Cryptosporidiosis

Epidemiology in New Zealand
Cryptosporidiosis is caused by infection with the coccidian protozoan Cryptosporidium parvum.

More detailed epidemiological information is available on the Institute of Environmental Science and Research (ESR) surveillance website at www.surv.esr.cri.nz

Further information on foodborne illness is available at www.foodsafety.govt.nz and www.mpi.govt.nz.

Case definition

Clinical description
An acute illness that includes symptoms of diarrhoea (may be profuse and watery) and abdominal pain. The infection may be asymptomatic.

Laboratory test for diagnosis

Laboratory confirmation requires detection of C. parvum oocysts in a faecal specimen.

Case classification

- **Under investigation**: A case that has been notified, but information is not yet available to classify it as probable or confirmed.
- **Probable**: A clinically compatible illness that either is a contact of a confirmed case of the same disease or has had contact with the same common source – that is, is part of a common-source outbreak.
- **Confirmed**: A clinically compatible illness that is laboratory confirmed.
- **Not a case**: A case that has been investigated and subsequently found not to meet the case definition.

Spread of infection

Incubation period
Probably 1–12 days, with an average of 7 days.
Mode of transmission
Faecal-oral, including person to person, from infected animals or from contaminated water or food.

Period of communicability
Oocysts, the infectious stage, appear in the faeces at the start of illness and are excreted for several weeks after symptoms resolve.

Notification procedure
Attending medical practitioners or laboratories must immediately notify the local medical officer of health of suspected cases. Notification should not await confirmation.

Management of case

Investigation
Obtain a history of contact with animals, consumption of untreated water, recreational water contact, exposure to faeces or contact with other symptomatic cases.

Investigate further if there is an outbreak, or if the case is in a high-risk occupation, such as a food handler or a staff member at an early childhood service, or attends an early childhood service (see ‘Other control measures’ below).

Ensure stool samples from people with diarrhoea have been tested for Cryptosporidium spp.

Restriction
In any health care facility, only standard precautions are indicated in most cases; if the case is a diapered or incontinent child, apply contact precautions for the duration of illness.

In the case of immunocompromised people, there is currently no available chemotherapeutic agent that can be used to treat the infection, hence infection prevention and control are of major importance to protect such people. For further details, refer to the exclusion and clearance criteria in Appendix 2: Enteric Disease.

Cases should not use public swimming pools for 2 weeks after symptoms have resolved.

Counselling
Advise the case and their caregivers of the nature of the infection and its mode of transmission.

Educate about hygiene, especially hand cleaning.
Management of contacts

Definition
All people who have had close physical contact (for example, household) with a symptomatic case or who have been exposed to the same animal, water, food or other material suspected to be the source of infection.

Counselling
Advise all contacts to seek early medical attention if symptoms develop.

Other control measures

Identification of source
Check for other cases in the community. Investigate potential food, water or swimming pool sources of infection only if there is a cluster of cases or an apparent epidemiological link.

If indicated, check water supply for microbiological contamination and compliance with the latest New Zealand drinking-water standards (Ministry of Health 2008).

If a water supply is involved, liaise with the local territorial authority to inform the public. Advise on the need to boil water.

If indicated, check swimming pools for compliance with the Standard for Pool Water Quality (NZS 5826:2010). Liaise with the local territorial authority staff to investigate potential water or pool sources of infection.

Disinfection
Clean and disinfect surfaces and articles soiled with stool. For more details, refer to Appendix 1: Disinfection.

Health education
Consider a media release and direct communication with relevant early childhood services, schools and health professionals to encourage prompt reporting of symptoms. In communicating with doctors, include recommendations regarding diagnosis and infection control.

Hand-cleaning facilities should be available and used after contact with animals. Young children should be supervised during contact with animals and during hand cleaning. Food-related activities should be separated from areas that house animals.
In early childhood services or other institutional situations, ensure satisfactory facilities and practices regarding hand cleaning; nappy changing; toilet use and toilet training; preparation and handling of food; and cleaning of sleeping areas, toys and other surfaces.

Educate the public about safe food preparation (see Appendix 3: Patient Information).

**Reporting**

Ensure complete case information is entered into EpiSurv.

Liaise with the environmental health officer of the local territorial authority where food premises are thought to be involved.

Liaise with the Ministry for Primary Industries if a contaminated commercial food source is thought to be involved.

If a cluster of cases occurs, contact the Ministry of Health Communicable Diseases Team and outbreak liaison staff at ESR, and complete the Outbreak Report Form.

**References and further information**