



## Reducing Potential Risks of Foodborne Illness From Fresh Fruits and Vegetables

### *What is the Concern?*

Fresh fruits and vegetables are being linked more frequently to outbreaks of foodborne illness. According to some data, fruits and vegetables cause more illness than chicken and beef combined.

### *What Can be Done to Reduce Risk of Illness?*

- ① Do not purchase fruits and vegetables that are visibly dirty. The probability of contamination with disease causing organisms is higher on dirty products and it takes more effort to wash them.
- ② Discard the outer leaves from leafy vegetables, particularly those grown on or near the ground. These leaves are potentially most heavily contaminated with bacteria. Lettuce and cabbage are good examples of leafy vegetables.
- ③ Wash fruits and vegetables before eating them. This may be done in a dilute soap solution followed by a rinse. Some people may also wish to sanitize their fruits and vegetables in a dilute chlorine solution (one teaspoon bleach in one litre of water). The soap and chlorine solutions **should be at least 5°C warmer than the product** to prevent the water, chemicals, and bacteria from being soaked into the product.
- ④ Wash, rinse and sanitize all food contact equipment and utensils that will be used to prepare fruits and vegetables.

- ⑤ Wash hands thoroughly with soap and warm running water prior to preparing fruits or vegetables for service.
- ⑥ Protect ready-to-eat fruits and vegetables from contamination. Only a few harmful micro-organisms are needed to cause foodborne illness.

### *Special Considerations*

- ① Just because a fruit has a rind (peel) on the outside does not guarantee that a fruit will be safe to eat. Harmful bacteria may be present on rind fruits, such as melons, and may be carried into the edible flesh during cutting/peeling. Sanitize the outside of fruits and vegetables before cutting.
- ② Store cut or cooked fruits and vegetables below 4°C. Cutting or cooking releases nutrient rich fluid on which harmful bacteria and moulds can grow.
- ③ Do not preserve fruits and vegetables in oil unless you are certain they have a pH below 4.6. Fruits and vegetables that have a pH of 4.6 or above must be preserved in a way that prevents the possible growth of *Clostridium botulinum*, which produces the dangerous toxin, botulin.

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**EXAMPLES OF FRUITS AND VEGETABLES  
LINKED TO OUTBREAKS**

<i>Food</i>	<b>Organism(s)</b>
Basil	Cyclospora
Carrots	Giardia
Coleslaw	E. coli 0157:H7, Salmonella
Cucumber	Campylobacter
Egg plant (stored in oil)	C. botulinum (botulism)
Fruit Salads	E. coli 0157:H7
Garlic (stored in oil)	C. botulinum (botulism)
Lettuce	E. coli 0157:H7, Campylobacter, Shigella
Melons	Salmonella, E. coli 0157:H7
Mixed Tossed Salads	Shigella, E. coli 0157:H7
Onions	Salmonella
Parsley	Shigella
Raspberries	Cyclospora
Sprouts	Salmonella, E. coli 0157:H7, B. cereus
Strawberries	Hepatitis A
Unpasteurized juices	Salmonella, E. coli 0157:H7, Cryptosporidium

Reference:

- Surface decontamination of fruits and vegetables eaten raw: a review, WHO/FSF/FOS/98.2.
- Food Protection Report, Page 4, May 1999.
- Food Protection Report, Page 3, July 1997.
- Food Protection Report, Page 3, November 1998.

*For more Information contact your local  
Environmental Health Officer*

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