

# Safe Handling of Fresh Fruits and Vegetables

Peggy Van Laanen and Amanda Scott\*

**F**resh fruits and vegetables are an important part of a healthy diet. They provide vitamins, minerals and fiber to help keep your body healthy.

Occasionally, fresh fruits and vegetables can become contaminated with harmful bacteria or viruses, which are also known as pathogens. Examples of pathogens include *Salmonella*, *E. coli* 0157:H7 and Hepatitis A. This contamination can occur at any point from the field to your table.

If eaten, contaminated fruit and vegetables can cause foodborne illness. Common signs of foodborne illness include nausea, vomiting, diarrhea, headaches and fever. These symptoms usually appear within 12 to 72 hours.

Although foodborne illness can be serious, there are several easy steps you can take to help keep fresh fruits and vegetables safe to eat.

## Shopping

When shopping for fresh produce, avoid items that are bruised, damaged or moldy or that show signs of insect damage. Bruises and cuts may allow pathogens to

enter a fruit or vegetable. Damaged fruits and vegetables may also spoil faster. If good-quality fresh produce is not available, it may be better to choose canned or frozen fruits and vegetables.

When shopping for pre-cut fresh fruits and vegetables, buy only those that are refrigerated or surrounded by ice. Avoid damaged items and open or torn packages.

Check the use-by dates on packages of pre-cut fruits and vegetables, and be sure to choose fresh items and to eat them by this date.

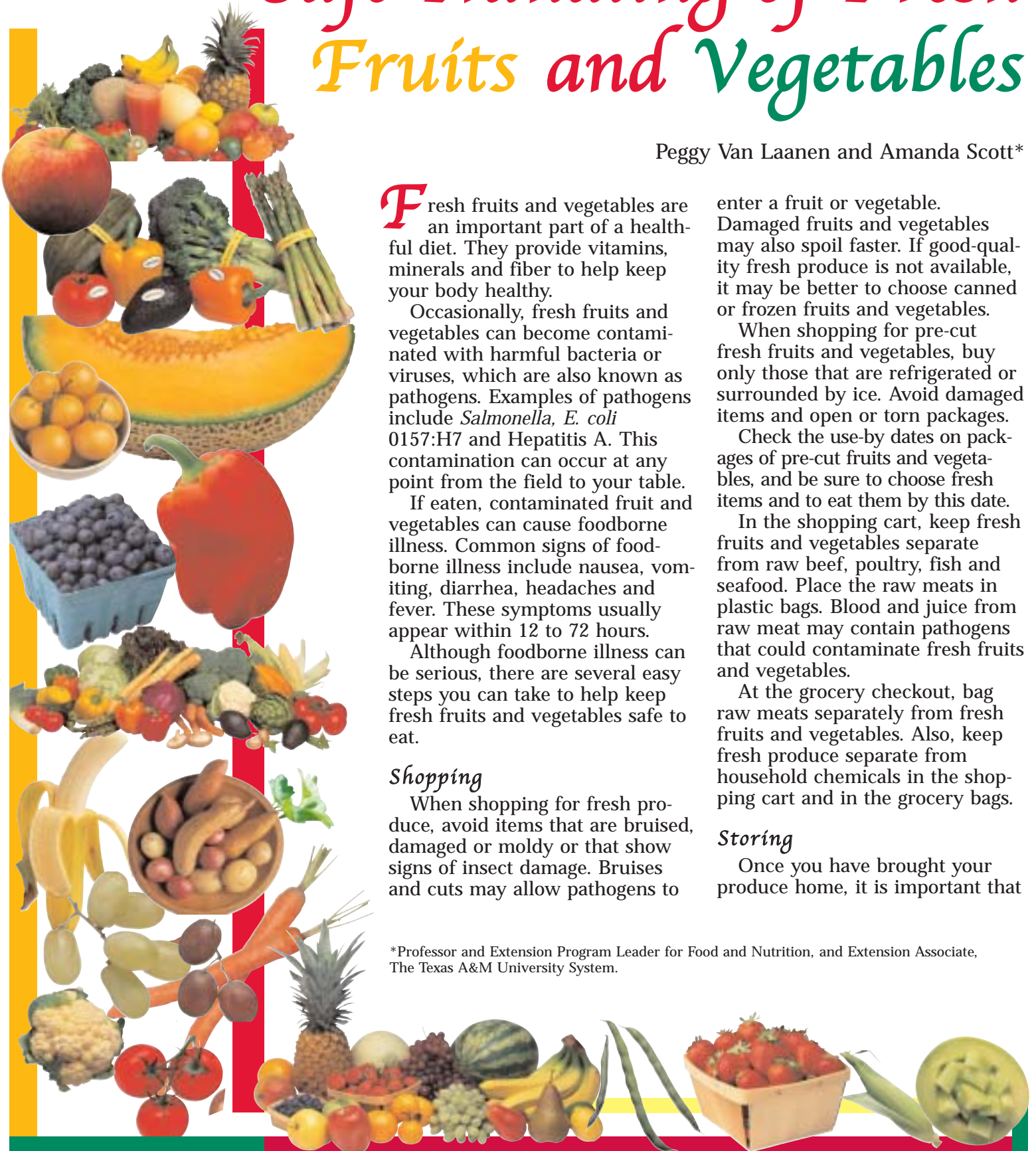
In the shopping cart, keep fresh fruits and vegetables separate from raw beef, poultry, fish and seafood. Place the raw meats in plastic bags. Blood and juice from raw meat may contain pathogens that could contaminate fresh fruits and vegetables.

