

What is rotavirus?

Rotavirus is a highly contagious virus that causes a bowel (gut) infection with fever, vomiting and diarrhoea (gastroenteritis) in babies and young children.

Without immunisation almost all children get rotavirus infection before 5 years of age. It is a significant cause of diarrhoea (watery or loose stools) and dehydration in babies and young children worldwide. Adults can also get rotavirus infection.

How do you catch it?

Rotavirus is mainly spread through close contact with someone who has the virus and by the faecal-oral route, for example incomplete hand washing after changing nappies or using the toilet, or touching a contaminated surface and handling food or eating.

Large amounts of rotavirus are present in the stools of those with the infection, when they are sick and for about a week after they appear to be better. Rotavirus can survive on hands for at least four hours and on inanimate objects such as change tables, taps, door handles, toys and utensils, for approximately two months.

What are the symptoms of rotavirus?

The illness begins with the sudden onset of fever, vomiting, and diarrhoea. The fever usually lasts for 1–2 days, vomiting for around 3–6 days and diarrhoea for around 5–6 days.

How serious is it?

Feeling too sick to drink and loss of liquid from vomiting and diarrhoea can cause severe dehydration that needs medical treatment.

Prior to the introduction of the rotavirus vaccine in New Zealand in 2014, it is estimated that one child in five sought medical advice for rotavirus infection, and one child in 43 had been hospitalised by 5 years of age.

Since the introduction of rotavirus vaccine in New Zealand, both rotavirus infections in the community and rotavirus hospitalisation rates have decreased markedly. In New Zealand death from rotavirus infection is rare.

Each time we are exposed to rotavirus we develop more protection against it. Healthy adults with rotavirus infection usually have mild symptoms.

Who is most at risk from rotavirus?

Most symptomatic infections occur in babies and children between 3–24 months of age.

How do you prevent it?

The spread of rotavirus can be reduced by good hand washing using soap after changing nappies or cleaning up vomit, after using the toilet, before preparing food and before eating.

Children with diarrhoea or vomiting should not attend school or child care centres until they have not had any vomiting or loose bowel motions for 48 hours.

Immunisation against rotavirus prevents most rotavirus infections and almost all serious rotavirus illness. The vaccine is free on the National Immunisation Schedule for babies.

What vaccines protect against rotavirus?

Rotarix and RotaTeq are weakened live virus vaccines given as drops into the mouth that protect against the most common strains of rotavirus. The vaccines do not protect against gastroenteritis caused by other viruses or bacteria.

RotaTeq was the first funded rotavirus vaccine in New Zealand, added to the National Immunisation Schedule in July 2014 as a three dose course for babies at the 6 week, 3 month and 5 month immunisation visits.

From July 2017, the funded rotavirus vaccine will change to Rotarix, a two dose course given at the 6 week and 3 month immunisation visits.

How safe are the vaccines?

RotaTeq or Rotarix can be given safely at the same time as the other immunisations at 6 weeks, 3 months and 5 months of age.

One or two babies in 100 may have mild vomiting or diarrhoea caused by the vaccine during the 7 days after immunisation. However, studies suggest these symptoms may be unrelated to rotavirus vaccine because as many, and sometimes more, babies who received a placebo liquid not containing rotavirus also developed these symptoms.

The weakened rotavirus from the vaccines may be found in faeces for up to 28 days after the first immunisation and up to 15 days after the second dose. After changing nappies caregivers only need to follow standard hygiene measures, i.e. wash their hands using soap and water and dry them well, or use liquid hand gel.

A baby living in a house with someone who is pregnant or is immunosuppressed can be immunised. Babies in hospital, including those in neonatal units, can be immunised.

Intussusception is a type of bowel blockage usually seen in young children, with most cases occurring in the first year of life. The cause is usually unknown.

There is a small increase in the risk of a baby developing intussusception during the week following the first rotavirus vaccine dose and a smaller risk after the second dose.

