

Raw Produce

Selecting and Serving it Safely



As you enjoy fresh produce, follow these safe handling tips to help protect yourself and your family.

Fruits and vegetables are an important part of a healthy diet. Your local markets carry a wide variety of nutritious fresh fruits and vegetables. However, harmful bacteria that may be in the soil or water where produce grows can come in contact with fruits and vegetables and contaminate them. Fresh produce may also become contaminated after it is harvested, such as during storage or preparation.

Furthermore, like any fresh produce that is consumed raw or lightly cooked, sprouts (such as alfalfa or mung bean) that are served raw or lightly cooked may contain bacteria that can cause foodborne illness. Unlike other fresh produce, sprouts are grown from seeds and beans under warm and humid conditions. These conditions are also ideal for the growth of bacteria, including *Salmonella*, *Listeria*, and *E. coli*. If just a few harmful bacteria are present in or on the seed, the bacteria can grow to high levels during sprouting, even if you are growing your own sprouts under sanitary conditions at home.

Eating contaminated produce can lead to foodborne illness, often called “food poisoning.” Recent Food and Drug Administration regulations for produce help reduce the risk of illness-causing contamination but they do not eliminate it entirely. So, as you enjoy fresh produce, follow these safe handling tips to help protect you and your family.

Buy Right

You can help keep produce safe by making wise buying decisions.

- Choose produce that is not bruised or damaged.
- When buying pre-cut, bagged or packaged produce — such as half of a watermelon or bagged salad greens — choose only those items that are refrigerated or surrounded by ice.
- Bag fresh fruits and vegetables separately from raw meat, poultry, and seafood when packing them to take home from the market.

Store Properly

Proper storage of fresh produce can affect both quality and safety.

- Store perishable fresh fruits and vegetables (like strawberries, lettuce, herbs, and mushrooms) in a clean refrigerator at a temperature of 40° F or below. Use a refrigerator thermometer to check! If you're not sure whether an item should be refrigerated to keep its quality, ask your grocer.
- Refrigerate all produce that is purchased pre-cut or packaged.



Separate for Safety

Keep fruits and vegetables that will be eaten raw separate from raw meat, poultry, and seafood — and from kitchen utensils used for those products.

- Wash cutting boards, dishes, utensils, and countertops with soap and hot water between preparing raw meat, poultry, and seafood and preparing produce that will not be cooked.
- If possible, use one cutting board for fresh produce and a separate one for raw meat, poultry, and seafood.
- If you use plastic or other non-porous cutting boards, run them through the dishwasher after use.



Prepare Safely

When preparing any fresh produce, begin with clean hands. Wash your hands for at least 20 seconds with soap and warm water before and after preparation.

- Cut away any damaged or bruised areas on fresh fruits and vegetables before preparing and/or eating. Throw away any produce that looks rotten.
- Wash all produce thoroughly under running water before preparing and/or eating, including produce grown at home or bought from a grocery store or farmers' market.
- Washing can reduce bacteria that may be present, but it will not eliminate it.
- Washing fruits and vegetables with soap, detergent, or commercial produce wash is not recommended. Produce is porous. Soap and household detergents can be absorbed by fruits and vegetables, despite thorough rinsing, and can make you sick. Also, the safety of the residues of commercial produce washes is not known and their effectiveness has not been tested.
- Scrub firm produce, such as melons and cucumbers, with a clean produce brush.
- After washing, dry produce with a clean cloth towel or paper towel to further reduce bacteria that may be present on the surface.
- Cooking produce thoroughly kills harmful bacteria and reduces the risk of illness.



What About Pre-Washed Produce?

Many pre-cut, bagged, or packaged produce items are pre-washed and ready-to-eat. If so, it will be stated on the packaging, and you can use the produce without further washing.

If you choose to wash produce marked as “pre-washed” or “ready-to-eat,” be sure that it does not come in contact with unclean surfaces or utensils. This will help to avoid cross contamination.





About Foodborne Illness

Know the Symptoms

Consuming dangerous foodborne bacteria will usually cause illness within 1 to 3 days of eating the contaminated food. However, sickness can also occur within 20 minutes or up to 6 weeks later. Although most people will recover from a foodborne illness within a short period of time, some can develop chronic, severe, or even life-threatening health problems. Children, older adults, pregnant people, and people with weakened immune systems (such as transplant patients and individuals with HIV/AIDs, cancer, and diabetes) can be especially vulnerable to foodborne illness.

