

# Disease effects compared with vaccination

Administering a vaccine stimulates the immune system to protect the body from the disease, therefore some common minor responses are expected following receipt of any vaccine. These include:

- Local responses of mild pain, redness and swelling around injection site
- Systemic responses including mild fever less than 39°C, irritability, mild headache, malaise and tiredness

Rarely, more severe responses are seen following vaccination with certain vaccines. The risk of complications from the disease itself is much greater than the risk from rare responses following immunisation.

As with any medicine, very rare severe allergic responses (anaphylaxis) can occur following immunisation. For this reason, we ask people to wait 20 minutes after receiving vaccines.

Some responses, such as brief fainting spells, are related to the immunisation process not the vaccine itself. Also, unexpected medical events may coincidentally occur which are completely unrelated to being immunised.

Disease and possible complications	Vaccines available and possible responses
<b>Rotavirus</b> <ul style="list-style-type: none"> <li>» Tummy/gut pain</li> <li>» Severe vomiting and diarrhoea</li> <li>» Dehydration</li> <li>» Death from untreated dehydration</li> </ul>	<b>Rotarix (RV1)</b> <p>First dose 6 weeks to under 15 weeks of age ONLY, and Subsequent dose under 25 weeks of age ONLY</p> <p><b>Common responses</b></p> <ul style="list-style-type: none"> <li>» Vomiting or diarrhoea</li> <li>» Mild tummy/gut pain</li> </ul> <p><b>Rare responses</b></p> <ul style="list-style-type: none"> <li>» Severe tummy/gut pain related to a bowel obstruction (intussusception)</li> </ul>
<b>Diphtheria</b> <ul style="list-style-type: none"> <li>» Throat swelling and difficulty breathing</li> <li>» Sinusitis, ear infection</li> <li>» Pneumonia</li> <li>» Heart muscle inflammation and damage</li> <li>» Kidney damage and failure</li> <li>» Delayed nerve complications</li> <li>» Death, even with treatment</li> </ul>	<b>Infanrix-hexa (DTaP-IPV-HepB/Hib)</b> <b>Infanrix-IPV (DTaP-IPV)</b> <p><b>6 weeks to under 10 years of age</b></p> <p><b>Common responses</b></p> <ul style="list-style-type: none"> <li>» Decreased appetite</li> <li>» Vomiting or diarrhoea</li> <li>» Irritability, restlessness</li> <li>» Unusual crying</li> </ul> <p><b>Rare responses</b></p> <ul style="list-style-type: none"> <li>» Limb swelling after the 4th or 5th vaccine dose</li> </ul>
<b>Tetanus</b> <ul style="list-style-type: none"> <li>» Muscle weakness, stiffness or cramps – progresses to muscle rigidity and painful spasms</li> <li>» Bone fractures</li> <li>» Throat spasm</li> <li>» Rehabilitation required following infection</li> <li>» Death, around 1 person out of 10 cases, even with treatment</li> </ul>	<p><b>Rare responses</b></p> <ul style="list-style-type: none"> <li>» Hives</li> <li>» Temporary low platelet count</li> <li>» Persistent inconsolable screaming</li> <li>» Hypotonic, hyporesponsive episode (HHE) in infants</li> <li>» Convulsion (seizure)</li> </ul>
<b>Whooping cough (pertussis)</b> <ul style="list-style-type: none"> <li>» Dehydration, weight loss</li> <li>» Ear infection</li> <li>» Lack of oxygen during coughing fits</li> <li>» Bleeding in the eye</li> <li>» Hospitalisation, 5 infants out of 10 cases aged under 12 months</li> <li>» Slowed or stopped breathing</li> <li>» Pneumonia</li> <li>» Convulsions (seizures)</li> <li>» Death, 1—2 infants out of 100 hospitalised infants</li> <li>» Brain inflammation</li> <li>» Violent coughing can result in urinary incontinence, ear infection, nose bleeds, collapse, pneumonia, or broken ribs in adults</li> </ul>	<b>Boostrix® (Tdap)</b> <p><b>From 7 years of age</b></p> <p><b>Common responses</b></p> <ul style="list-style-type: none"> <li>» Pain and swelling around the injection site may prevent normal everyday activities for 24—48 hours</li> <li>» Headache or nausea</li> <li>» Muscle or joint stiffness or pain</li> </ul> <p><b>Rare responses</b></p> <ul style="list-style-type: none"> <li>» Hives</li> <li>» Abscess at the injection site</li> </ul>

