



Microbiological Safety of Fresh Fruits and Vegetables

Fruits and vegetables are essential to a nutritionally adequate diet. However, foodborne illness outbreaks linked to lettuce, cantaloupe, strawberries, and bean sprouts have made some consumers worried about the safety of eating fresh produce.

Consumers should not eat less produce. Nutrition research shows that eating five or more servings of fruits and vegetables each day can decrease the incidence of some cancers. Instead of eating less fresh produce, consumers should guard against careless handling. Careless handling can make produce unsafe to eat. Therefore, handle produce safely from the time you buy it until you eat it.

At the grocery store

Do not buy produce that is badly bruised, cut, or shows signs of insect bites unless you use it immediately. These conditions create openings that allow microorganisms and enzymes to spoil the product more quickly.

In storage

Cold temperatures slow the rate of spoilage and the growth of harmful microorganisms.

Most produce should be refrigerated before handling; however, some should not.

- Store tomatoes and sweet potatoes between 55 to 60°F. Pumpkins and squash keep longest if kept in a dry place that is between 50 to 55°F.
- Potatoes, cabbage, and parsnips should be stored in a cool, moderately moist place that is above freezing.
- Some fruits should be ripened at room temperature before eating. These include apricots, bananas, cantaloupe, kiwi, nectarines, peaches, pears, and plums.

Cutting and peeling can increase the number of microorganisms, so store all cut produce in the refrigerator. Store produce above meat, fish, and poultry so their juices do not drip onto the produce and make it unsafe to eat.

During preparation

If you plan to eat fruits or vegetables raw, wash them first. Washing will remove some of the microorganisms on the surface. Wash them even if you do not eat the rind or skin. When you cut into produce, microorganisms that are on the surface can be transferred to the inner flesh.

Clean tough-skinned fruits and vegetables, such as cucumbers, peppers, melons, and apples, with a vegetable brush and warm water. Do not use soap because it might leave a residue that could make you sick. Soak more delicate fruits and vegetables like lettuce and berries for a few minutes in warm (not hot) water, then rinse with warm water.

Another way to reduce the number of microorganisms on the surface of fresh produce is to blanch it. Drop the produce into boiling water for one minute and then remove it from the boiling water. Keep in mind that some produce might become slightly mushy after this process.

Bacteria can be spread throughout the kitchen and get onto cutting boards, utensils, and countertops. When cutting fruits and vegetables, always use a clean knife and clean cutting surface. Never use utensils or surfaces that have been in

contact with other foods, especially raw meat, fish, or poultry, without properly cleaning them first. Raw meat, fish, and poultry contain bacteria that could contaminate raw fruits and vegetables.

To properly clean utensils and cutting surfaces, wash them in warm, soapy water, then rinse well with hot water. Then sanitize them. Make a sanitizing solution by adding one tablespoon of unscented bleach to one gallon of warm (not hot) water. Allow the items to soak for a few minutes. Remove them from the sanitizing solution and let air dry.

Who should not eat fresh produce

- People with AIDS or cancer or who are organ transplant recipients should not eat fresh fruits and vegetables. They face a higher than normal risk from foodborne illness.

These people should eat only fruits and vegetables that have been cooked. The best way to kill microorganisms on or in produce is to heat it thoroughly.

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