Enteric Bacteria

The feces of ANY animal contain a variety of bacteria which can cause gastro intestinal signs in some individuals. The way to keep yourself safe is to always wash your hands after working with animals.

What kind of germ is enteric bacteria?

The intestines of all animals are colonized by many microbes. Most of these are harmless, or even beneficial. Others are harmless in normal individuals, but can produce disease in the very young, those with weakened immune systems, or in a new host that has no prior experience with the microbe. Some bacteria are much more pathogenic and can produce disease in normal individuals on a regular basis.

These are a few of the enteric bacteria most often associated with disease in humans:

- Salmonella
- Campylobacter jejuni
- Eschericia coli (pathogenic strains)
- Shigella

Biology

The genus Salmonella includes a very large number of species and serotypes. Many Salmonellae are infectious for man. Salmonellae can cause disease in animals, but may also be carried by apparently healthy animals. Salmonellae are especially likely to be carried by reptiles, birds, and wild rodents. Salmonellosis is one of the most common causes of diarrhea and "food poisoning" in man.

Campylobacter jejuni is also a very common cause of diarrhea in man. It can be carried by most other mammals and by birds; it is especially likely to be found in cattle, sheep, dogs and poultry. In mammals, Campylobacter is most likely to be seen in young animals with diarrhea. A very high proportion of chickens shed Campylobacter in their feces, yet they rarely show any sign of illness.

Escherichia coli is one of the most common intestinal bacteria and is a normal part of every mammal's intestinal flora. While most E. coli bacteria are harmless, there are a few specific types of E. coli that can produce disease. Disease caused by pathogenic strains of E. coli is most likely to be seen in cattle, swine, and humans.

Shigella is a tropical bacteria species that is often seen in primates, but rarely in other animals. Shigella is a common cause of intestinal illness in the tropics, but is rare in this country. The species of Shigella seen in laboratory primates seldom infects people, but is at least a potential risk. The signs of all the above in man would be similar, although they may vary in severity. All can cause diarrhea, cramping, and fever. Most cases are minor, but these infections can be quite severe, especially in the young, the pregnant, or those with compromised immune systems.

How can humans get enteric bacteria?

The transmission of all these organisms to man is by the fecal-oral route. Material contaminated by the feces of animals must be put directly into the person's mouth.

Most human cases of enteritis and diarrhea caused by enteric bacteria are associated with food poisoning. These organisms are very common in the intestines of animals, and may contaminate animal products during processing. The highest risk is associated with unpasteurized milk and undercooked hamburger or poultry.

Living animals may also transmit these diseases to people. The highest risk is associated with young animals with diarrhea. In order to become infected, the human must place material from the animal's feces directly in his or her mouth. People do this when they fail to wash their hands after handling animals.

Prevention

The single most effective preventive measure that you could take to protect yourself would be thorough, regular hand washing with soap and warm water after handling animals, especially young animals with diarrhea.

Good ways to infect yourself would be to eat or drink in the animal facility, or to fail to wash your hands before eating, drinking or smoking after working with animals.

If you work with young animals with diarrhea, and you develop intestinal signs, you should report the illness to your supervisor and consult with your physician.