

Expanded Food & Nutrition Education Program

EAT SMART

Get Your Family to the Table



Cooking Basics

Starting with the Basics: Food, Equipment and Knowledge

Cooking Basics: Introduction

This publication provides information you may find helpful when you prepare recipes.

- Kitchen equipment (page 2)
- Measuring (page 3)
- Measurement equivalents (page 4)
- Recipe preparation steps (page 5)
- Cooking terms (pages 6-7)
- Ingredient substitutions (pages 8-11)
- Trimming the fat from our diets (pages 12-14)
- Healthy cooking tips (page 15)
- Cooking with herbs, spices and seasonings (pages 16-18)
- Seasoning your food with less salt (page 19)
- Food yields (pages 20-21)
- Putting out a cooking fire (page 22)

Use this information to prepare all your recipes.

Then enjoy the food you've prepared!



Starting with the Basics: Food, Equipment and Knowledge

Cooking Basics: Kitchen Equipment

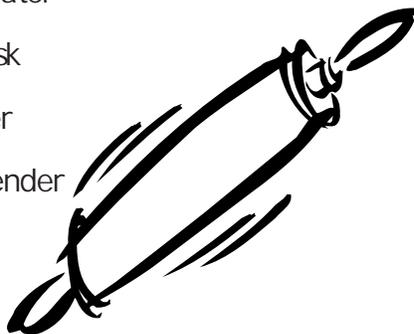
Put an "X" in front of the kitchen equipment on the left you already have or substitute items on the right as needed. There may be other items you could substitute.

Kitchen Equipment

- _____ Measuring cup
- _____ Strainer
- _____ Cookie sheet
- _____ Rolling pin
- _____ Potato masher
- _____ Measuring spoons
- _____ Vegetable peeler
- _____ Mixing bowls
- _____ Cutting board
- _____ Pie pan
- _____ Round cake pan
- _____ Biscuit/cookie cutters
- _____ Ladle for serving soup
- _____ Pancake turner
- _____ Cooling rack
- _____ Rotary beater
- _____ Wire whisk
- _____ Pot holder
- _____ Pastry blender
- _____ Grater

Substitute Items

- _____ Marked jar or baby bottle
- _____ Pan with a lid or cover
- _____ Cake pan, pizza pan
- _____ Smooth bottle or glass
- _____ Forks
- _____ Regular teaspoon and/or tablespoon
- _____ Sharp knife
- _____ Kettle, pan or storage containers
- _____ Sturdy plate
- _____ Flat cake pan
- _____ Square or oblong pan
- _____ Lids, rim or jars, rim of cans, glasses
- _____ Cup with handle
- _____ Two knives, fork
- _____ Oven rack
- _____ Fork
- _____ Two forks or jar with tight lid
- _____ Folded towel
- _____ Two knives
- _____ Sharp knife



Starting with the Basics: Food, Equipment and Knowledge

Cooking Basics: Measuring

DO NOT MEASURE ANY INGREDIENTS OVER THE MIXING BOWL.

One of the skills needed to prepare food is measuring. Let's review some important points about measuring.

Measuring Liquid Ingredients

- Use a liquid measuring cup to measure water, oil, fluid milk, juices and syrup.
- Measure liquids in marked, clear containers.
- Set measuring cup on a flat surface. Check at eye level to make sure the correct amount is measured.

Measured Dry Ingredients

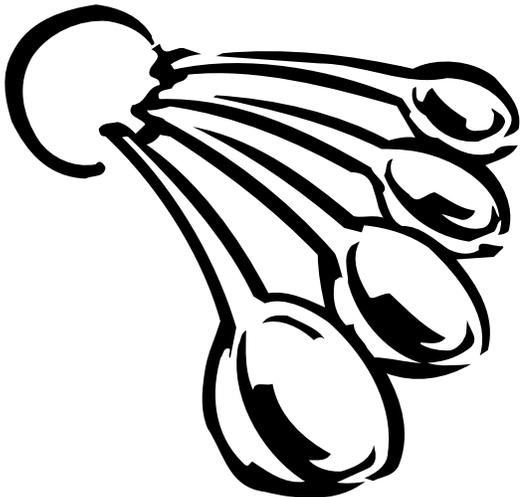
- Measure dry ingredients in containers that allow you to level off the ingredients across the top edge.
- Use a dry measuring cup to measure ingredients like flour, sugar, cornmeal, dry milk and solid shortening.
- Sift or fluff dry ingredients, like flour, with a fork before measuring.
- Spoon dry ingredients into dry measuring cup. Level off ingredients with the flat edge of a knife.



