

E. coli O157:H7

What is *E. coli* O157:H7?

The digestive systems of all animals, including humans, are home to billions of essential bacteria. *Escherichia coli* or *E. coli* is one group of naturally-occurring bacteria in our intestine.

Most types of *E. coli* do not cause illness in healthy humans and some assist in the production of vitamins. Some kinds of *E. coli*, however, cause cramps and diarrhea in humans. One dangerous type, called *E.coli* O157:H7, produces a toxin that can cause severe illness.

E. coli O157:H7 can be found in cattle, other farm animals, (i.e. pigs, sheep, etc) and wildlife, including deer. *E.coli* O157:H7 can also be passed from person to person by unwashed hands, and from contact with contaminated water or manure. Bacteria can also be transferred to meat, including ground meat, unpasteurized milk and cider, and many fruits and vegetables.

Risks from illness caused by *E. coli* O157:H7 are greatest for young children, the elderly, pregnant women, and anyone with ill health. However, everyone needs to guard against these bacteria.

What are beef producers and meat processors doing to prevent *E. coli* O157:H7?

As few as 10 bacteria are all it takes to cause illness from *E. coli* O157:H7. As these bacteria are very common, every part of the food and water production system must work to control the risk. The beef industry has spent millions of dollars on research projects with the goal of reducing or eliminating these bacteria. Research projects include a vaccine to prevent *E. coli* O157:H7 growth in live cattle and the search for feeds that may prevent its spread. The beef industry has also developed methods to treat meat surfaces with steam to reduce *E. coli* O157:H7 during processing.

Beef producers are developing and adopting on-farm manure management plans. These plans include procedures to keep manure away from water supplies.

Meat processors have also developed internationally recognized systems known as HACCP (Hazard Analysis and Critical Control Point) plans to control *E.coli* O157:H7 and other foodborne bacteria. These plans identify potential food safety hazards and monitor the most important production steps (critical points) to ensure these hazards are controlled before the product is sent to the grocery store.

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What can consumers do to prevent foodborne illness?

Research continues to find ways to reduce the levels of *E. coli* O157:H7 and other harmful bacteria in food. There are also important ways that consumers can safeguard their health through proper hygiene, effective food preparation and thorough cooking of ground meats.

The Beef Information Centre (a division of the Canadian Cattlemen's Association) is a founding member of the Canadian Partnership for Consumer Food Safety Education. The Partnership was formed to help consumers fight foodborne illness in the home. Here are four simple messages for safe food handling:

CLEAN

Wash hands and surfaces often

- ✓ Wash hands often with soap and water before handling food—be especially vigilant after using the washroom, changing diapers, or handling animals.
- ✓ Always wash hands very well after handling raw meat, poultry or fish.
- ✓ Clean and then sanitize counter tops, cutting boards and utensils with a mild bleach solution before and after food preparation.
- ✓ Wash all vegetables and fruit very well. Risks are reduced if vegetables are cooked.
- ✓ Do not handle food if suffering from diarrhea. If anyone in your household has diarrhea, do not share cutlery or dishes. Towels and bedding should be washed separately in hot water and bleach.

CHILL

Refrigerate food products promptly.

- ✓ Keep meat in the refrigerator.
- ✓ Thaw meat in the refrigerator, not at room temperature.
- ✓ Refrigerate leftovers within two hours.
- ✓ Foods should be kept at 4°C (40°F) or below.

These tips will protect against *E. coli* as well as other foodborne bacteria. For more information, visit the Canadian Partnership for Consumer Food Safety Education at www.canfightbac.org.

To order the information booklet "*Food Safety at Home - You're in Control*" visit www.beefinfo.org (go to the Order Centre).

COOK

Cook to proper temperature.

- ✓ For ground meat, cook until the centre reaches 71° C (160° F).
- ✓ Never eat raw meat.
- ✓ Drink only milk or cider that has been pasteurized and water from a source that is known to be safe. Never drink untreated surface water (i.e. from lakes or streams).

SEPARATE

Don't cross-contaminate.

- ✓ Do not re-use knives, cutting boards, plates, etc. that have been in contact with raw meat until they have been thoroughly cleaned and sanitized with a mild bleach solution.
- ✓ Don't place cooked meat on the plate or tray you used to carry the raw meat.
- ✓ Take care that the juices and marinades from meat and poultry do not drip onto other foods.
- ✓ Before marinating meat, set aside some marinade to be used for basting.