread Pan	5" x 6" x 4"	3 to 5 lb

\* The size of pans may vary according to manufacturer.

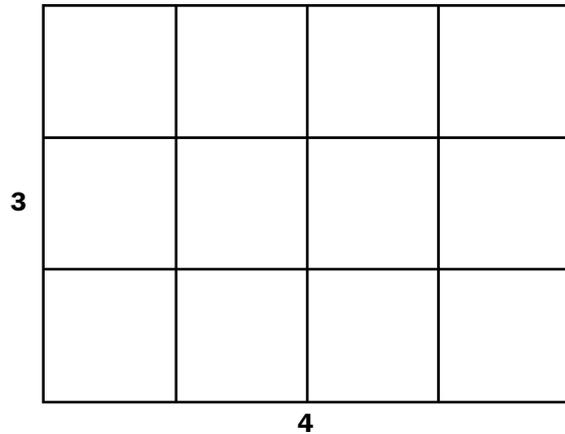
## Common Kitchen Pans To Use as Casseroles

When the Recipe Calls for:	Use:
4-cup baking dish	9" pie plate 8" x 1 $\frac{1}{4}$ " layer cake pan 7 $\frac{3}{8}$ " x 3 $\frac{5}{8}$ " x 2 $\frac{1}{4}$ " loaf pan
6-cup baking dish	8" or 9" x 1 $\frac{1}{2}$ " layer cake pan 10" pie plate 8 $\frac{1}{2}$ " x 3 $\frac{5}{8}$ " x 2 $\frac{5}{8}$ " loaf pan
8-cup baking dish	8" x 8" x 2" square pan 11" x 7" x 1 $\frac{1}{2}$ " baking pan 9" x 5" x 3" loaf pan
10-cup baking dish	9" x 9" x 2" square pan 11 $\frac{3}{4}$ " x 7 $\frac{1}{2}$ " x 1 $\frac{3}{4}$ " baking pan 15" x 10" x 1" jelly-roll pan
12-cup baking dish	13 $\frac{1}{2}$ " x 8 $\frac{1}{2}$ " x 2" glass baking dish 13" x 9" x 2" metal baking pan 14" x 10 $\frac{1}{2}$ " x 2 $\frac{1}{2}$ " roasting pan