Starting with the Basics: Food, Equipment and Knowledge

Cooking Basics: Measurement Equivalents

3 teaspoons	=	1 tablespoon
4 tablespoons	=	¼ cup
5 1/3 tablespoons	=	1/3 cup
8 tablespoons	=	½ cup
10 2/3 tablespoons	=	2/3 cup
12 tablespoons	=	¾ cup
16 tablespoons	=	1 cup
16 ounces	=	1 pound
2 tablespoons	=	1 fluid ounce
1 cup	=	8 fluid ounces
1 cup	=	½ pint
2 cups	=	1 pint
4 cups	=	1 quart
4 quarts	=	1 gallon



Abbreviations

Tbsp. = tablespoon

Tsp. = teaspoon

Oz. = ounce

Starting with the Basics: Food, Equipment and Knowledge

Cooking Basics: Recipe Preparation Steps

1. Read the recipe to make sure you have all the food and equipment you need. Be sure you have enough time to prepare the recipe.
2. Clear and clean a work area.
3. Set out all ingredients needed.
4. When necessary, preheat the oven, then grease and flour pans.
5. Prepare the recipe.



Starting with the Basics: Food, Equipment and Knowledge

Cooking Basics: Cooking Terms

- Boil:** To heat liquid until bubbles break to the surface, or to cook in boiling water.
- Broil:** To use direct heat to cook.
- Coat:** To cover entire surface with a mixture, such as flour or bread crumbs.
- Core:** Using a sharp knife, remove the core/seeds of a fruit.
- Cream:** To stir one or more foods until they are soft.
- Crisp-tender:** Describes the “doneness” of vegetables when they are cooked only until tender and remain slightly crisp in texture.
- Cut in:** To mix fat into dry ingredients using a pastry blender, fork or two knives, with as little blending as possible until fat is in small pieces.
- Dice:** To cut into small, square-shaped pieces.
- Drain:** To put food and liquid into a strainer (or colander), or to pour liquid out of a pot by keeping the lid slightly away from the edge of the pan and pouring away from you.
- Flute:** To pinch the edge of dough, such as on a pie crust.
- Fold:** To mix by turning over and over.
- Fork-tender:** Describes the “doneness” of a food when a fork can easily penetrate the food.
- Knead:** To mix by “pushing” and by folding.



Starting with the Basics: Food, Equipment and Knowledge

Cooking Basics: Cooking Terms (cont.)

- Marinate:** To soak in a seasoned liquid to increase flavor and tenderness.
- Mince:** To cut or chop food into small pieces.
- Mix:** To combine ingredients using a fork or spoon.
- Oil:** To apply a thin layer of vegetable oil on a dish or pan. Vegetable spray may be used instead.
- Sauté:** To cook in a small amount of fat or water.
- Scald:** To heat milk until bubbles appear (bubbles should not be “breaking” on the surface).
- Shred:** To rub foods against a grater to divide into small pieces.
- Simmer:** To cook at a temperature that is just below the boiling point. Bubbles form slowly but do not reach the surface.
- Steam:** To cook over boiling water.
- Stir fry:** A method of cooking in which vegetables are fried quickly to a crisp-tender state while stirring constantly.
- Stock:** Water in which vegetable(s) or meat has been cooked. Stock liquid should be stored in the refrigerator.



Starting with the Basics: Food, Equipment and Knowledge

Cooking Basics: Ingredient Substitutions

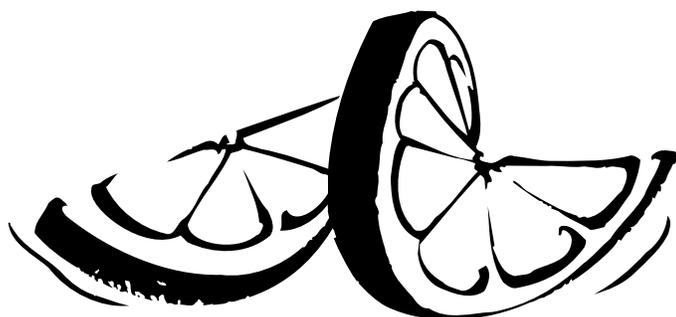
Have you ever been all set to prepare a favorite dish and suddenly discover you do not have one of the ingredients for your recipe? Here are some substitutions that can be used.

