



## Fresh Fruits and Vegetables and Food Safety

Fresh produce is an important part of a healthy diet. They are a source of vitamins, minerals, fibers and antioxidants and have many health benefits.

Fruits and vegetables are naturally exposed to organisms that promote spoilage because of the environment in which they are grown and harvested, but these organisms typically do not cause illness in people. Fresh produce can however be exposed to contaminants before reaching the consumer. This may occur in the field, during or after harvesting, during storage or transport or even at the grocery store. Contaminants may be bacteria, viruses and parasites which can cause foodborne illness.

Because contaminants may remain in fresh produce before reaching the consumer, it is important to safely handle fresh produce before eating, especially if it is to be eaten raw.

### Potential for foodborne illness

The most common symptoms of foodborne illness include stomach cramps, nausea, vomiting, diarrhea, headache and fever. Symptoms may begin several hours to days after eating contaminated food. While most people recover completely, some individuals may suffer more serious effects. Those considered to be at higher risk include pregnant women, young children, the elderly and people with weakened immune systems.

Some organisms that have been associated with foodborne illness outbreaks from fruits and vegetables include *Salmonella*, *Shigella*, *E.coli* O157:H7, Hepatitis A, Noroviruses, *Cyclospora* and *Cryptosporidium*.

### Food safety tips

Below are food safety tips to minimize risk of foodborne illness.

#### 1. Shopping

- Examine produce carefully and do not buy fruits and vegetables that are bruised or damaged. Leafy greens should be crisp and not wilted or brown.
- Pre-cut, peeled or ready-to-eat items must be refrigerated or surrounded by ice. Certain whole vegetables, such as leafy greens, will also require refrigeration.
- Keep fresh produce separate from raw meats and fish (and their juices) in the shopping cart and shopping bags.

#### 2. Storage at home

- Items that require refrigeration should be put in the refrigerator as soon as you get home from shopping.
- Maintain the temperature of your refrigerator at 4oC (40oF) or below. It is a good idea to keep a thermometer in the main part of the refrigerator to check routinely.
- Store fresh produce above and away from raw meats and fish (and their juices) and eggs in the refrigerator to prevent cross-

contamination from juices dripping onto produce. It is also important to keep washed and unwashed produce separate.

#### 3. Washing and preparation

- Wash your hands before and after handling food, including fresh produce, for 20 seconds with soap and warm water.
- Make sure that knives and other utensils, dishes, cutting boards and countertops are clean before using. These can be cleaned with soap and hot water. Avoid using sponges and other materials that are difficult to keep clean and dry. These harbor bacteria and their use will contaminate your surfaces.
- Wash fruits and vegetables before eating, cutting or cooking. This is especially important if they are to be eaten raw or uncooked.
- It is not necessary to wash ready-to-eat, bagged, pre-washed leafy greens again before eating; however, it is advised to wash pre-cut or pre-washed leafy greens sold in open bags or containers before eating.
- Before washing, cut away any damaged areas. Be sure to clean the knife before using it again.
- Wash produce by rubbing briskly with your hands under clean cold running water to remove dirt and surface microorganisms. Special produce cleansers are not necessary.
- Produce with a firm skin or hard rind such as carrots, potatoes, oranges, melons or squash should be scrubbed with a clean produce brush under cold running water, even if they will then be peeled and/or cut into sections.
- Discard outer leaves of lettuce or cabbage. Remove remaining leaves and thoroughly rinse leaves in water for about 30 seconds. Gently shake the water off and place them on paper towels or a clean dish towel to dry. A lettuce spinner can also be used to remove excess water.
- Place peeled or cut produce into a clean container for storage or plate for serving. This will prevent it from being cross-contaminated.
- Refrigerate produce within 2 hours after peeling and/or cutting.

### More information

Health Canada fact sheet 'Produce Safety':  
<http://www.hc-sc.gc.ca/fn-an/securit/kitchen-cuisine/safety-salubrite/index-eng.php>

Specific foodborne diseases:  
[http://www2.gnb.ca/content/gnb/en/departments/ocmoh/cdc/content/food\\_andwaterborne.html](http://www2.gnb.ca/content/gnb/en/departments/ocmoh/cdc/content/food_andwaterborne.html)

General food safety information:  
[http://www2.gnb.ca/content/gnb/en/departments/ocmoh/healthy\\_environments.html](http://www2.gnb.ca/content/gnb/en/departments/ocmoh/healthy_environments.html)