

Diseases Fact Sheet - Rotavirus

South Dakota Department of Health

Office of Disease Prevention Services - 605-773-3737 -(1-800-592-1861 in South Dakota only)

This material is provided for informational purposes only and is not a substitute for medical care. We are not able to answer personal medical questions. Please see your health care provider concerning appropriate care, treatment or other medical advice.

What is it?

Rotavirus is the most common cause of severe diarrhea among children 6 months to 2 years of age in the United States. By 4 years of age, most persons have been infected and have acquired long-term immunity to the severe dehydrating syndrome of rotavirus infection. Throughout life, asymptomatic or minimally symptomatic reinfection can occur. The elderly and others with decreased immunity may be susceptible to severe disease.

Who gets rotavirus infection?

Most children under age 4 have been infected. One-third of parents whose children are infected with rotavirus become ill. Travelers to developing countries, the elderly, and people with debilitating or immunosuppressive conditions may develop rotavirus diarrhea. In the U.S., rotavirus activity is most common in the cooler months of the year (October-April).

What are the symptoms of rotavirus infection?

The incubation period from exposure to symptoms is approximately 2 days followed by vomiting for three days and watery diarrhea for 3-8 days. Fever and abdominal pain occur frequently. Without adequate fluid replacement, the syndrome can result in severe dehydration and death.

In the United States, there are approximately 3.5 million rotavirus cases each year. A child has a 2% lifetime chance of being hospitalized for rotavirus diarrhea. There are an estimated 75-125 childhood deaths annually in the U.S. associated with rotavirus-caused diarrhea and resulting dehydration. In developing countries, where medical care is least available and malnutrition is most prevalent, rotavirus infection is estimated to cause 1 million deaths each year.

How is rotavirus spread?

Rotavirus is most often transmitted from person to person, through the fecal-oral route. The infective dose in a child can be very small. Contaminated food or water can be a source of infection and there is some airborne transport possible.

Most outbreaks are self-limited; however, factors such as a closed environment (day-care, nursing home, pediatric section of a hospital), a constantly renewing population of susceptible persons (children at camp), and persons at special risk (elderly) can prolong an outbreak.

Rotavirus can be detected with a lab test the day before diarrhea starts in half of all infected children and among some children for up to a week after symptoms end. Many children shed rotavirus and never become ill.

What is the treatment for rotavirus infection?

Oral rehydration therapy for children who lose a large amount of fluid. Hospitalization and treatment with intravenous fluids may be required for severe dehydration. For adults, good hydration is also important, particularly among the elderly.

Should an infected person be excluded from work, school, or day care?

Rotavirus outbreaks at daycare centers and in pediatric sections of hospitals are common. Hands that have been contaminated directly or from soiled surfaces may be the most important means by which enteric viruses such as rotavirus are transmitted. Employees are at the highest risk for transmitting disease because of their many contacts with ill persons. Any staff member with symptoms should be excluded from contact with susceptible persons for at least 2 days after the resolution of the illness.

Food handlers with symptoms should not be involved in preparing food for the same period of time.

Healthcare providers and staff of day-care centers should wear disposable plastic gloves when coming in contact with ill persons. Hands should be washed after each contact. Soiled linens and clothes should be handled as little as possible, promptly washed, and machine dried. Bathrooms and rooms occupied by ill persons should be kept clean on a routine basis; soiled surfaces should be disinfected with a commercial germicidal product.

Additional information about diarrheal illness

- A stool sample is needed to determine what is causing the diarrhea and who might be at risk for the spread of the disease from the ill individual.
- Kits for collecting the stool sample are available from the South Dakota Department of Health's local [Disease Intervention Offices](#) or from the [State Public Health Laboratory](#). (There is a charge for the testing.)
- If *salmonella*, *E. coli*, rotavirus, *shigella*, or *campylobacteriosis* is diagnosed, department disease intervention staff may contact you about potential exposures such as food, farm animals, or other ill individuals.



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Related Sites:

- [American Academy of Pediatrics](#)
- [South Dakota Department of Health, Immunization Program](#)
- Centers for Disease Control and Prevention
 - [Vaccines and Immunizations](#)
 - [Parents Guide to Childhood Immunizations](#)