

# Cryptosporidium

## What is Cryptosporidium?

Cryptosporidium is a single-celled parasite that infects the gastrointestinal system of many mammals, including humans. There are many species of cryptosporidium. The species that infects humans is *cryptosporidium parvum*. This species can also cause illness in young calves. Another species, *cryptosporidium andersoni* (formerly called *cryptosporidium muris*), is sometimes present in adult cattle but does not infect humans.

## How is it spread?

Cryptosporidium forms spore-like eggs called oocysts, which can survive for long periods in the environment and are resistant to heat, cold and chlorine. These oocysts are released with bowel movements of infected humans or animals. Other humans and animals can then be infected through such means as contaminated water, food, or poor hygiene.

Human effluent is considered the major source of water contamination.

## What are the symptoms in humans?

The illness caused by cryptosporidium is known as cryptosporidiosis. Symptoms include diarrhea, cramping, possibly vomiting and slight fever. The symptoms appear from 2 to 10 days after infection.

## What is the treatment?

Treatment is usually not required for healthy people and symptoms usually subside within 2 weeks. The elderly, very young and people with compromised immune systems may need to be treated for dehydration.

## How can illness from cryptosporidium be prevented in humans?

The most important preventative measure is good hygiene.

- Wash hands with soap and water after using the toilet, before handling food and after diaper changes.
- Avoid swallowing water while swimming.
- Protect others by not swimming if experiencing diarrhea.
- Avoid drinking untreated water from shallow wells, lakes, streams etc.
- If unable to avoid drinking untreated water, treat the water yourself by boiling for at least 1 minute.
- As cryptosporidium is resistant to chlorine, water treatment must include filtration with a filter that has an absolute pore size of at least 1 micron or that has been NSF-rated for "cyst-removal".
- Wash and peel raw vegetables and fruits before eating, using uncontaminated water.

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## What is the cattle industry doing to protect water sources from cryptosporidium?

While human effluent is recognized as being the major source of outbreaks of cryptosporidiosis, cattle producers realize there are many reasons for protecting water sources from cattle manure.

Cattle producers are subject to both federal and provincial water quality legislation that prohibits deliberate contamination of water sources. Producers also follow good management practices for the handling of manure as a fertilizer and soil enhancer. Large livestock production operations are required to construct manure containment facilities away from water sources.