



## MONTGOMERY COUNTY HEALTH DEPARTMENT

### **What is shigellosis?**

Shigellosis is an infectious disease caused by a group of bacteria called *Shigella*. Most 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.

### **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 laboratory can also do special tests to determine which antibiotics, if any, would be best to treat the infection.

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

Persons 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. The antibiotics commonly used for treatment are ampicillin, trimethoprim/sulfamethoxazole (also known as Bactrim\* or Septra\*), ceftriaxone (Rocephin\*), or, among adults, ciprofloxacin. Some *Shigella* bacteria have become resistant to antibiotics. This means some antibiotics might not be effective for treatment. Using antibiotics to treat shigellosis can sometimes make the germs more resistant. Therefore, when many persons in a community are affected by shigellosis, antibiotics are sometimes used to treat only the most severe cases. Antidiarrheal agents such as loperamide (Imodium\*) or diphenoxylate with atropine (Lomotil\*) can make the illness worse and should be avoided.

### **Are there long term consequences of a *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. However, they can still get infected with other types of *Shigella*.

### **How do people catch *Shigella*?**

The *Shigella* bacteria pass from one infected person to the next. *Shigella* 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 and can happen during cer-

tain types of sexual activity. It is particularly likely to occur 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 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 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.

### **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. Frequent and careful handwashing is important among 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 diapers. After use, the diaper changing area should be wiped down with a disinfectant such as diluted household bleach, Lysol\* or bactericidal wipes. When possible, young children with a *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, having enough bathrooms and handwashing stations with soap near the swimming area helps keep the water from becoming contaminated. Daycare centers should not 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 traveler's diarrhea.

### **How common is shigellosis?**

Every year, about 14,000 cases of shigellosis are reported in the United States. Because many milder cases are not diagnosed or reported, the actual number of infections may be twenty times greater. Shigellosis is particularly common and causes recurrent problems in settings where hygiene is poor and can sometimes sweep through entire communities. It is more common in summer than winter. Children, especially toddlers aged 2 to 4, are the most likely to get shigellosis. Many cases are related to the spread of illness in child-care settings, and many are the result of the spread of the illness in families with small children.

In the developing world, shigellosis is far more common and is present in most communities most of the time.

### **Some tips for preventing the spread of shigellosis:**

- wash hands with soap carefully and frequently, especially after going to the bathroom, after changing diapers, and before preparing foods 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 toilet
- do not prepare food for others while ill with diarrhea