

## Shigellosis

### What is shigellosis?

Shigellosis is an infectious disease caused by a group of bacteria called *Shigella*. Most people who are infected with *Shigella* develop diarrhea, fever, and stomach cramps starting a day or two after they are exposed to the bacteria. The diarrhea is often bloody. Shigellosis usually resolves in 5 to 7 days. Persons with shigellosis in the United States rarely require hospitalization. A severe infection with high fever may be associated with seizures in children less than 2 years old. Some persons who are infected may have no symptoms at all, but may still pass the *Shigella* bacteria to others. Shigellosis is rare in New Hampshire.

### How can *Shigella* infections be diagnosed?

Many different kinds of germs can cause diarrhea, so establishing the cause will help guide treatment. Determining that *Shigella* is the cause of the illness depends on laboratory tests that identify *Shigella* in the stools of an infected person. The lab can also do special tests to determine which antibiotics, if any, would be best to treat the infection.

### How can *Shigella* infections be treated?

People with mild infections usually recover quickly without antibiotic treatment. However, appropriate antibiotic treatment kills *Shigella* bacteria and may shorten the illness by a few days. Antidiarrheal agents may make the illness worse and should be avoided. Contact your healthcare provider for proper treatment.

### What are the long-term consequences of *Shigella* infection?

Persons with diarrhea usually recover completely, although it may be several months before their bowel habits are entirely normal. About 2% of

persons who are infected with one type of *Shigella*, *Shigella flexneri*, later develop pains in their joints, irritation of the eyes, and painful urination. This is called post-infectious arthritis. It can last for months or years, and can lead to chronic arthritis. Post-infectious arthritis is caused by a reaction to *Shigella* infection that happens only in people who are genetically predisposed to it. Once someone has had shigellosis, they are not likely to get infected with that specific type again for at least several years, but they still can get infected with other types of *Shigella*.

### How do people get *Shigella*?

The *Shigella* bacteria pass from an infected person to another person. *Shigella* bacteria are present in the diarrheal stools of infected persons while they are sick and for up to a week or two afterwards. Most *Shigella* infections are the result of the bacterium passing from stools or soiled fingers of one person to the mouth of another person. This happens when basic hygiene and handwashing habits are inadequate. It is particularly likely among toddlers who are not fully toilet-trained. Family members and playmates of such children are at high risk of becoming infected.

*Shigella* infections may also be acquired from eating contaminated food. Contaminated food usually looks and smells normal. Food may become contaminated by infected food handlers who forget to wash their hands with soap after using the bathroom. Vegetables can become contaminated if they are harvested from a field with sewage in it. Flies can breed in infected feces and then contaminate food. Water (such as in lakes) may become contaminated with *Shigella* bacteria if sewage runs into it, or if someone with shigellosis swims in or plays with it (especially in splash tables, untreated wading pools, or shallow play fountains used by daycare centers). *Shigella* infections can then be acquired by drinking,

swimming in, or playing with the contaminated water. Outbreaks of shigellosis have also occurred among men who have sex with men.

### **What can a person do to prevent this illness?**

Currently, there is no vaccine to prevent shigellosis. However, the spread of *Shigella* from an infected person to other persons can be stopped by frequent and careful handwashing with soap, which is important for all age groups. Handwashing among children should be frequent and supervised by an adult in daycare centers and homes with children who have not been fully toilet trained. If a child in diapers has shigellosis, everyone who changes the child's diapers should be sure the diapers are disposed of properly in a closed-lid garbage can, and should wash his or her hands and the child's hands carefully with soap and warm water immediately after changing the diaper. After use, the diaper changing area should be wiped down with a disinfectant such as diluted household bleach or bactericidal wipes or spray. When possible, young children with *Shigella* infection who are still in diapers should not be in contact with uninfected children.

Basic food safety precautions and disinfection of drinking water prevents shigellosis from food and water. However, people with shigellosis should not prepare food or drinks for others until they have been shown to no longer be carrying the *Shigella* bacterium, or if they have had no diarrhea for at least 2 days. At swimming beaches, using bathrooms and washing hands with soap and water after using the bathroom helps keep the water from becoming contaminated. Swimmers should also wash hands before touching food and take a shower after swimming. Don't drink lake, pond, river, or untreated pool water. Daycare centers can choose not to provide water play areas.

Simple precautions taken while traveling to the developing world can prevent shigellosis. Drink only treated or boiled water and eat only cooked hot foods or fruits you peel yourself. The same precautions prevent other types of travelers' diarrhea.

### **What else can be done to prevent shigellosis?**

It is important for the New Hampshire Department of Health and Human Services' Division of Public Health Services (DPHS) to be notified of cases of shigellosis. It is important for clinical laboratories to send isolates of *Shigella* to the DHHS Public Health Laboratories so the specific type can be determined. If many cases occur at the same time, it may mean that a restaurant, food or water supply has a problem that needs correction by DPHS. If a number of cases occur in a daycare center, for example, DPHS may need to coordinate efforts to improve handwashing among staff, children, and their families. When a community-wide outbreak occurs, a community-wide approach to promote handwashing and basic hygiene among children can stop the outbreak.

Some tips for preventing the spread of shigellosis are:

- Wash hands with soap and warm water carefully and frequently, especially after going to the bathroom, after changing diapers, and before preparing food or beverages
- Dispose of soiled diapers properly
- Disinfect diaper-changing areas after using them
- Keep children with diarrhea out of child care settings
- Supervise handwashing of toddlers and small children after they use the bathroom
- Do not prepare food for others while ill with diarrhea
- Avoid swallowing water from ponds, lakes, and untreated pools

**For more information about shigellosis or to report a *Shigella* infection, call the New Hampshire Department of Health and Human Services Division of Public Health Services, Communicable Disease Control Section at 603-271-4496 or 1-800-852-3345. Or visit the Centers for Disease Control and Prevention website at [www.cdc.gov](http://www.cdc.gov).**