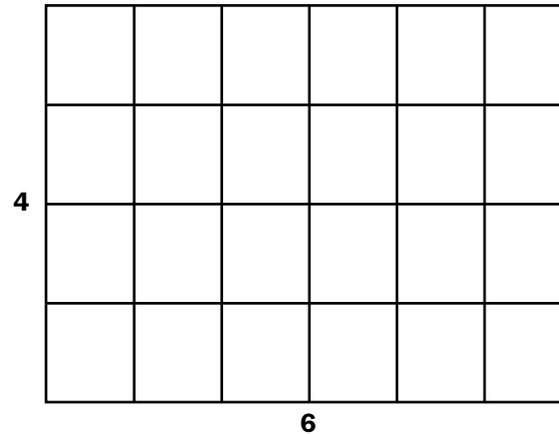
# Portioning Diagrams

## Cutting diagrams for portioning

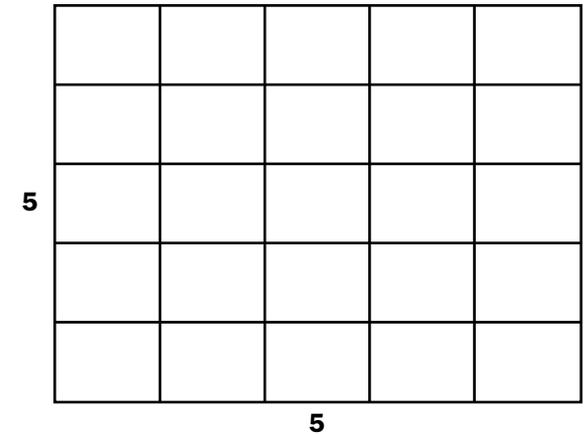
**For 12 servings cut 3 x 4**



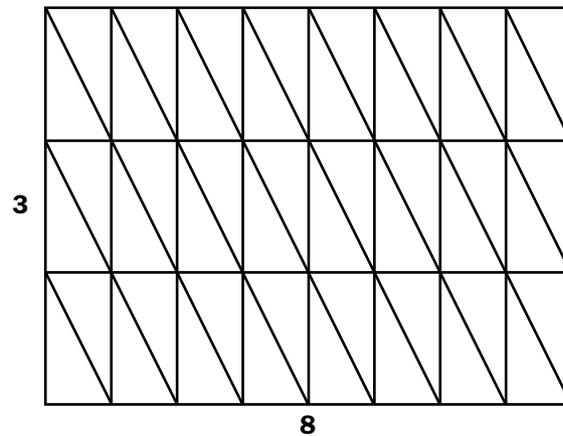
**For 24 servings cut 4 x 6**



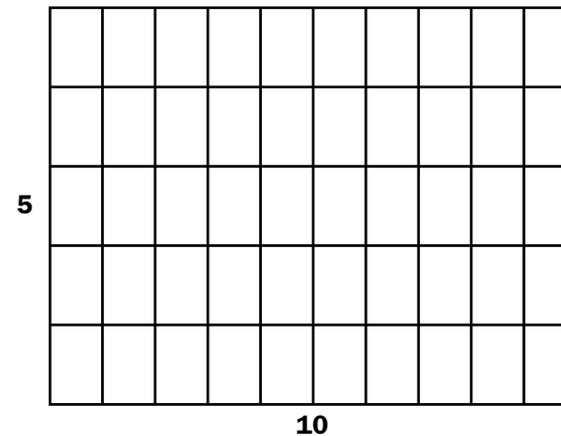
**For 25 servings cut 5 x 5**



**For 48 servings cut 3 x 8 then diagonally**



**For 50 servings cut 5 x 10**



# Portion Control

The recipes are standardized to yield a certain number of servings specified in the recipe. To obtain that number of servings, follow the specified serving size as closely as possible. Scoops, ladles, or spoons of standard sizes help in serving equal-sized portions.

## Ladles

Using ladles will help in obtaining equal-size servings of soups, sauces, creamed foods, and similar foods. Perforated ladles are available for accurate portioning of foods that need draining.

## Measuring Cups

A measuring cup can be used in place of a scoop (or disher) or measuring service spoon. Measuring cups are not as expensive to purchase.

## Scoop (or Disher) Number

The number of the scoop or disher indicates the number of **level** scoopfuls it takes to make 1 quart.

## Standardized Portioning Tools

Measure (cup, Tbsp, or tsp)		Ladle Size		Measuring Serving Spoons		Scoop (or Disher) Number *
1 cup	=	8 oz	=	8 oz	=	...
$\frac{3}{4}$ cup	=	6 oz	=	6 oz	=	...
$\frac{2}{3}$ cup	=	...	=	...	=	6
$\frac{1}{2}$ cup	=	4 oz	=	4 oz	=	8
$\frac{3}{8}$ cup	=	...	=	3 oz	=	10
$\frac{1}{3}$ cup	=	...	=	...	=	12
$\frac{1}{4}$ cup	=	2 oz	=	2 oz	=	16
3 $\frac{1}{3}$ Tbsp	=	...	=	...	=	20
2 $\frac{3}{4}$ Tbsp	=	...	=	...	=	24
2 Tbsp	=	...	=	...	=	30
1 $\frac{2}{3}$ tsp	=	...	=	...	=	40
3 $\frac{3}{4}$ tsp	=	...	=	...	=	50
3 $\frac{1}{4}$ tsp	=	...	=	...	=	60
2 $\frac{3}{4}$ tsp	=	...	=	...	=	70
2 tsp	=	...	=	...	=	100

\* measures for scoops and dishers are approximate.

# Portion Control

continued

## Measuring-Serving Spoons

Measuring-serving spoons are volume-standardized serving spoons identified for a specific volume measure. They are similar to a ladle, scoop, disher, or dipper in that they can be used to measure specific volumes of food but they are shaped like a serving spoon (solid or perforated.) Measuring-serving spoons are labeled in ounces (which are understood to be fluid ounces, not avoirdupois (weight) ounces).

