

# Rotavirus

## What is rotavirus?

Rotaviruses are the leading cause of severe diarrhoeal disease and dehydration in infants and young children in both developed and developing countries.

Illness can range from mild, watery diarrhoea of limited duration, to severe diarrhoea with vomiting, abdominal cramps and fever. Persistent diarrhoea and vomiting can lead to severe dehydration of the child, which may need hospital treatment. Children can be infected with rotavirus several times.

One child dies from rotavirus every year in Australia on average.

## How common is it?

The prevalence of rotavirus has been vastly underestimated until recently.

Most children will have had a rotavirus episode before their third birthday. Most episodes occur between six months and two years of age.

In Australia, there are about 10,000 hospitalisations each year due to rotavirus in children under five. Rotavirus accounts for about half the hospitalisations for any acute gastroenteritis in this age group.

Indigenous infants and children have a 3-5 times higher incidence of hospitalisation. As well, every year about 115,000 children under five visit a GP, and 22,000 children visit the emergency department.

In adults, rotavirus infections are usually asymptomatic, but may occasionally result in illness.

## How is it spread?

Rotavirus is highly contagious and is transmitted by the faecal-oral route.

Large numbers of viral particles are shed in faecal matter for up to one week after infection. Because the virus is stable in the environment, contamination of hands and objects is relatively easy. Virus excretion can also occur in individuals who have no symptoms.

Outbreaks in daycare centres and hospitals can spread rapidly among non-immune children, presumably through person-to-person contacts, airborne droplets, or contact with contaminated toys.

## How is it treated?

Rotavirus infection is usually treated by support and comfort to the child and management of dehydration.

## Can rotavirus gastroenteritis be prevented?

Yes. Vaccination is the best option for providing protection from rotavirus.

Currently there are two vaccines available. Both are oral vaccines containing a live weakened strain of the virus. They are registered for use in infants only. Immunisation of older infants or children is not recommended.

Rotarix is given in a two dose schedule at 2 and 4 months of age.

RotaTeq is given in a three dose schedule at 2, 4 and 6 months of age.

Vaccination will reduce the risk of developing severe rotavirus gastroenteritis by 85-100% and any rotavirus gastroenteritis by 70%. The vaccine will not prevent severe diarrhoea and vomiting from other infectious agents.

## How safe is the vaccine?

The currently licensed rotavirus vaccines have



undergone some of the largest and most stringent testing in clinical trials ever seen for a vaccine.

This is because a rotavirus vaccine in America was withdrawn from the market because it was associated with an increased risk of intussusception. This is a bowel condition in which the bowel telescopes on itself and may require surgical intervention to correct. However, intussusception occurs for unknown reasons in about 1 child per 10,000, regardless of whether or not they have received any vaccine. It occurs most often in infants from 4 to 10 months of age.

Current vaccines differ in composition to the past rotavirus vaccine. The clinical trials of the new rotavirus vaccines were done with a large study trial of more than 60,000 infants. There was no evidence of increased risk of intussusception when compared to the placebo group.

Trials of Rotarix and RotaTeq limited administration of the first dose of

vaccine to infants under 3 months of age, and did not give subsequent doses to children past a certain age (6 months for Rotarix and 7.5 months for RotaTeq).

## What about catch-up immunisation?

Catch-up vaccination or immunisation to older children is not recommended as safety of the current vaccines was not studied in older infants or children. Also the main burden of the disease is in children under three years of age.

## How much does it cost?

There is no charge. Rotavirus vaccines are funded under the National Immunisation Program.

*For more information about rotavirus, speak to your GP or visit [www.vaccination.org.au](http://www.vaccination.org.au)*