Bulletin #4336, Best Ways to Wash Fruits and Vegetables

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Food Safety Facts

Best Ways to Wash Fruits and Vegetables

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With the recent food-borne outbreaks related to produce, consumers, more than ever, have heightened concerns over the safety of fresh produce. It is important to know how to prevent food-borne illness related to these types of foods. Washing fruits and vegetables is the best way to reduce your risks for food-borne illness. In this publication we will explore the procedures for proper produce washing and handling. In addition, effectiveness of commercial fruit and vegetable cleaners will be investigated.

We hear that eating a variety of fresh fruits and vegetables will keep us healthy. Research has shown that eating lots of fresh produce reduces the risk of some cancers and other diseases. Due to promotions such as the Produce for Better Health Foundation's 5 A Day The Color Way campaign, people in the U.S. are encouraged to eat more fruits and vegetables as a part of their normal diet. This is good for public health. On the other hand, we also hear safety warnings about raw fruits and vegetables. News reports have linked Salmonella and *E. coli* outbreaks with alfalfa and other sprouts. Fruits and vegetables are often eaten raw, without cooking to destroy pathogens. Thus they are potential sources of food-borne illness.

According to the FDA (Food and Drug Administration), you should wash raw fruits and vegetables very well before you peel, cut, eat or cook with them. Washing reduces the bacteria that may be present on fresh produce.

What are the best ways to keep raw fruits and vegetables safe?

- Wash your hands with hot soapy water before and after preparing food.

- Clean your counter top, cutting boards, and utensils after peeling produce and before cutting and chopping. Bacteria from the outside of raw produce can be transferred to the inside when it is cut or peeled. Wash kitchen surfaces and utensils with hot, soapy water after preparing each food item.
- Do not wash produce with soaps or detergents.
- Use clean potable cold water to wash items.
- For produce with thick skin, use a vegetable brush to help wash away hard-to-remove microbes.
- Produce with a lot of nooks and crannies like cauliflower, broccoli or lettuce should be soaked for 1 to 2 minutes in cold clean water.
- Some produce such as raspberries should not be soaked in water. Put fragile produce in a colander and spray it with distilled water.
- After washing, dry with clean paper towel. This can remove more bacteria.
- Eating on the run? Fill a spray bottle with distilled water and use it to wash apples and other fruits.
- Don't forget that homegrown, farmers market, and grocery store fruits and vegetables should also be well washed.
- Do not rewash packaged products labeled "ready-to-eat," "washed" or "triple washed."
- Once cut or peeled, refrigerate as soon as possible at 40ºF or below.
- Do not purchase cut produce that is not refrigerated.

What are the best ways to wash leafy greens?

- Leafy greens from the farmers market, grocery store, farm or garden should be stored at 35-40°F within two hours of harvesting or purchasing.
- Wash greens by separating leaves and soaking them in a bowl of cool water for a few minutes. Drain the greens using a strainer or colander and repeat this process. The goal here is dilution.
    - Another technique is to presoak greens for five minutes in a mixture of vinegar and water (1/2 cup distilled white vinegar per two cups water), which should be followed by a clean water rinse. This has been shown to REDUCE but NOT eliminate bacteria contamination, and it may slightly affect texture and taste.
- Drain leafy greens with a clean strainer or colander, then dry with a clean towel or salad spinner. Salad spinners should be thoroughly cleaned with warm soapy water after every use.

Do commercial fruit and vegetable rinses/washes actually work?

Chemical rinses and other treatments for washing raw produce—usually called fruit and vegetable washes—are now being sold. They are often advertised as the best way to keep fresh fruits and vegetables safe in the home. But are these washes effective?

In the fruit and vegetable product industry, chlorine is commonly used to remove microbes such as bacteria and mold from produce. In the home, a water wash, either with or without the help of a produce brush, is typically used to clean fruits and vegetables. So how do water washes hold up to the new "fruit and veggie" washes?

In the Department of Food Science and Human Nutrition at the University of Maine, researchers tested three commercial wash treatments:

- Fit® (Proctor & Gamble, Cincinnati, OH)

- Ozone Water Purifier XT-301 (Air-Zone Inc., Leesburg, VA)
- J0-4 Multi-Functional Food Sterilizer (Indoor Purification Systems, Layton, UT)

All three products were tested according to product directions. We used low-bush blueberries as the produce. A water wash was also tested, using blueberries soaked in distilled water for one to two minutes. Here are the results:

- Fit® washes got rid of roughly the same amount of microbes as distilled water. Both Fit® and distilled water reduced the level of residual pesticides compared to the unwashed samples.
- Both ozone systems—the Ozone Water Purifier XT-301 and the J0-4 Multi-Functional Food Sterilizer—removed microbes from the blueberries. However, the distilled water wash was more effective than either of the ozone washes.
- Because some produce washes are costly, we advise consumers to wash fresh fruits and vegetables with distilled water. Soak all produce for one to two minutes to reduce the risk of food-borne illness.

Why use distilled water? Because distilled or bottled water has been filtered and purified to remove contaminants. NOTE: You can also used very clean cold tap water to clean produce instead of distilled water.

Help prevent food-borne illness from striking you and your family. Wash fruits and vegetables before you eat them.

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