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## Diarrheal Diseases

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**Description:** Diarrhea can be caused by a variety of different germs including bacteria, viruses and parasites. However, children can sometimes have diarrhea without having an infection such as when diarrhea is caused by food allergies or as a result of taking medicines such as antibiotics. A person should be considered to have diarrhea when the person has three or more loose stools in a 24 hour period.

**Symptoms:** Persons with diarrhea may have additional symptoms including nausea, vomiting, stomachaches, headache or fever.

**How it is Spread:** Diarrhea is spread from person to person when a person touches the stool of an infected person or an object contaminated with the stool of an infected person and then ingests the germs, usually by touching the mouth with a contaminated hand. Diarrhea can also be spread by contaminated food and water. Children in diapers and child care providers who change their diapers have an increased risk of diarrheal diseases.

**Incubation:** Varies on the causative agent of the diarrhea.

The most common diarrheal diseases in the child care setting are discussed individually below. If the cause of diarrhea is known, **refer to the Staff and Child Re-admittance Criteria section** for the re-admittance information for the diseases described.

***Shigella*** - This bacterial infection is spread by the fecal-oral route and may be spread through groups of children who are toilet trained, as well as through groups of children who are in diapers. Signs of *Shigella* infection include severe bloody diarrhea, fever, cramping, nausea and vomiting. It may be spread to parents and siblings and whole families may be ill in a matter of days. The illness may even cause death.

***Campylobacter*** - Persons often become infected with this bacterium when they eat or drink foods or liquids contaminated with feces of infected animals (birds and mammals). Exposure to human feces in such a manner, especially diapered children, may promote transmission in child care settings. Many people become infected from eating poorly cooked meats, especially poultry. Water-borne infections result from drinking water from contaminated wells, springs or streams. Outbreaks have been reported in child care facilities but they are rare and sporadic.

***Giardia*** - This protozoan illness is spread from person to person when a person touches the stool of an infected person (or an object which has been contaminated by the stool of an infected person) and then ingests the germs. Infection is spread by lack of proper hand washing after bowel movements, after changing diapers or before preparing foods. It may also be transmitted through contaminated water such as in water play tables. Outbreaks have also been linked to portable wading pools and contaminated water supplies. Many children infected with *Giardia* have no symptoms. Other children may have foul-smelling greasy diarrhea, gas, stomachaches, fatigue and weight loss. It can be easily spread in the child's home and parents and siblings may become infected.

***Cryptosporidiosis*** -This protozoan illness is spread through fecal-oral transmission by feces of an infected person or an object that has been contaminated with the infected person's feces. Infection can also occur if someone ingests food or water contaminated with the parasite. Outbreaks in the child care setting are most common in late summer/early fall (August/September), but may occur at any time. Spread is highest among children who are not toilet-trained and higher in toddlers than in infants. The greatest risk is for those who change diapers. Symptoms include watery diarrhea and stomachache, but may include nausea and vomiting, general ill feeling and fever. Symptoms can come and go for up to 30 days, but may subside in less time. Sanitation during an outbreak should be with hydrogen peroxide in the child care setting.

***Salmonella*** - Persons with this infection experience fever, stomach cramps, nausea and vomiting in addition to diarrhea. Symptoms may last for two weeks or more, but are usually gone within a week. The bacterium is present in feces of ill and recently recovered persons and infections may spread from person to person. Some foods such as chicken and eggs come from naturally infected sources while others such as tomatoes and some vegetables, become contaminated during processing. It is important to practice good hygiene and hand washing when preparing food. Also, pets such as turtles, lizards and birds, often carry *Salmonella* in their digestive tracts.

***Yersinosis*** - This bacterial infection is spread by the fecal-oral route by eating or drinking contaminated food and water and by contact with infected people or animals. *Yersinia* infection may cause mild or severe diarrhea, fever, vomiting, headache and abdominal cramps. Diarrhea may last from a few days to one or two weeks; chronic diarrhea, lasting several months, may develop. The infection may sometimes mimic appendicitis. It is relatively uncommon and usually occurs as a single, isolated event. *Yersinia* has been found in raw milk, mussels, oysters, scallops, raw chitterlings (pig intestines), tofu and canned beef.

**Prevention tips:** Avoid drinking unpasteurized milk and improperly treated water, practice good hand washing after handling animals, especially domestic pets.

***E. coli*** - Persons infected with this bacteria may have very mild illness while others develop severe bloody diarrhea. Infections with this organism are often the result of eating undercooked meat (ex. hamburger). Feces may also spread this infection and children and staff may pick it up from ill persons in child care facilities.

## Responsibilities of Parent and Caregivers/Control

To prevent diarrheal diseases from spreading in the child care setting:

- Exclude staff or children with diarrhea of unknown cause from the child care setting until diarrhea-free for 24 hours or unless a physician has stated the diarrhea is noninfectious and it can be contained in a diaper, potty chair or toilet. If the cause of diarrhea is known, **refer to the Staff and Child Re-admittance Criteria section.**
- Make sure everyone in the child care setting practices good hand washing techniques.
- Wash your hands after using the toilet, helping a child use the toilet or diapering a child and before preparing, serving or eating food.
- Have children wash their hands upon arrival at your child care facility, after using the toilet, after having their diapers changed (an adult should wash an infant's or small child's hands) and before eating snacks or meals.
- Sanitize toys, bathrooms and food preparation surfaces daily.
- Use disposable paper towels for hand washing.
- Notify parents of children who have been in direct contact with a child who has diarrhea. Parents should contact the child's physician if their child develops diarrhea.
- Use disposable table liners on diaper changing tables and sanitize tables after each use.
- If at all possible, the person who prepares and/or serves food should not change diapers.
- In larger programs, diapered children should be cared for by different caregivers in a room separate from toilet-trained children.
- Use diapers with waterproof outer covers that contain liquid stool or urine or use plastic pants.
- Make sure children always wear clothes over diapers.
- Do not allow diapered children to use wading or swimming pools unless they are wearing leak-proof swim diapers.
- Notify your local health department if the number of cases is excessive, even if undiagnosed. There are laws/regulations dealing with persons with diarrheal diseases who attend/work at child care centers.

\* Notify the local health department if two or more people in one classroom or home have diarrhea within a 48-hour period. Also notify the local health department if you learn or suspect that a child in your care has diarrhea due to *Shigella*, *Campylobacter*, *Salmonella*, *Giardia*, *Cryptosporidium*, *E. coli* 0157: H7 or *Yersinia*. Any child with prolonged or severe diarrhea or diarrhea with fever, or a known exposure to someone with infectious diarrhea, should be seen by a health care provider. (See the ODH Communicable Disease Chart)

**Treatment:** Depends on the causative agent. (See the ODH Communicable Disease Chart).