

# Rotavirus Disease

## **What is rotavirus?**

Rotavirus is a virus that causes severe diarrhea, often accompanied by vomiting, fever, and dehydration, mostly in babies and young children. It is the leading cause of diarrhea in infants and young children in the United States (U.S.) and worldwide. Almost all children in the U.S. are likely to be infected with rotavirus before their 5th birthday.

In the U.S., rotavirus is responsible for approximately 5 to 10 percent of all episodes of diarrhea among children younger than 5 years of age. However, because rotavirus causes more severe diarrhea than other pathogens, it accounts for a greater proportion of severe diarrhea cases (e.g., 40%-50% of diarrhea hospitalizations).

Each year in the U.S., rotavirus is responsible for more than 400,000 doctor visits; more than 200,000 emergency room visits; 55,000 to 70,000 hospitalizations; and between 20 and 60 deaths. Rotavirus leads to about \$1 billion in health care costs and lost productivity per year in the U.S. Despite efforts to improve the management of childhood rotavirus-associated diarrhea, hospitalizations of children in the U.S. with the disease have not significantly declined in the past two decades. Hospitalizations are the most severe and costly outcome of rotavirus disease in U.S. children.

In developing countries, rotavirus is a major cause of childhood deaths, causing more than a half a million deaths each year in children younger than five years old.

## **What are the symptoms of rotavirus disease?**

Rotavirus disease usually starts with fever, an upset stomach, and vomiting, followed by diarrhea. Rotavirus occurs most often in the winter and spring. Children are most likely to get rotavirus disease between November and May. Rotavirus is very contagious, spreading easily from children who are already infected to other children and sometimes adults. Once a child has been exposed to rotavirus, it takes about two days for symptoms to appear. Children who have rotavirus disease develop vomiting and watery diarrhea that may last from three to eight days. They may lose interest in eating and drinking and become dehydrated from loss of fluids. A child may develop rotavirus disease more than once because there are many different rotavirus types, but second infections tend to be less severe than the original infections.

## **How is rotavirus spread?**

Rotavirus spreads easily. Large amounts of rotavirus are shed in the stool of infected persons and rotavirus is easily spread on contaminated hands and objects. Children can spread rotavirus both before and after they become sick with diarrhea. They can sometimes pass the virus to other members of the family and close contacts. In the United States (U.S.), rotavirus infections can

cause diarrhea in adults caring for children, in the elderly, and in adults who are traveling, but this occurs less often than in children.

#### **How is rotavirus disease treated**

Children are typically treated by replacing lost body fluids through drinking products that contain water with sugar and minerals. In severe cases requiring a visit to the emergency room or hospitalization, body fluids are replaced with fluids given directly to the child through the veins using an intravenous (I.V.) line.

#### **How can rotavirus disease be prevented?**

While it is important that you wash your child's hands, better hygiene and sanitation have not significantly reduced rotavirus disease. A new, recently licensed vaccine is the best way to protect your child against rotavirus disease.

The new vaccine, RotaTeq®, marketed by Merck and Company, is a live, oral, vaccine for preventing rotavirus disease, and is the only vaccine approved in the U.S. that can help protect against rotavirus.

Rotavirus vaccine will not prevent diarrhea or vomiting caused by other viruses but it is very effective against rotavirus disease. Studies indicate the vaccine will prevent about 74 percent of all rotavirus cases, about 98 percent of severe cases, and about 96 percent of hospitalizations due to rotavirus.