

Recommended Practices to Avoid Infections from Animals

Introduction

Healthy farm animals can be carriers of microorganisms that occasionally cause illness in people. Some of the organisms that can cause illness in humans include: *Salmonella*, *Cryptosporidia*, *Listeria*, and *E. coli* O157:H7. *E. coli* O157 can pose a serious hazard to human health, especially young children, the elderly and immune-compromised individuals. As a parent, teacher, or guardian there are steps that you can take to minimize the risk to you, your family, or children under your supervision from acquiring an infection during a visit to a petting zoo or farm. The following guidelines can help to make your farm visit safer, healthier, and more enjoyable.

Guidelines to reduce the risk of hand to mouth infections

- Adults should only allow children to come into contact with animals under supervision. Teachers and guardians should have no more than 8 children under their guidance. Children under 8 years of age should only be allowed contact with animals under direct supervision.
- Avoid footwear that exposes the toes and heels to the farm environment.
- Ask the children under your direction to clean their footwear before they leave the farm. Wash hands after this step. Remind them to wash their hands after taking their shoes off at home.
- Instruct the children that they should not eat food or drink beverages, especially in open containers, while they are in animal housing areas. All eating and drinking should be done in designated food areas.
- Do not feed animals with personal food.
- Do not kiss the animals.
- Do not allow children to handle any animal food or bedding that might be contaminated with manure.
- Do not allow children to play on or handle any gates or stall dividers that might be contaminated with manure.
- Discourage children from chewing their nails or putting their fingers into their mouth, especially in animal areas.

Guidelines after you have visited petting zoos or farms

- **Children under your supervision must wash their hands after visiting a petting zoo or farm. Teach proper hand washing techniques.**
 - Wet hands with warm running water
 - Add soap, and then rub the hands together making a soapy foam. Do this away from the running water for at least 20 seconds, being careful not to wash the foam away. Wash the front and back of the hands as well as between fingers and around/under the fingernails.
 - Rinse hands well under running water. Let the water run into the sink and not toward the elbows.
 - Turn off the water with a paper towel and dispose in a waste can.
 - Dry hands thoroughly with a clean towel or a hot air drier.
 - After visiting the restroom, children should wash their hands in the same manner.

Any children that show signs of illness such as diarrhea that progresses to bloody diarrhea, severe abdominal cramps, nausea and vomiting must receive medical attention immediately. The physician should be given as complete a history as possible, including food consumed and places visited in the past 72 hours.

- Human to human transmission of *E. coli* O157, *Salmonella*, and *Cryptosporidia* has been documented. Caregivers must be careful with personal hygiene to prevent spreading these illnesses.

Illness caused by *E. coli* O157:H7 *

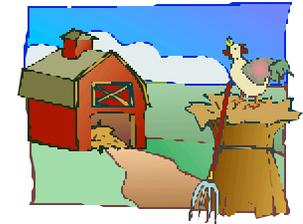
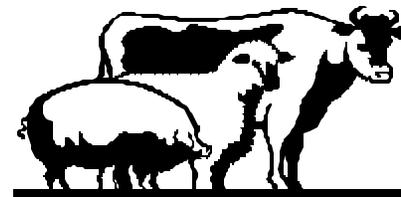
- Infants and the elderly are the most susceptible. The incubation period is usually 3-4 days. An infection with *E. coli* O157 typically begins with severe abdominal cramps and non-bloody diarrhea. Vomiting occurs in about half of the people infected. Fever is not a typical sign, and a low-grade fever only occurs in about 30% of the cases. On the second or third day of illness, stools may become bloody in 30% to 70% of the cases. Most people get better within a week even without antibiotics. Seldom are there lasting health effects.
- Hemolytic Uremic Syndrome (HUS) is a severe complication that can occur up to 3 weeks after *E. coli* O157 infection. HUS happens in fewer than 2% to 7% of the symptomatic cases, primarily in the very young or elderly. Bacterial toxins damage small blood vessels in the kidney and destroy platelets and red blood cells. Kidney function may be so greatly reduced that dialysis is necessary. At the present time there is no treatment. However, treatment protocols are under experimental development.
- The most common way people become infected is by the ingestion of contaminated food or water. Undercooked ground beef is most often the source. Other foods such as, unpasteurized apple cider, sprouts, lettuce, and unwashed fruits or vegetables can also be a source of infection. Person to person transmission can occur and may play an important role in the spread among family members, in day-care settings, or in institutions.
- Hamburger and other foods containing ground beef should never be served rare or raw. When properly cooked, the inside of ground beef should be brown rather than pink, with an internal temperature of 160°F, and the juices should be clear. Drinking of raw (unpasteurized) milk or eating foods made with raw milk should be avoided. Fruits and vegetables should be washed.
- Any individual who has eaten suspect food or has had contact with farm animals and develops illness such as diarrhea progressing to diarrhea with blood, severe abdominal cramps, and nausea should immediately seek medical attention. The physician should be given a list of the foods consumed and the places visited in the past 72 hours.

*Abstracted from the PA Department of Health web site

Reducing *E. coli* Infections in People

Avoiding illness when handling animals or visiting exhibitions or farms

Advice for parents, teachers, and guardians



For more information call:

***PA Department of Health (877) PA Health
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www.health.state.pa.us/hpa/cdi/ecoli.htm
www.cdc.gov/ncidoc/dbmd/diseaseinfo/escherichiacoli_g.htm
www.vetsci.psu.edu/ecoli.cfm

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