## Serving Spoons

A serving spoon (solid or slotted) may be used instead of a scoop. Since these spoons are not identified by number, it is necessary to measure or weigh the quantity of food from the spoons used. This will help ensure that the proper portion size is served.



# Be Aware of Choking Hazards When Selecting and Serving Foods

Keep in mind that young children — especially ages 2 to 3 years — are at risk of choking on food. They remain at risk until they can chew and swallow better by about age 4.

*Always supervise children during meals and snacks.*

## **Foods that may cause choking include...**

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Hot dogs	Nuts and seeds	Raw carrots
Raisins	Chunks of meat	Peanut butter (spoonfuls)
Whole grapes	Marshmallows	Round or hard candy
Chips	Popcorn	Pretzels
Raw celery	Cherries with pits	Large pieces of fruit with skin

## **Some foods can be offered if you change the form. For example...**

- 1) Cut hot dogs lengthwise into thin strips.
- 2) Steam carrots or celery until slightly soft, then cut into sticks.
- 3) Cut grapes or cherries into small pieces.

# Finger Foods and Snack Ideas

## Finger Foods

Finger foods are foods cut into bite-size pieces that children can pick up with their fingers. Many fruits and vegetables — such as apple wedges, banana slices, cucumber sticks — are good as finger foods. So are bread and cereal items, such as bagel quarters and oat cereal rings; and meat/meat alternates, such as cubes of meat or cheese. Other finger foods are suggested below.

On pages 64-65 there are tips on preparing foods as finger foods.

### CAUTION:

- Young children — especially ages 2 to 3 years — are at risk of choking on food. They remain at risk until they can chew and swallow better by about age 4.
- Always supervise children during meals and snacks.
- See page 62 for a list of foods that may cause choking. Also listed are some foods that can be offered if you change the form.

## Suggested finger foods include:

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Apple wedges	Bagel quarters
Banana slices	Berries
Bread sticks	Broccoli florets
Cabbage wedges	Carrot sticks
Cauliflower florets	Cucumber sticks
Celery sticks	Cheese cubes
Cherry tomato halves	Cinnamon toast fingers
Dried apples	Dried cherries, pitted
Dried cranberries	Dried peaches, pitted
Dried pears	Dry cereal, such as oat rings
Fresh peach wedges	Fresh pear wedges
Fresh pineapple sticks	Graham cracker strips
Halved grapes	Halved meatballs
Hard-cooked egg halves	Grapefruit sections
Green pepper sticks	Green beans, whole
Jicama strips	Kohlrabi sticks
Meat cubes	Melon cubes
Nectarine wedges	Orange sections
Pizza wedges	Plum wedges
Pretzels, hard or soft	Prunes, pitted
Raisins	Rice cakes
String cheese	Tangerine sections
Tomato wedges	Trail mix
Turnip sticks	Zucchini sticks

## Preparing Finger Foods

Before proceeding with preparation, scrub fruits and vegetables thoroughly with a soft brush.

Here are some suggestions for preparing a variety of finger foods:

<b>Apple wedges</b>	Remove core. Slice into wedges about 1/2 inch thick. Serve peeled or unpeeled.
<b>Banana slices</b>	Peel bananas. Slice or serve as banana half, and teach the children how to peel the banana.
<b>Berries</b>	Select fruit with no soft decayed spots. Remove caps and stems.
<b>Cabbage wedges</b>	Steam or microwave until bright green. Slice into 1/2 inch wedges.
<b>Carrot sticks</b>	Scrape or peel. Cut off ends. Cut into sticks about 1/4 inch thick and 2 1/2 to 3 inches long.
<b>Cauliflower florets</b>	Break into single florets.
<b>Celery sticks</b>	Trim off root and blemishes. Cut into sticks about 1/4 inch thick and 2 1/2 to 3 inches long. Or, cut celery stalk into pieces 2 1/2 to 3 inches long.  Fill with peanut butter (thinned with mayonnaise, honey, or low-fat margarine) or cream cheese (thinned slightly with milk). Minced pimentos may be added to cream cheese for color or extra flavor.
<b>Cheese cubes</b>	Cut cheese (such as Cheddar, Edam, Gouda, Gruyere, Muenster, and Swiss) into 1-inch cubes.
<b>Fresh grapes</b>	May be served on the stem, snipped into small bunches, or removed from the stem. Halve the grapes to prevent choking in small children.
<b>Fresh peach wedges</b>	Select ripe peaches. Peel, or leave unpeeled, as desired. Remove pit and cut into 1/4 inch wedges.
<b>Fresh pear wedges</b>	Select ripe fruit. Remove core and soft places. Cut into 1/4 inch wedges.
<b>Fresh pineapple</b>	Peel and core pineapple. Cut into sticks 1/2 inch thick and 2 1/2 to 3 inches long.
<b>Grapefruit sections</b>	Peel and section. Remove all seeds.
<b>Green pepper sticks</b>	Cut out stem and remove seeds. Cut into strips 1/4 inch wide and 2 1/2 to 3 inches long.
<b>Kiwi</b>	When ripe, kiwi are soft to the touch. May be peeled and then sliced or sectioned. Can be served halved, with peels intact; child will scoop out contents with a spoon. Can also be served unpeeled: the peels are edible.

