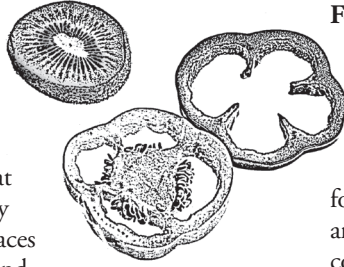


# What's All the Talk About Food Safety?

Did you ever have an upset stomach or something that people call the 24-hour flu? If your symptoms lasted less than a day, chances are your brief illness was caused by a foodborne illness. You will learn about ways you can minimize the number of foodborne incidents you have in your lifetime.

## What is a foodborne illness?

A **foodborne illness** is a disease that is carried to animals or humans by food. Foodborne illnesses are caused by microorganisms such as bacteria. Not all bacteria cause disease in humans. Those that do are called **pathogens**. They grow rapidly when conditions are right—dark, damp places where temperatures range between 40° F and 140° F. Any type of food can be a source of a foodborne illness; however, high protein foods are responsible for most of them. Examples include milk and milk products, eggs, meats, poultry, fish, seafood, and soy protein food such as tofu.



## What is food safety ?

**Food safety** is the practice of making sure that people have the healthful food they need for an active, healthy lifestyle. Some foods, particularly fresh fruits and vegetables, are not cooked before we eat them. These foods must be handled correctly to make sure they are safe to eat. The Centers for Disease Control reports the majority of foodborne illnesses associated with fresh fruits and vegetables are due to improper food handling at the foodservice or consumer level. They are contaminated with pathogens and then not cooked or stored properly. Since you handle food, you can do your part to keep your food safe.

## Who is responsible?

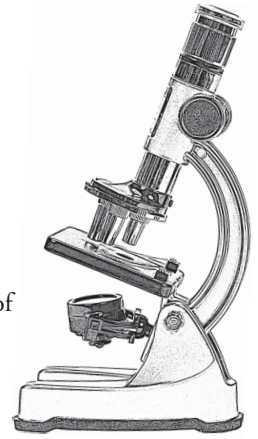
All people have a personal responsibility to keep food safe. Farmers are the first people responsible for producing healthful food. They must know how to plant, cultivate, irrigate, harvest, and store the food so that the final product is safe for the consumer. Farmers are responsible for making sure that the people involved in their operations follow the guidelines established by the United States Department of Agriculture (USDA). In the 1990s, the agricultural industry adopted some guidelines called GAPs—Good Agricultural Practices—that keep food safe at the farm level.

People who pack, process and transport food must make sure that food is kept at proper temperatures, and handled and washed appropriately. Storage facilities must be kept clean. Grocers and those who prepare and serve food at restaurants are responsible for using proper food safety procedures. You, the at-home consumer, must do your part too! It requires teamwork.



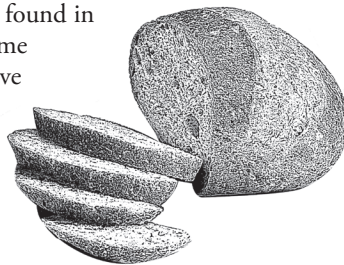
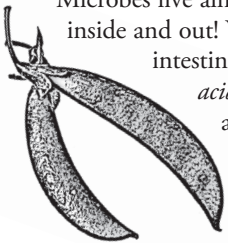
## What is a microorganism?

Microorganisms, also known as microbes, are single-celled organisms so tiny that millions of them can fit between the eye of a needle. Individually, they can only be seen with a microscope. Colonies of microorganisms, such as mold on bread, may be visible with the eye alone. Common microbes associated with foodborne illnesses are bacteria.



## Beneficial Microbes

Microbes live almost everywhere! In fact, you are covered with microbes inside and out! Your mouth contains more than 600 kinds! Your large intestine contains *Escherichia coli*, a bacterium. *Lactobacillus acidophilus* turns milk into yogurt. *Saccharomyces cerevisiae*, also known as yeast, makes bread rise. *Bacillus thuringiensis (Bt)*, a natural pesticide, is found in the soil and is used by farmers and home gardeners. Rhizobia are bacteria that live in the nodules of some plant roots, such as beans and alfalfa, and convert nitrogen into a form plants can use. Without microbes to decompose things, the world would be covered with waste. In fact, Earth as we know it would not exist!



## Bacteria Out of Control!

Under certain conditions, a bacterium can double in population every 10 to 30 minutes—usually in warm, damp and dark places. People can get sick when they eat foods that have been contaminated by harmful bacteria. *Salmonella* and *E.*

*Coli* are common bacteria that cause foodborne illnesses. Seems funny that one form of *E. Coli* is inside our gut, but if we eat another form, it can make us sick. That's strange but true!

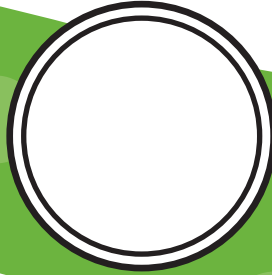
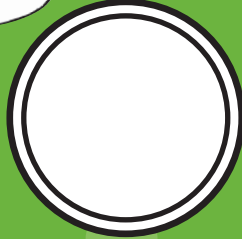
Since pathogens can live almost anywhere, it is important to clean, separate, chill, and cook your food properly... and then eat it in a timely manner.



