

## **E. coli 0157:H7 (Hemorrhagic E. coli)**

In January 1993, a large number of individuals in the northwest region of the United States became ill after consuming undercooked ground beef at a fast food restaurant. The organism responsible for the widespread outbreak of foodborne illness was identified as Escherichia coli 0157:H7, commonly referred to as hemorrhagic E. coli. At least one death was associated with this outbreak.

Hemorrhagic E. coli has been isolated in various foods including ground beef, apple juice, raw milk, ham, venison, and contaminated drinking water. Since the first cases were reported in 1982, it is estimated that 16 deaths have resulted.

The primary illness caused by ingestion of hemorrhagic E. coli is known as hemorrhagic colitis. Symptoms of this illness include severe abdominal cramps, followed by watery and often bloody diarrhea, vomiting, and nausea. Hemorrhagic colitis usually lasts from 4 to 10 days.

In extreme cases, hemorrhagic colitis may develop into a more severe illness known as hemolytic uremic syndrome (HUS). HUS primarily affects children and the elderly. HUS affects the urinary tract may cause acute kidney failure. In adults, HUS may progress to thrombotic thrombocytopenic purpura (TPP), which affects the central nervous system and causes seizures, coma and possible death.

Hemorrhagic E. coli is capable of surviving both refrigeration and freezing but is destroyed by heat. The Food and Drug Administration recommends that ground beef patties be cooked thoroughly to at least 155°C to destroy any hemorrhagic E. coli that may be present.

In addition, food processors and consumers should practice safe food handling. The Food Safety and Inspection Service recommends the following practices:

- Never drink raw, unpasteurized milk.
- After shopping, quickly freeze or refrigerate perishable foods.
- Never thaw food on the counter or let it sit out of the refrigerator over 2 hours.
- Use refrigerated ground meat and patties in 1-2 days; frozen meat and patties in 3-4 months.
- Wash hands, utensils and work areas with hot soapy water after contact with raw meat and meat patties.
- Follow rules of personal hygiene, especially after bathroom use or after diapering of infants.
- Cook meat and patties until the center is gray or brown. Juices should run clear with no trace of pink. All meat, poultry and fish should be well cooked.
- If eating out, send back any meat, poultry or fish product that does not appear thoroughly cooked.
- Serve cooked food with clean plates and utensils.
- Microwave carefully. If your oven is a lower wattage than what is shown in the instructions, you'll need to cook food longer or at a higher setting. Cover and rotate food for even

cooking. Let food stand outside the oven after cooking if so directed. The food will finish cooking as it stands.

For more information about E. coli 0157:H7, please contact your Midwest Laboratories representative:

Erin Smith, M.S.

Nutritional Sciences

or

Ken Johnson, M.S.

Supervisor, Nutrition and Biological Sciences

Midwest Laboratories, Inc.

13611 B Street

Omaha, NE 68144

Phone: (402) 334-7770

Fax: (402)445-9121