Parents are recommended to seek medical advice if their baby develops intermittent crying/screaming episodes, pull their knees towards their chest and vomit, or develop pink or red coloured jelly-like stools.

How well do the vaccines work?

In countries like New Zealand, a course of either RotaTeq or Rotarix vaccines will protect 5–8 babies in 10 from severe rotavirus infection, nine in 10 from needing to be admitted to hospital because of rotavirus infection, and 5–7 in 10 from having any rotavirus diarrhoea.

Are all vaccine doses needed?

Yes. Babies who start a rotavirus vaccine course with RotaTeq need three rotavirus vaccine doses for maximum protection. Babies who start with Rotarix need two doses of Rotarix for maximum protection. However, less than the recommended number of vaccine doses may still provide some protection against rotavirus infection.

Who should have the vaccine?

Babies who start their course of rotavirus vaccines with RotaTeq should receive rotavirus vaccine at 6 weeks, 3 months and 5 months of age.

Babies who start with RotaTeq can complete the course with Rotarix provided they are under 25 weeks of age. Your practice nurse will advise how many doses of Rotarix are required to complete the course of three vaccines.

Babies who start their course of rotavirus vaccines with Rotarix should receive Rotarix at 6 weeks and 3 months of age.

Babies can have food or liquid, including breast milk, before or after immunisation. The dose does not have to be given again if they spit it out.

Can a baby catch-up missed doses of rotavirus vaccine?

Yes, but only if the first dose of rotavirus vaccine is given before a baby is 15 weeks old. If a baby does not have their first dose before they are 15 weeks old, they cannot have any doses of rotavirus vaccine.

When a baby has their first rotavirus vaccine dose before 15 weeks old, catch-up doses of Rotarix can be given any time before baby is 25 weeks old providing there are at least 4 weeks between each of the doses. Once they are 25 weeks old, no Rotarix vaccine doses can be given.

Catch-up doses of RotaTeq have slightly different timing; your practice nurse will advise if they have RotaTeq in stock and if your baby is still young enough to receive catch-up doses of RotaTeq.

Babies who start a rotavirus course with RotaTeq can complete the course with Rotarix provided they are under 25 weeks of age. Your practice nurse will advise how many doses of Rotarix are required to complete the rotavirus course.

Who should not have the vaccine?

Any baby with a serious medical condition affecting the immune system called combined severe combined immunodeficiency (SCID), or who has previously had intussusception, or had anaphylaxis (a severe allergic reaction) to any component of the rotavirus vaccine or to a previous dose of the rotavirus vaccine should not be given the vaccine.

Rotavirus vaccine should be postponed for any baby with moderate to very high fever, vomiting or diarrhoea.

Who should seek more advice before having the vaccine?

Further medical advice should be sought for any baby suspected or known to have a weakened immune system, for example due to HIV infection, treatment with long term steroids, or any baby who has cancer or who is undergoing treatment for cancer.

If a mother was on immunosuppressive therapy during pregnancy, it is important to seek advice before a baby is given RotaTeq or Rotarix.

The vaccine can be administered to a baby who lives with someone who is immunocompromised or receiving immunosuppressive therapy. After changing nappies caregivers are recommended to follow standard hygiene measures, i.e. wash their hands using soap and water and dry them well, or use liquid hand gel.

Disease	Possible complications of disease	Possible vaccine responses
A highly contagious virus causing a bowel (gut) infection with fever, vomiting and diarrhoea (gastroenteritis).	<ul style="list-style-type: none"> » Abdominal pain. » Severe vomiting and diarrhoea. » Dehydration. » Death from untreated dehydration. 	<p>Common responses</p> <ul style="list-style-type: none"> » Mild diarrhoea or vomiting. » Mild abdominal pain. <p>Rare responses</p> <ul style="list-style-type: none"> » Intussusception (bowel obstruction). » Severe allergic reaction (anaphylaxis).

Vaccines are prescription medicines. Talk to your doctor or nurse about the benefits or any risks.

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