<u>Ingredient</u>	<u>Amount</u>	<u>Substitutions</u>
Baking powder	1 teaspoon	¼ teaspoon baking soda plus 5/8 teaspoon cream of tartar, or ¼ teaspoon baking soda plus ½ cup sour milk, or buttermilk (if using sour milk or buttermilk, decrease liquid called for in recipe by ½ cup)
Beef or chicken broth	1 (14½ oz.) can	2 teaspoons instant beef or chicken bouillon granules with water to equal amount of broth specified
Bouillon cube	1	1 tablespoon soy sauce
Dry bread crumbs	¼ cup	¼ cup cracker crumbs, corn meal or 1 cup soft bread crumbs
Butter	1 cup	7/8 to 1 cup shortening plus ½ teaspoon salt, or 1 cup margarine
Catsup or chili sauce	1 cup	1 cup tomato sauce plus ½ cup sugar and 2 tablespoons vinegar (for use in cooking only)
Corn syrup	1 cup	1 cup sugar plus ¼ cup liquid (use the type of liquid that is called for in the recipe)
Cornstarch	1 tablespoon	2 tablespoons all-purpose flour, or 2 tablespoons quick-cook tapioca



Cooking Basics: Ingredient Substitutions (cont.)

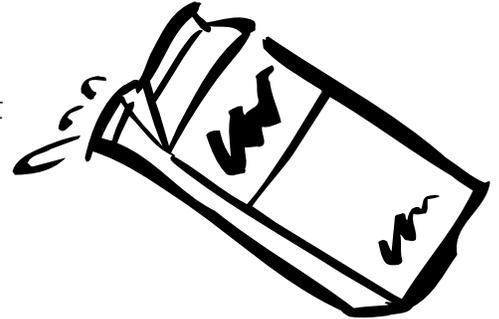
<u>Ingredient</u>	<u>Amount</u>	<u>Substitutions</u>
Egg (cake batter only)	1	2 tablespoons mayonnaise
Flour, all-purpose	1 tablespoon	½ tablespoon cornstarch or quick-cooking tapioca (for thickening)
Flour, all-purpose	1 cup sifted	1 cup plus 2 tablespoons sifted cake flour or 1 cup unsifted all-purpose flour minus 2 tablespoons
Flour, cake	1 cup sifted	1 cup minus 2 tablespoons sifted all-purpose flour
Garlic	1 clove, small	1/8 teaspoon garlic powder
Gelatin, flavored	3 ounce package,	a tablespoon plain gelatin plus 2 cups fruit (prepared with water) juice
Herbs, fresh	1 tablespoon	1 teaspoon dried herbs
Honey	1 cup	1½ cups sugar plus ¼ cup liquid (use liquid called for in recipe)
Lemon	1 medium	2-3 tablespoons juice and 1-2 teaspoons rind



Starting with the Basics: Food, Equipment and Knowledge

Cooking Basics: Ingredient Substitutions (cont.)

<u>Ingredient</u>	<u>Amount</u>	<u>Substitutions</u>
Lemon juice	1 teaspoon	½ teaspoon vinegar (for use as acid source in cooking only)
Milk, buttermilk	1 cup	1 cup yogurt or 1 cup sour milk (make sour milk by putting 1 tablespoon of vinegar or lemon juice in a measuring cup and add milk to 1 cup mark)
Milk, whole	1 cup	½ cup evaporated milk plus ½ cup water
Milk, skim	1 cup	5 tablespoons nonfat dry milk and 1 cup water
Onion, fresh	1 small	1 tablespoon dry minced onion, rehydrated
Prepared mustard	1 tablespoon	1 teaspoon dried mustard
Parsley, dried	1 teaspoon	3 teaspoons chopped fresh parsley
Shortening, melted	1 cup	1 cup vegetable oil
Sour cream	1 cup	1 cup yogurt
Sugar, white	1 cup	1 cup corn syrup minus ¼ cup liquid in recipe, or 1 cup brown sugar (firmly packed), or 1 cup honey (reduce liquid in recipe by ¼ cup), or 1¾ cup confectioners (powdered) sugar (packed)



Starting with the Basics: Food, Equipment and Knowledge

Cooking Basics: Ingredient Substitutions (cont.)