At the grocery checkout, bag raw meats separately from fresh fruits and vegetables. Also, keep fresh produce separate from household chemicals in the shopping cart and in the grocery bags.

## Storing

Once you have brought your produce home, it is important that

\*Professor and Extension Program Leader for Food and Nutrition, and Extension Associate, The Texas A&M University System.



you store it properly at room temperature and in the refrigerator to prevent foodborne illness.

### **At room temperature**

To store fruits and vegetables safely at room temperature:

- Do not wash them before storage. Instead, wash them when you are ready to use them. If the produce is very dirty, rinse it and then dry it well before storing it.
- Keep your storage areas clean and pest-free. Store fruits and vegetables in bowls, bins or mesh bags off the floor.
- Keep the produce in a cool, dry, dark place. Do not store it near heat sources such as ovens, water heaters, hot water pipes or direct sunlight. Heat causes food to spoil more quickly.
- Store fresh fruits and vegetables away from household cleaning products. These products are poisonous.
- Do not place heavy items on top of fruits and vegetables because bruising can cause spoilage.
- Check stored fruits and vegetables often. Throw away items that show signs of spoilage such as mold or slime.

When in doubt about the safety of a fruit or vegetable, throw it out!

### **In the refrigerator**

All fruits and vegetables must be stored in the refrigerator once they are cut or peeled. Pre-cut fruits and vegetables bought at the store should also be refrigerated immediately.

Here are some tips on storing fruits and vegetables safely in the refrigerator:

- Do not wash whole fruits and vegetables before storing them.
- Be sure to store all fruits and vegetables in the crisper or produce drawer. Do not overload the crisper. It is best to buy only the amount of produce you will use within a few days.
- Cover cut fruits and vegetables tightly with plastic wrap. Or, store them in sealed plastic bags or clean, air-tight containers.
- Keep fruits and vegetables separate from raw beef, poultry, fish and seafood in the refrigerator. Place raw meats on the bottom shelf of the refrigerator in a tray or pan. This will prevent blood or juices from dripping onto fresh produce.
- Do not place heavy items on top of fruits and vegetables.
- Keep the temperature of your refrigerator at 40 degrees F or below. Use a refrigerator thermometer to measure the temperature.

- Clean the refrigerator as needed. Throw out spoiled food and wipe up spills with hot, soapy water.

### *Preparing*

Food can also become contaminated when you are preparing it. To prevent foodborne illness, be sure to keep your hands, your cooking area and utensils, and your produce clean.

Wash your hands with hot, soapy water for 20 seconds before and after handling food and after touching raw meat, changing a diaper, using the restroom, handling a pet or touching anything that could contaminate your hands. Dry your hands with a paper towel.

Also wash all utensils, countertops and cutting boards with hot, soapy water. Then sanitize them with a mixture of 1 teaspoon chlorine bleach in 1 quart of water. Do this before and after preparing food. It is especially important to wash and sanitize cutting boards and utensils that have been in contact with raw meat before using them with fresh produce.

Wash all whole fruits and vegetables before preparing them – even if the skin or rind will not be eaten. This prevents pathogens from being transferred from the rind or skin to the inside of the fruit or vegetable when it is cut.

Wash fruits and vegetables in clean, running water. Do not use detergents, soaps or bleach to wash produce. These may change the taste and could be poisonous.

If the fruits and vegetables are firm (such as potatoes or melons), scrub them with a clean, sanitized fruit/vegetable brush. For soft fruits and vegetables (such as tomatoes), gently rub them with your hands to loosen the dirt. Remove and throw away the outer leaves of lettuce and cabbage before washing them.

To wash berries, parsley and greens, put them in a clean colander and spray them with a kitchen sink sprayer. Or, gently turn the produce as you hold it under running water. Be sure to turn and gently shake the colander as you wash the produce.

When chopping, slicing or peeling fresh produce, use separate cutting boards and utensils for raw meats and fresh produce, or wash and sanitize them between foods.

Once cut or peeled, fresh produce should be refrigerated within 2 hours. If it is left at room temperature for more than 2 hours, throw it away.

Remember: To prevent foodborne illness, buy good-quality fruits and vegetables, store them properly and wash them thoroughly.

Tri-State Fruit and Vegetable Safety Consortium  
<http://fruitandvegetablesafety.tamu.edu>

This publication was sponsored by a grant from the Initiative for Future Agriculture Food Systems, a program of the Cooperative State Research, Education, and Extension Service, which is an agency of the United States Department of Agriculture (USDA-CSREES-IFAFS Grant # 00-52102-9637).

Produced by Agricultural Communications,  
The Texas A&M University System  
Extension publications can be found on the Web at:  
<http://tcebookstore.org>  
Visit Texas Cooperative Extension at:  
<http://texasextension.tamu.edu>

Educational programs of Texas Cooperative Extension are open to all people without regard to race, color, sex, disability, religion, age or national origin.

Issued in furtherance of Cooperative Extension Work in Agriculture and Home Economics, Acts of Congress of May 8, 1914, as amended, and June 30, 1914, in cooperation with the United States Department of Agriculture. Chester P. Fehlis, Director, Texas Cooperative Extension, The Texas A&M University System.

New