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<b>Polio (poliomyelitis)</b> <ul style="list-style-type: none"> <li>» Most cases have no symptoms</li> <li>» Mild non-specific illness, 4—8 people out of 100 cases</li> <li>» Inflammation of the membranes around the brain, 1—5 people out of 100 cases</li> <li>» Rapid onset paralysis occurs, around 2 people out of 100 cases</li> <li>» Permanent muscle weakness or paralysis</li> <li>» Impaired growth</li> <li>» Brain, heart, nerve damage</li> <li>» Muscle pain and weakness (post-polio syndrome) can occur 15—40 years after infection</li> </ul>	<b>Infanrix-hexa (DTaP-IPV-HepB/Hib)</b> <b>Infanrix-IPV (DTaP-IPV)</b> <b>6 weeks to under 10 years of age</b> As described above <b>Ipol (IPV)</b> <b>From 6 weeks of age</b> <b>Common responses</b> <ul style="list-style-type: none"> <li>» Irritability, restlessness</li> <li>» Sleepiness</li> <li>» Changed feeding behaviour in infants</li> </ul>
<b>Hepatitis B</b> <ul style="list-style-type: none"> <li>» Infants and children are less likely to have symptoms than adults, but</li> <li>» Infants are more likely to become chronically infected and develop complications later in life</li> <li>» Liver inflammation, around 8 out of 10 adults</li> <li>» Acute liver failure can require liver transplantation or lead to death</li> <li>» Chronic infection can lead to permanent liver damage and liver cancer</li> </ul>	<b>Infanrix-hexa (DTaP-IPV-HepB/Hib)</b> <b>6 weeks to under 10 years of age</b> Refer above <b>Engerix-B</b> <b>From birth</b> Responses are more common in adults than in children. <b>Common responses</b> <ul style="list-style-type: none"> <li>» Irritability</li> <li>» Decreased appetite</li> <li>» Nausea or diarrhoea</li> <li>» Tummy/gut pain and vomiting</li> </ul> <b>Rare responses</b> <ul style="list-style-type: none"> <li>» Hives</li> <li>» Itching</li> <li>» Muscle or joint pain</li> </ul>
<b>Haemophilus influenzae type b (Hib)</b> <ul style="list-style-type: none"> <li>» Blood infection</li> <li>» Inflammation of the membranes around the brain, especially in young children</li> <li>» Severe swelling in the throat</li> <li>» Pneumonia</li> <li>» Joint, heart, bone, skin inflammation</li> <li>» Long-term nerve damage</li> <li>» Death, around 1 person out of 20 cases, even with treatment</li> </ul>	<b>Infanrix-hexa (DTaP-IPV-HepB/Hib)</b> <b>6 weeks to under 10 years of age</b> Refer to page 1 <b>Hiberix (Hib)</b> <b>From 6 weeks of age</b> <b>Common responses</b> <ul style="list-style-type: none"> <li>» Irritability</li> <li>» Sleepiness</li> <li>» Unusual crying</li> </ul> <b>Rare responses</b> <ul style="list-style-type: none"> <li>» Hives</li> <li>» Itching</li> <li>» Convulsion (seizure)</li> </ul>
<b>Pneumococcal disease</b> <ul style="list-style-type: none"> <li>» Sinusitis, ear infection</li> <li>» Pneumonia</li> <li>» Blood infection</li> <li>» Inflammation of the membranes around the brain <ul style="list-style-type: none"> <li>» Around 3 people out of 10 cases with brain inflammation die</li> </ul> </li> <li>» Out of the survivors, up to half will have serious disabilities</li> </ul>	<b>Prevenar 13 (PCV13)</b> <b>From 6 weeks of age</b> <b>Common responses</b> <ul style="list-style-type: none"> <li>» Mild pain, redness and swelling around injection site</li> <li>» Decreased appetite</li> <li>» Increased or decreased sleep</li> </ul> <b>Rare responses</b> <ul style="list-style-type: none"> <li>» Hives</li> <li>» Hypotonic, hyporesponsive episode (HHE) in infants</li> <li>» Convulsion associated with fever</li> </ul>