<u>Ingredient</u>	<u>Amount</u>	<u>Substitutions</u>
Tomato juice	1 cup	½cup tomato sauce plus ½cup water
Tomato sauce	1 (15 oz. can)	1 (6 oz. can) tomato paste and 1 cup water
Tomatoes	1 (16 oz. can)	3 fresh medium tomatoes, cut up
Yogurt	1 cup	1 cup buttermilk or sour milk (make sour milk by putting 1 tablespoon vinegar or lemon juice in a measuring cup and add milk to 1 cup mark)



Starting with the Basics: Food, Equipment and Knowledge

Cooking Basics: Trimming the Fat from Our Diets

1. Choose meat with the least amount of fat.
2. Remove fat.
 - Trim off the fat you can see from meat and poultry. Remove the skin from poultry.
 - Remove fat from canned meats.
 - Buy tuna packed in water.
 - Chill soups and stews and remove the solid fat layer from the top.
3. Cook meats by:
 - Baking
 - Microwaving
 - Broiling
 - Grilling
 - Boiling
 - Stir-frying
 - Cook with little or no added fat. Use non-stick pans or spray with cooking spray.
4. Drain fat after browning ground meat. To remove even more fat, rinse the browned ground meat crumbles with hot (not boiling) water. Then blot with a paper towel.



Starting with the Basics: Food, Equipment and Knowledge

Cooking Basics: Trimming the Fat from Our Diets (cont.)

5. Eat meat in moderation. Add more grains, fruits and vegetables to your meal.

A deck of cards is about the size of 3 ounces of meat, poultry or fish. Three ounces of meat, cooked and boneless, is a serving for one adult.

6. Cook with less fat.

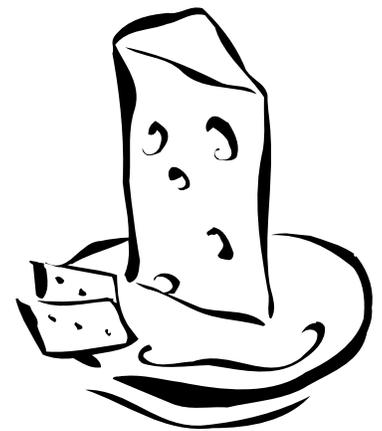
- Replace whole milk in recipes with low fat or skim milk.
- Replace cream in recipes with evaporated skim milk.
- Use smaller amounts of full-fat cheese, such as cheddar, or use lower-fat cheese, such as part skim mozzarella.
- Decrease the amount of fat in recipes. Do not decrease fat if the recipe has already been reduced in fat. Start by decreasing the fat by $\frac{1}{4}$. For example, if a cake recipe calls for 1 cup of margarine, use $\frac{3}{4}$ cup of margarine. The fat in recipes for quick bread, muffins and some soft cookies can be decreased by $\frac{1}{2}$. For example, if a muffin recipe calls for 1 cup oil, use $\frac{1}{2}$ cup oil.
- Replace chocolate and nuts with raisins or chopped fresh fruits or canned fruits.
- Replace sour cream with nonfat or low-fat source cream or low-fat yogurt.
- Decrease the amount of oil in homemade salad dressings. Try using one part oil to two parts vinegar.

7. Use skim milk or low-fat milk in place of whole milk. It may be easier to take one step at a time. Start by switching from whole milk to 2 percent low-fat milk. Later, switch to 1 percent low-fat and then to skim milk.

8. Add less fat to food.

Small amounts of these fatty extras can add a lot of fat. Use these sparingly:

- butter or margarine



Starting with the Basics: Food, Equipment and Knowledge

Cooking Basics: Trimming the Fat from Our Diets (cont.)