For more information on FDA's food safety advice for vulnerable populations, see the following:

- People at Risk of Foodborne Illness
<https://www.fda.gov/food/consumers/people-risk-foodborne-illness>
- Safe Eats – Food Safety During Pregnancy
<https://www.fda.gov/food/people-risk-foodborne-illness/safe-eats-food-safety-moms-be>
- Food Safety for Older Adults and People with Cancer, Diabetes, HIV/AIDS, Organ Transplants, and Autoimmune Diseases. <https://www.fda.gov/media/83744/download>

People who are more vulnerable to foodborne illness (as identified above) should avoid eating raw or lightly cooked sprouts of any kind (including onion, alfalfa, clover, radish, and mung bean sprouts).

Foodborne illness can sometimes be confused with other illnesses that have similar symptoms. The symptoms of foodborne illness can include:

- Vomiting, diarrhea, and abdominal pain
- Flu-like symptoms, such as fever, headache, and body ache

Take Action

If you think that you or a family member has a foodborne illness, **contact your healthcare provider immediately**. Also, **report** the suspected foodborne illness to FDA:

- Contact the Consumer Complaint Coordinator in your area. Locate a coordinator here:
<http://www.fda.gov/Safety/ReportaProblem/ConsumerComplaintCoordinators>
- Contact MedWatch, FDA's Safety Information and Adverse Event Reporting Program:
By Phone: 1-800-FDA-1088
Online: File a voluntary report at <http://www.fda.gov/medwatch>

For more information on preventing foodborne illness, see Safe Food Handling: Four Simple Steps at <https://www.fda.gov/food/buy-store-serve-safe-food/safe-food-handling-what-you-need-know>

Safe Food Handling: Four Simple Steps

CLEAN



SEPARATE



COOK








CHILL







CLEAN

Wash hands and surfaces often

-  Wash your hands with warm water and soap for at least 20 seconds before and after handling food and after using the bathroom, changing diapers, and handling pets.
-  Wash your cutting boards, dishes, utensils, and counter tops with hot soapy water after preparing each food item.
-  Consider using paper towels to clean up kitchen surfaces. If you use cloth towels, launder them often in the hot cycle.
-  Rinse fresh fruits and vegetables under running tap water, including those with skins and rinds that are not eaten. Scrub firm produce with a clean produce brush.
-  With canned goods, remember to clean lids before opening.





SEPARATE

Separate raw meats from other foods

-  Separate raw meat, poultry, seafood, and eggs from other foods in your grocery shopping cart, grocery bags, and refrigerator.
-  Use one cutting board for fresh produce and a separate one for raw meat, poultry, and seafood.
-  Never place cooked food on a plate that previously held raw meat, poultry, seafood, or eggs unless the plate has been washed in hot, soapy water.
-  Don't reuse marinades used on raw foods unless you bring them to a boil first.






COOK

Cook to the right temperature

-  Color and texture are unreliable indicators of safety. Using a food thermometer is the only way to ensure the safety of meat, poultry, seafood, and egg products for all cooking methods. These foods must be cooked to a safe minimum internal temperature to destroy any harmful bacteria.
-  Cook eggs until the yolk and white are firm. Only use recipes in which eggs are cooked or heated thoroughly.
-  When cooking in a microwave oven, cover food, stir, and rotate for even cooking. If there is no turntable, rotate the dish by hand once or twice during cooking. Always allow standing time, which completes the cooking, before checking the internal temperature with a food thermometer.
-  Bring sauces, soups and gravy to a boil when reheating.

CHILL

Refrigerate foods promptly

-  Use an appliance thermometer to be sure the temperature is consistently 40° F or below and the freezer temperature is 0° F or below.
-  Refrigerate or freeze meat, poultry, eggs, seafood, and other perishables within 2 hours of cooking or purchasing. Refrigerate within 1 hour if the temperature outside is above 90° F.
-  Never thaw food at room temperature, such as on the counter top. There are three safe ways to defrost food: in the refrigerator, in cold water, and in the microwave. Food thawed in cold water or in the microwave should be cooked immediately.
-  Always marinate food in the refrigerator.
-  Divide large amounts of leftovers into shallow containers for quicker cooling in the refrigerator.