

Rotavirus Gastroenteritis

Fact Sheet

What is it?

- Rotavirus causes diarrhea, vomiting, and fever. It is the most common cause of severe gastroenteritis – an inflammation of the stomach and intestines – in infants and children between six and 35 months of age.¹
- Severe diarrhea and vomiting caused by rotavirus can lead to rapid and dangerous depletion of body fluids called dehydration, which can be life-threatening if untreated.^{2,3}
- Rotavirus is highly contagious and is relatively resistant to most soaps and disinfectants.⁴ Large amounts of rotavirus are shed in the stool of infected persons and it is easily spread on contaminated hands and objects.² This could be on floors, diaper changing areas or toys, for example.
- The mode of transmission of rotavirus infection is assumed to be fecal-oral, although respiratory transmission has also been hypothesized.⁴
- Children can spread rotavirus both before and after they become sick. They can sometimes pass the virus to other members of the family and close contacts.²
- There are many different strains of rotavirus circulating at different times of the year and in different geographical locations. In Canada, five rotavirus strains (G1, G2, G3, G4 and P1[8]) are responsible for approximately 95 per cent of rotavirus disease.⁵

Disease Burden

- Rotavirus is an unavoidable and unpredictable disease. Virtually all children (95 per cent) are infected at least once by the age of 5.⁶
- In Canada, one in four children who visited a doctor with a rotavirus infection required emergency room care or hospitalization.⁷
- In Canada, a recent study shows that rotavirus causes up to 7,000 hospitalizations, 27,000 ER visits and 56,000 physician visits per year, costing the health care system up to \$17 million annually, and representing up to \$46 million in societal costs, taking into account out of pocket costs and work days lost.^{8,9}

- Rotavirus infection is seasonal from November to June. During the peak months of April and May, up to 78 per cent of children hospitalized for gastroenteritis in Canada are rotavirus-positive.^{1,10}
- Worldwide, rotavirus-induced dehydration accounts for around 440,000 childhood deaths annually,¹¹ which translates into about 1,200 children dying every day from rotavirus infection, mostly in developing countries.

Signs and symptoms

Rotavirus infection usually starts with fever, upset stomach, and vomiting, followed by diarrhea. It can last three to nine days with up to 20 episodes of diarrhea per day in some children.^{12,13}

Symptoms of dehydration are:¹⁴

- Lethargy
- Dry, cool skin
- Absence of tears when crying
- Dry or sticky mouth
- Sunken eyes or sunken fontanelle (the soft spot on the head of infants)
- Extreme thirst

Diagnosis

Diagnosis of rotavirus infection is made by detection of rotavirus in stool specimens.¹⁴

Treatment

- While there is no specific treatment for rotavirus gastroenteritis, patients should increase fluid intake (oral rehydration) to prevent dehydration.² However, this may be difficult due to the fact that vomiting is more commonly associated with rotavirus than any other gastroenteritis.⁴
- In cases where oral hydration can not be maintained, intravenous hydration may be necessary.⁴

References

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