- sour cream
- oil or shortening
- salad dressing
- cream cheese
- mayonnaise
- bacon grease or bacon
- tartar sauce
- non-dairy creamer (liquid or powder)

9. Many foods taste good with less fat. Substitute nonfat or low-fat items for high-fat items.

- *Sandwiches:* use mustard, ketchup, low-fat or nonfat salad dressing, onion, tomato, lettuce and sprouts.
- *Vegetables, soups and dried beans:* Flavor vegetables with Low-fat margarine spreads, onion, garlic, lemon juice, spices, salsa or vinegar. Flavor soups and bean dishes with lean diced ham, smoked turkey or bouillon instead of fatty cuts of meat like salt pork.
- *Bread, muffins and rolls:* Use jam, jelly, fruit spreads or small amounts of low-fat margarine or low-fat spreads.
- *Pasta, potatoes and rice:* Use low-fat margarine or low-fat yogurt on potatoes. Rice and pasta do not need fat added to the cooking water.



Starting with the Basics: Food, Equipment and Knowledge

Cooking Basics: Healthy Cooking Tips

Ways to Increase Fiber

- Choose whole grain instead of refined products. For example, use whole wheat flour, brown rice, oatmeal, whole cornmeal and barley.
- Whole-wheat flour can usually be substituted for up to ½ of the white flour in recipes. For example, if a recipe calls for 2 cups of flour, try 1 cup of white and 1 cup of whole-wheat flour.
- Add fruits to muffins, pancakes, salads and desserts. Add vegetables to casseroles and salads.
- Add grated or mashed vegetables or fruits to sauces or baked goods. For example, you can add grated carrots to spaghetti sauce and meat loaf.

Ways to Decrease Sugar

- Try using ¼ to 1/3 less sugar in baked foods and desserts. *For example, if a fruit pie recipe calls for 1 cup of sugar, use ¾ cup sugar. This works best with quick breads, cookies, pie fillings, custard, puddings and fruit crisps. It may not work for some cakes. Do not decrease the small amount of sugar in plain yeast breads because it provides food for the yeast and helps the bread rise.
- You do not have to add sugar when canning or freezing fruits. Or, you can buy unsweetened frozen fruit or fruit canned in its own juice or water.
- Increase the amount of cinnamon or vanilla in a recipe to make it seem sweeter.*

**Do not do this if sugar in the recipe has already been reduced.*



Starting with the Basics: Food, Equipment and Knowledge

Cooking Basics: Cooking with Herbs, Spices and Seasoning

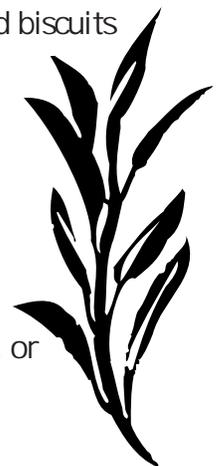
Herbs and spices can add flavor and variety to your food. Use a little at first, then add more when you are sure you like the flavor. To substitute dry herbs for fresh, use ¼ teaspoon powder or 1 teaspoon crushed for 1 tablespoon fresh chopped herbs. Some herbs and spices are expensive. You might want to buy only a few of the less expensive herbs and spices you will use.

Herbs and spices lose flavor and can spoil or get buggy if kept in the cupboard longer than a year. If you use herbs and spices slowly, buy small containers, or store them in the freezer.

Herbs, Spices and Seasonings

Uses

Allspice	A mixture of cinnamon, nutmeg and cloves. Use in fruit desserts, pumpkin pie, apple cider, cakes, cookies, chicken, beef and fish dishes
Basil	Tomato and egg dishes, stews, soups and salads
Bay leaves	Tomato dishes, fish and meat dishes
Celery seed	Juices, soups, salads, vegetables, pot roasts, poultry, rolls and biscuits
Chili powder	Chili, bean and rice dishes
Chives	Potato dishes, soups, dips and sauces
Cilantro (Coriander leaves)	Latin American, Indian and Chinese dishes, salsa, stir fries, legume or rice salads, hot cooked rice, grilled chicken or fish, or a dish of ripe tomatoes. Use fresh if possible.
Cinnamon	French toast, fruit and fruit salads, sweet potatoes, pumpkin and squash, puddings and apple desserts, ham or pork chops