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<b>Measles</b> <ul style="list-style-type: none"> <li>» Ear infection</li> <li>» Diarrhoea</li> <li>» Pneumonia</li> <li>» Low platelet count</li> <li>» Brain inflammation, around 1 person out of 1000—2000 cases</li> <li>» Weakened immune system</li> <li>» Hospitalisation, around 1 person out of 10 cases</li> <li>» Death, around 1 person out of 1000 cases, even with treatment</li> <li>» Degenerative brain disease, around 1 person out of 100,000 cases, occurs years later and is always fatal</li> <li>» Measles during pregnancy increases the risk of miscarriage or premature birth</li> </ul>	<b>Priorix (MMR)</b> <p><b>From 12 months of age</b></p> <p><b>Common responses</b></p> <p>Measles component:</p> <ul style="list-style-type: none"> <li>» Fever and/or mild rash 6–12 days after immunisation</li> </ul> <p>Mumps component:</p> <ul style="list-style-type: none"> <li>» Fever and/or mild swelling under the jaw 10–14 days after immunisation</li> </ul> <p>Rubella component:</p> <ul style="list-style-type: none"> <li>» Fever, mild rash and/or swollen glands 2–4 weeks after immunisation</li> <li>» Temporary joint pain 2–4 weeks after immunisation is more common in adult women than children</li> </ul> <p><b>Rare responses</b></p> <ul style="list-style-type: none"> <li>» Temporary low platelet count</li> <li>» Convulsion (seizure) associated with fever</li> </ul>
<b>Mumps</b> <ul style="list-style-type: none"> <li>» Fever, headache, swelling and pain of one or more glands under the jaw</li> <li>» Inflammation of the membranes around the brain, up to 15 people out of 100 cases</li> <li>» Temporary deafness, around 4 people out of 10 cases</li> <li>» Permanent deafness, around 1 person out of 15,000 cases</li> <li>» Inflammation of the testicles, breasts or ovaries in adolescents and adults</li> <li>» Nerve, joint, pancreas, heart inflammation</li> <li>» Brain inflammation, around 1 person out of 6000 cases, which may result in death for 1 person out of 100</li> <li>» Death, 1–2 people out of 100,000 cases</li> <li>» Mumps during early pregnancy increases the risk of miscarriage</li> </ul>	<b>Priorix (MMR)</b> <p><b>From 12 months of age</b></p> <p><b>Common responses</b></p> <p>Measles component:</p> <ul style="list-style-type: none"> <li>» Fever and/or mild rash 6–12 days after immunisation</li> </ul> <p>Mumps component:</p> <ul style="list-style-type: none"> <li>» Fever and/or mild swelling under the jaw 10–14 days after immunisation</li> </ul> <p>Rubella component:</p> <ul style="list-style-type: none"> <li>» Fever, mild rash and/or swollen glands 2–4 weeks after immunisation</li> <li>» Temporary joint pain 2–4 weeks after immunisation is more common in adult women than children</li> </ul> <p><b>Rare responses</b></p> <ul style="list-style-type: none"> <li>» Temporary low platelet count</li> <li>» Convulsion (seizure) associated with fever</li> </ul>
<b>Rubella</b> <ul style="list-style-type: none"> <li>» Some cases have no symptoms, which increases the risk of exposing pregnant women to the disease</li> <li>» Rash and painful swollen glands</li> <li>» Low platelet count</li> <li>» Joint pain in adolescents and adults</li> <li>» Brain inflammation, around 1 person out of 6,000 cases</li> <li>» Rubella during early pregnancy can cause severe abnormalities in unborn babies, including deafness, blindness, heart defects, brain damage</li> </ul>	
<b>Chickenpox (varicella)</b> <ul style="list-style-type: none"> <li>» Permanent skin scarring</li> <li>» Bacterial skin infection, around 1 child out of 20 child cases</li> <li>» Nerve inflammation, around 1 child out of 4000 child cases</li> <li>» Bone, joint, liver, blood vessel inflammation</li> <li>» Brain inflammation, around 4 people out of 10,000</li> <li>» Pneumonia in adults, especially pregnant women</li> <li>» Hospitalisation, 2–6 people out of 100,000 cases</li> <li>» Death, 2–4 people out of 100,000 cases</li> <li>» Chickenpox during pregnancy can cause severe abnormalities in unborn babies including skin scarring, eye, limb or brain abnormalities, developmental delay, and a poor outcome</li> <li>» Maternal chickenpox close to delivery can infect the newborn causing severe disease and death</li> </ul>	<b>Varilrix or Varivax (VV)</b> <p><b>From 12 months of age (Varilrix or Varivax, routine Schedule)</b></p> <p><b>From 9 months of age (Varilrix, special groups)</b></p> <p><b>Common responses</b></p> <ul style="list-style-type: none"> <li>» Headache and/or tiredness</li> <li>» Mild rash 6–43 days after immunisation</li> </ul> <p><b>Rare responses</b></p> <ul style="list-style-type: none"> <li>» High fever</li> <li>» Transfer of vaccine virus from a vaccine rash to another person</li> </ul>
<b>Human papillomavirus (HPV)</b> <ul style="list-style-type: none"> <li>» Genital warts</li> <li>» Cancers of the mouth, throat, vulva, vagina, cervix, penis and anus</li> </ul>	<b>Gardasil®9 (HPV9)</b> <p><b>From 9 years of age</b></p> <p><b>Common responses</b></p> <ul style="list-style-type: none"> <li>» Fainting – more common in adolescent girls</li> </ul> <p><b>Rare responses</b></p> <ul style="list-style-type: none"> <li>» Severe pain and swelling at injection site</li> </ul>