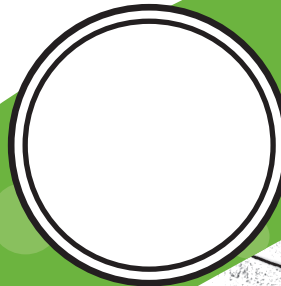
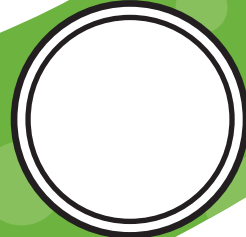
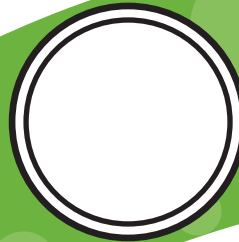
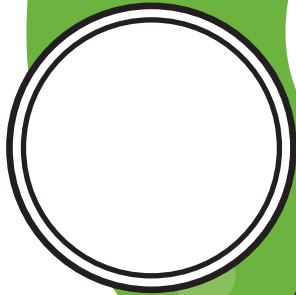
# PLAYING IT SAFE



START



CARDS

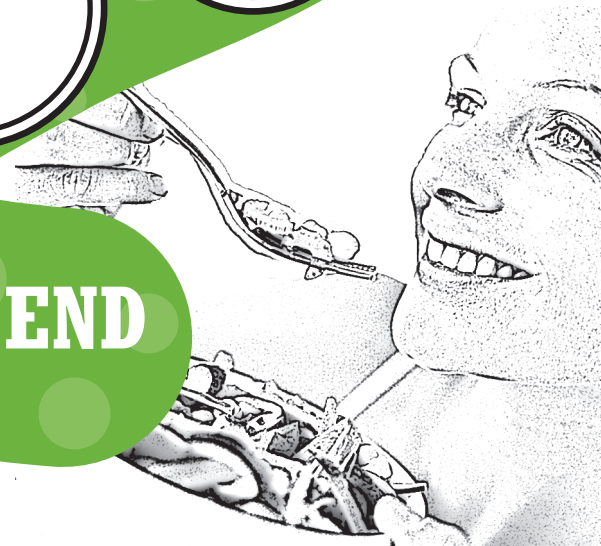


END

## Cause and Effect

Read each of the following statements. Underline the "cause" and circle the "effect."

- 1 The milk was not refrigerated, so it turned sour.
- 2 Miguel washed his hands before making a tasty, healthful salad.
- 3 There are more foodborne illnesses in the summer because bacteria multiply quicker in warmer temperatures.
- 4 Grandma made cheese after adding rennet to milk.
- 5 Sandra threw her apple core into the outdoor bin so it would decompose and become compost.



# PLAYING IT SAFE

## GAME CARDS

**Instructions:** Copy and cut one set of game cards for each group.

You used a clean paper towel to wipe off the kitchen counter and then disposed of it properly.  
**MOVE AHEAD 3 SPACES.**

You washed your hands for 20 seconds with warm water and soap before helping make dinner.  
**MOVE AHEAD 3 SPACES.**

You pet your dog and let him lick your hand. Then you helped mom cut up lettuce for the salad without washing your hands.  
**GO BACK 2 SPACES.**

You used a scrub brush to wash under your fingernails before preparing dinner.  
**MOVE AHEAD 4 SPACES.**

You cooked your scrambled egg until all of it was firm.  
**MOVE AHEAD 3 SPACES.**

You washed your cutting board under hot soapy water after cutting the eggs, but before you started slicing the potatoes for the salad.  
**MOVE AHEAD 3 SPACES.**

You were tired, so you left the potato salad on the counter for 2 hours before putting it away.  
**MOVE BACK 2 SPACES.**

When your dad barbecued, you washed the raw meat juices off the platter with warm soapy water before he put the cooked meat back on it.  
**MOVE AHEAD 3 SPACES.**

You washed the plastic cutting board in the dishwasher after dinner.  
**MOVE AHEAD 4 SPACES.**

You washed your hands but a towel was not close by. You wiped them on the legs of your pants.  
**MOVE FORWARD 2 SPACES, THEN BACK 2 SPACES.**

You cut up the chicken for fajitas with a sharp knife and then cut your veggies without rinsing the knife or cutting board.  
**MOVE BACK 4 SPACES.**

Before talking on the phone, you helped your mom put the leftovers in the refrigerator as soon as dinner was over.  
**MOVE AHEAD 3 SPACES.**

You put your dish sponge in the microwave on high for one minute before you wiped off the counter.  
**MOVE AHEAD 3 SPACES.**

You asked the bag clerk at the supermarket to put the chicken in a separate bag from your fruits and vegetables.  
**MOVE AHEAD 4 SPACES.**

You cut up cheese slices but didn't clean the cutting board when you finished.  
**MOVE BACK 2 SPACES.**

You let the kitchen sponge soak in the dishwasher overnight. In the morning you wiped down the counter with it.  
**MOVE BACK 3 SPACES.**

Mom called and asked you to put the ground beef out to thaw. You placed it on the counter top all day to defrost.  
**MOVE BACK 3 SPACES.**

As your chicken defrosted in the refrigerator, the juices dripped onto the refrigerator shelf. An apple rolled into the juices.  
**MOVE BACK 3 SPACES.**

Your steak was barely warm and looked under-cooked when you went out to dinner with your friends. You didn't want to say anything, so you ate it anyway.  
**MOVE BACK 2 SPACES.**

You dried the dinner dishes with the cloth that had been hanging all week on the refrigerator door.  
**MOVE BACK 3 SPACES.**

You remembered to tie back your hair while you were making a cake for your brother's birthday.  
**MOVE AHEAD 3 SPACES.**

You understand the importance of keeping hot foods hot and cold foods cold, and not cross-contaminating raw food with cooked food.  
**MOVE AHEAD 4 SPACES.**