Starting with the Basics: Food, Equipment and Knowledge

Cooking Basics: Cooking with Herbs, Spices and Seasoning

Herbs, Spices and Seasonings	Uses
Cloves	Whole cloves on ham or pork roast; ground cloves to season pear or apple desserts, beets, beans, tomatoes, squash and sweet potatoes
Coriander seed	Middle Eastern dishes, spice cakes and cookies, soups, roast pork and salad dressing
Cumin	Mexican, Middle Eastern and Indian dishes; beef and lamb, dry bean dishes, marinades, chili and tomato sauces; ingredient in curry powder
Dillweed	Tuna or salmon salad, potato salad, pickles, dips and sauces
Garlic	Mexican, Italian and Oriental dishes and in salad dressings; can be used fresh or dried, minced or powder
Ginger (fresh)	Oriental dishes, marinades for chicken or fish, fruit salad, dressings
Ginger (ground)	Gingerbread, spice cake, pumpkin pie, poultry or meat, soups, stews, stuffing, squash, sweet potatoes
Ground peppers: black, Cayenne & white pepper	Meats, casseroles, vegetables and soups
Italian seasoning	A mixture of marjoram, oregano, basil and rosemary; use in Italian dishes such as spaghetti
Marjoram	Egg and cheese dishes, meats, fish, poultry and vegetables



Starting with the Basics: Food, Equipment and Knowledge

Cooking Basics: Cooking with Herbs, Spices and Seasoning

Herbs, Spices and Seasonings

Uses

Mint	Fruit salads and fruit soups, melon, berries, cold fruit beverages, cooked carrots or peas, chilled yogurt soup, lamb, tabbouleh
Mustard	Sauces for meat and fish, in marinades, salad dressings, chutneys, pickles and relishes
Nutmeg	Cooked fruits, pies and desserts, baked items, spinach, sweet potatoes, eggnog and French toast
Onion	Any dish where onion flavor is desired; can be used fresh or dried (minced or powder)
Oregano	Italian dishes, chili, omelets, beef stew, meat loaf, pork and vegetables such as broccoli or tomatoes
Parsley	Meat, soup or vegetable dishes; adds color
Paprika	Stew, chicken, fish, potatoes, rice and hard-cooked eggs
Rosemary	Egg dishes, meats, fish, soups and stews, and vegetables
Thyme	Fish, poultry or meats, in soups or stews, vegetable salads



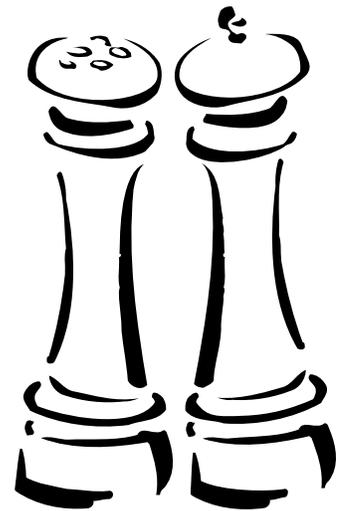
Starting with the Basics: Food, Equipment and Knowledge

Seasoning Your Food with Less Salt

Try using herbs and spices to season your food. You may find that you can cut down the amount of salt you use.

Some seasonings contain salt and/or sodium. Use these sparingly:

- Garlic salt
- Celery salt
- Seasoned salt
- Soy sauce
- Onion salt
- Monosodium glutamate (MSG)



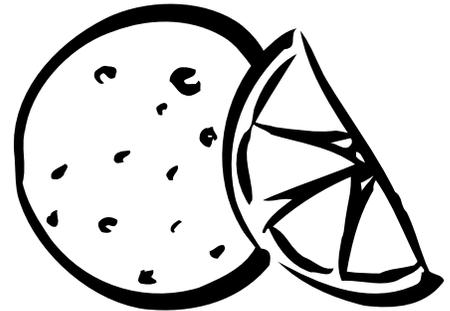
Many seasoning mixtures contain a lot of salt – read the label!

Adopted from “Cooking with Herbs and Spices: in “creative cooking” from the University of Wisconsin Extension.

