

**WHATCOM COUNTY  
Health Department**

*Leading the community in promoting  
health and preventing disease.*



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**FOR IMMEDIATE RELEASE**

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**E.coli O157:H7 outbreak in Whatcom County, Washington  
Final Investigation Summary**

**BELLINGHAM**— The Whatcom County Health Department (WCHD) in Bellingham investigated an outbreak of Shiga toxin-producing E. coli O157:H7 infections. The Washington State Department of Health and the Centers for Disease Control and Prevention assisted with the investigation.

Environmental contamination with E. coli O157:H7 of the Dairy Barn at the Northwest Washington Fairgrounds was the likely source of this outbreak. All of the ill people either attended the Milk Makers Fest between April 21 and 23 at the Northwest Fairgrounds; helped with the event between April 20 and 24; or were close contacts of people associated with the event. Most of the ill people were children, including older children who helped with the event. More than 1,000 children from primary schools in Whatcom County attended the event on these days.

The investigation team greatly appreciates the time and support of many community stakeholders who made this work possible, including Whatcom County schools, teachers, parents, students, Whatcom County Dairy Women, Northwest Washington Fair, and clinical and lab providers.

*Final Case Counts*

Disease investigators calculated case counts based only on lab-confirmed infection with E. coli O157:H7 or physician-diagnosed hemolytic uremic syndrome (HUS), a type of kidney failure.

- 25 people were confirmed cases.
  - 9 of these cases were considered secondary cases (the ill person didn't attend the event but had close contact with someone who did attend).
- No one died.
- 10 people were hospitalized.
- 6 people developed HUS.

*Final Environmental Sampling Results*

Multiple samples from the environment where the event was held were collected on two different days (April 30 and May 13) and submitted for laboratory testing. The samples indicated that several areas of the north end of the Dairy Barn at the Northwest Washington Fairgrounds were

contaminated with the same strain of E. coli that made people ill. Negative results do not rule out contamination in other parts of the barn.

The outbreak strain of E. coli O157:H7 was identified in the following areas of the Dairy Barn:

- Manure bunker
- Hay maze area
- Bleachers by east wall
- Bleachers by west wall

Contamination of the environment most likely occurred before the Milk Makers Fest. Any environment where animals have been kept, such as barns, should be considered contaminated. E.coli 0157 can survive in the environment up to 42 weeks (Varma, 2003 JAMA).

### *Epidemiologic Investigation Findings*

As part of the investigation, officials interviewed many of the confirmed cases to find out what they did during the event before they got ill. Officials also interviewed “controls,” meaning people who attended the Milk Makers Fest but did not get ill to find out what they might have done differently.

The results of analyzing the data collected during the interviews are not final, but a few preliminary findings stand out:

- Event attendees who reported washing or sanitizing their hands before eating lunch were less likely to become ill.
- Children who reported always biting their nails were more likely to become ill.
- Leaving animal areas without washing hands might have contributed to an increased risk of transmission.
- Eating in animal areas might have contributed to an increased risk of transmission.

### **Recommendations for Event Organizers:**

- Evaluate and update plans for cleaning and disinfection before, during, and after events, particularly surfaces with high levels of hand contact (such as seats, door or fence handles, and hand railings).
- Evaluate and update measures to restrict access to areas more likely to be contaminated with animal manure.
  - This is especially important for people at higher risk for severe illness. These people include young children, pregnant women, adults older than 65, and people with weakened immune systems.
- Ensure access to hand washing facilities with soap, running water, and disposable towels.
- Display signs and use other reminders to attendees to wash hands when leaving animal areas.
- Store, prepare, or serve food and beverages only in non-animal areas.

### **Recommendations for the Public:**

- Consider any environment where animals have been kept, such as barns, to be contaminated with bacteria or viruses that can make people ill.

- Hands should always be washed immediately when exiting animal areas, after removing dirty clothing or shoes, and before eating or drinking.
  - Hand washing with soap, running water, and disposable towels is the most effective method.
  - Adults should always supervise young children while they wash their hands.
- Food and beverages should be consumed in non-animal areas and only after washing hands first.
- Be aware that objects such as clothing, shoes, and stroller wheels can become soiled and serve as a source of germs after leaving an animal area.
- Nine secondary cases were reported during this outbreak. It's important for people infected with E. coli or those with a family member infected with E. coli to follow these precautions to prevent secondary infection:
  - Wash your hands thoroughly with soap and water immediately after using the restroom or changing a child's diaper.
  - Wash your hands before and after preparing food for yourself and others.
  - Stay home from school or work while diarrhea persists; most people can return to work or school when they no longer have diarrhea. Special precautions are needed for food handlers, health care workers, and child care providers and attendees. Check with your employer before returning to work, and check with your child's child care center before resuming child care.

More information on E. coli is available at the CDC website <http://www.cdc.gov/ecoli/general/>

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