# Finger Foods and Snack Ideas

continued

<b>Meat cubes</b>	Cut thoroughly cooked meat (such as roast beef, meat loaf, chicken, roast veal, or lamb) into 1-inch cubes.
<b>Melon cubes</b>	Peel, remove seeds and fibers, and cut into $\frac{1}{2}$ inch cubes.
<b>Orange sections</b>	Peel and section. Remove all seeds. Can also be cut into sections with peels intact (do this to make “orange smiles”).
<b>Plums</b>	Remove pit and cut into quarters.
<b>Prunes</b>	Remove pit or buy pitted prunes.
<b>Tangerine sections</b>	Peel and section. Be sure to remove all seeds.
<b>Tomato wedges</b>	Cut out core and cut into wedges.
<b>Turnip sticks</b>	Peel turnips. Cut into sticks $\frac{1}{2}$ inch thick and 2 to 2 $\frac{1}{2}$ inches long.



## Ideas for Snacks

Many foods are good for snacks. Below are some ideas, grouped as follows: Meat/Meat Alternate; Fruit, Juice, or Vegetable; and Grains/Breads.

### CAUTION:

- Young children — especially ages 2 to 3 years — are at risk of choking on food. They remain at risk until they can chew and swallow better by about age 4.
- Always supervise children during meals and snacks.
- See page 62 for a list of foods that may cause choking. Also listed are some foods that can be offered if you change the form.

### Snack ideas containing meat/meat alternate:

Quesadilla (melted cheese on a tortilla)

Peanut butter on toast fingers

Grated mozzarella cheese on a toasted English muffin spread with pizza sauce

Deviled hard-cooked egg half and toast triangles

Cheese cubes and fresh fruit chunks

Cheese cubes and juice

Tuna spread on a bagel

String cheese and juice

Cheese sandwich (cut with a cookie cutter) on whole-wheat bread

Cheese melted on mini shredded wheat

Turkey and ham slices in pita bread

Peanut butter and banana sandwich

### Snack ideas containing fruit, juice, or vegetable:

Fruit smoothie (frozen fruit, juice, ice)

Fresh vegetables and grain-based chips with dip

Frozen banana and milk

Grapes and low-fat cheese cubes

Carrot/raisin salad and milk

Fruit kabob

### Snack ideas containing grains/breads:

Raisin-bran or blueberry muffin and milk

Quick-bread fingers: zucchini bread, pumpkin bread, banana bread

Graham crackers and milk

Crackers with peanut butter

Raisin bread squares and orange juice

Melba toast and juice

Breadsticks and juice

Fig bars and milk

Bagel half and juice

Whole-wheat crackers with cheese slices

Baked tortilla chips with salsa

Pretzels and juice

### Some interesting combinations you might like to try...

#### Banana dog:

*Spread hot dog bun with peanut butter, drizzle with honey. Lay whole banana on top. Cut as desired.*

#### Fruit burrito:

*Place chopped fruit in a tortilla. Add a dash of cinnamon.*

#### Frosty fruit:

*Serve frozen grapes, frozen melon balls, or frozen berries with milk.*

#### Trail mix:

*Mix might include peanuts, miniature marshmallows, raisins, dates, and other dried fruit.*