Starting with the Basics: Food, Equipment and Knowledge

Cooking Basics: Food Yields

Apples	1 pound	= 3 medium = 3 cups slices
Bananas	1 pound	= 3-4 medium = 1½ cups mashed = 2 cups sliced
Beans (dry)	1 pound	= 2-2½ cups (dry) = 6 cups cooked
Bread crumbs	4 slices bread	= 2 cups fresh crumbs = 1 cups dry crumbs
Butter, margarine or shortening	1 pound	= 2 cups
Cabbage	1 pound	= 6 cups shredded = 2-3 cups cooked
Carrots	1 pound	= 3 cups sliced = 1½ cups shredded
Cheese	4 ounces	= 1-1 cups shredded
Coffee	1 pound	= 40-50 cups brewed
Cornmeal	1 pound	= 3 cups (dry) = 12 cups cooked
Eggs (medium)	1 dozen	= 2 cups
Egg whites (large)	8 eggs	= 1 cup
Flour, all purpose	1 pound	= 4 cups sifted
Flour, whole wheat	1 pound	= 3½-3¾ cups
Graham crackers	12 squares	= 1 cup crumbs
Ground meat (beef, pork, turkey)	1 pound	= 2 cups ground
Lemons	1 lemon	= 2-4 tablespoons juice
Macaroni, spaghetti	1 pound	= 5 cups (dry) = 8-10 cups cooked
Milk, evaporated	6 ounce can	= 1½ cups reconstituted
Oatmeal	½ cup (dry)	= 1 cup cooked
Onions	1 pound	= 3 large
Oranges	1 orange	= 6 tablespoons juice

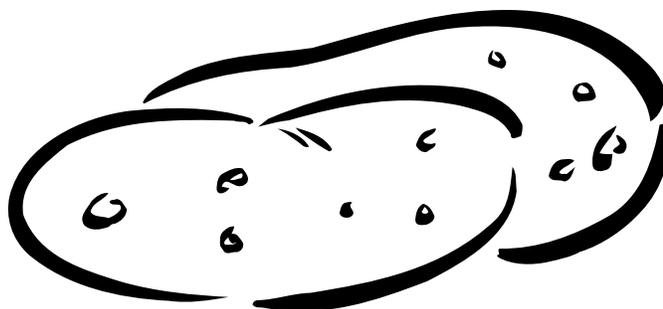


Starting with the Basics: Food, Equipment and Knowledge

Cooking Basics: Food Yields (cont.)

Potatoes	1 pound	= 3 medium = 3½ cups sliced = 2 cups mashed
Raisins	1 pound	= 1¾-3 cups
Rice, regular white or brown	1 pound	= 2½ cups (dry) = 7½ cups cooked
Salt nes	22 crackers	= 1 cup crumbs
Sugar, white-granulated	1 pound	= 2 cups
Sugar, brown	1 pound	= 2¼ cup (firmly packed)
Yeast (active dry)	1 packet	= 1 tablespoon

From Jane Brody's Good Food Gourmet, 1990, W.W. Norton & Co. Inc.



Starting with the Basics: Food, Equipment and Knowledge

Cooking Basics: Putting Out a Cooking Fire

1. Turn the stove or oven off immediately!
2. Use a fire extinguisher to put out a fire.
 - If you do not have a fire extinguisher, cover the pan with a lid or other non-flammable object to suffocate the fire.
 - If covering the pan is not possible, pour salt or baking soda on the fire.
3. If the fire does not go out immediately, call the fire department.

Don't throw water on grease fires.

The best way to put out a fire is with a fire extinguisher. Many buildings, such as apartment buildings, must have fire extinguishers in the hall or other areas close to each unit. If there is a fire extinguisher where you live, know where it is located and how to use it.





Expanded Food and Nutrition Program

11-0178 SP732-10M-11/11 R12-5310-206-013-12

The University of Tennessee. All rights reserved. This document may be reproduced and distributed for nonprofit educational purposes providing that credit is given to University of Tennessee Extension.

Programs in agriculture and natural resources, 4-H youth development, family and consumer sciences, and resource development. University of Tennessee Institute of Agriculture, U.S. Department of Agriculture and county governments cooperating. UT Extension provides equal opportunities in programs and employment.