Disease and possible complications	Vaccines available and possible responses
<b>Influenza</b> <ul style="list-style-type: none"> <li>» Sore throat, fever, chills, muscle aches and pain, malaise</li> <li>» Croup and bronchiolitis in children</li> <li>» Pneumonia</li> <li>» Brain inflammation</li> <li>» Heart failure</li> <li>» Blood infection</li> <li>» Death</li> <li>» Pregnant women are more likely to have complications, be admitted to hospital, need intensive care, and die than non-pregnant women</li> <li>» Labour and/or delivery problems including infant distress</li> </ul>	<b>Afluria® Quad Junior</b> <b>Afluria® Quad</b> <p><b>From 6 months of age</b> (Afluria Quad Junior)  <b>From 3 years of age</b> (Afluria Quad)</p> <p>Responses are more common in children not previously exposed to the vaccine or virus than in adults</p> <p><b>Common responses</b></p> <ul style="list-style-type: none"> <li>» Fever</li> <li>» Malaise</li> <li>» Muscle pain</li> </ul>
<b>Shingles (herpes zoster)</b> <ul style="list-style-type: none"> <li>» Severe pain that affects doing everyday activities</li> <li>» Headache</li> <li>» Facial palsy – droopiness</li> <li>» Eye and ear infections</li> <li>» Chronic nerve damage, causing pain and tingling (post-herpetic neuralgia)</li> </ul>	<b>Shingrix</b> <p><b>At 65 years of age (funded), from 50 years (unfunded)</b></p> <p><b>Common responses</b></p> <ul style="list-style-type: none"> <li>» Injection-site pain and swelling</li> <li>» Myalgia</li> <li>» Fatigue</li> <li>» Headache</li> <li>» Shivering</li> <li>» Fever</li> <li>» Gastrointestinal symptoms (nausea, vomiting, diarrhoea)</li> </ul> <p><b>Rare responses</b></p> <ul style="list-style-type: none"> <li>» Hypersensitivity - rashes and hives, angioedema.</li> </ul>

**CALL 0800 IMMUNE (466 863) for clinical advice**