

Vaccination advice for heart children

Last updated July 2021

Every child receives vaccinations to prevent illness and disease, but a heart child is especially vulnerable so extra care is taken to protect against things such as meningitis and flu. Your family doctor will have details of all the vaccinations your child should receive but we've put together a comprehensive update for extra peace of mind.

The following information has been provided by Dr Esse Menson, Consultant in Paediatric Infectious Disease.

Top 5 Vaccinations for heart children

1. Influenza vaccine

Most children with heart conditions aged 2-17 should have the influenza nasal spray (live) – it works better than the “flu jab” injection, is safe and needle free! Heart children who also have severe immune disorders or those taking aspirin should have the flu vaccine injection (killed) instead.

Further guidance here: [NHS England Chart: which flu vaccine should children have?](#)

2. Meningitis B vaccine

A new vaccine to prevent meningitis and septicaemia (blood poisoning) caused by meningococcal group B bacteria is being offered to babies as part of the routine immunisation schedule. It will protect babies against infection by this bacteria which are responsible for more than 90% of meningococcal infections in young children.

3. Men ACWY vaccine for teens and students

As a result of increasing cases of a vaccine of meningitis and septicaemia caused by meningococcal group W bacteria in young people the Men ACWY is being offered to children aged 14-18 years. This Men ACWY vaccine replaces the adolescent Men C vaccine, it covers meningococcus bacteria type W and type C and also types A and Y. Immunizing this age group will protect the wider community too. A catch-up programme is being rolled out over several years, first-time university students up to 25 years of age are being offered the vaccine first.

4. HPV vaccine

For teenage girls, the HPV vaccination schedule has been reduced to 2 doses instead of 3. One less injection!

5. Changes in the UK childhood vaccination programme

Changes to the programme are made after careful consideration by an expert panel about the need for additional protection, vaccine effectiveness and safety as well as considering what is children (and parents!) can tolerate – we'll keep you updated of changes that may affect heart children as well as the routine changes.

[Paediatric advice on COVID-19 vaccination for children](#)

On 20 July 2021 the BCCA (British Congenital Cardiac Association) published a statement regarding COVID-19 vaccination in children. [Read the advice and ECHO's statement here.](#)

Some reminders about flu vaccine

As occurs every year, the seasonal influenza (flu) vaccines are given yearly because the strains of flu change year on year. Vaccinating your child will mean your child is less likely to become ill if they come into contact with the flu. The vaccine helps your child build up immunity to flu in a similar way as natural infection but without the symptoms.

You may remember that since 2013 **live attenuated nasal vaccine** against flu has been available and has been rolled out to more and more age groups of children since last winter.

Children in clinical risk groups such as heart kids have been given either the nasal spray (containing live but weakened flu virus) or the inactivated injection (containing killed virus) if the live vaccine was contraindicated.

The nasal spray flu vaccine is called **Fluenz Tetra**:

- It is safe and simply to give – sprayed into your child's nostrils, no needle!
- It contains live viruses that have been weakened and adapted to cold so that they cannot replicate efficiently at body temperature.
- It cannot cause flu because it is adapted to the cold and cannot grow at body temperature.
- It is absorbed very quickly so it still works even if your child has a runny nose, sneezes or blows their nose after being vaccinated.
- It works better at protecting children from flu than flu vaccine injections.

Children with long-term health conditions such as congenital heart disease are at extra risk from flu illnesses so it is especially important that they are vaccinated against flu each year. Most of this group of children can have the nasal spray flu vaccine instead of the injection if they are aged 2 -17 years of age.

Like all other children, heart children aged between 6 months and 2 years will continue to get the

annual flu vaccine injection.

Babies under 6 months of age cannot have either the nasal spray or the injectable flu vaccine – the best way to protect them is to ensure that their mother is vaccinated during pregnancy and that their carers and household contacts are vaccinated against flu.

The number of doses of any flu vaccine that your child should receive (1 or 2) will depend on your child's age, the vaccine type and whether they have had any flu vaccines in the past. Your GP will advise you what your child needs.

We are still waiting for government advice on the flu vaccination this year (2021), and will update you as soon as we hear.

Are there children who should NOT have nasal spray flu vaccine?

The only heart children who shouldn't have the nasal flu spray are those who have a severely weakened immune systems due to conditions or immunosuppressive therapy such as:

- high dose corticosteroids
- have cellular immune deficiencies such as severe immunodeficiency as part of Di George syndrome ~ most children with Di George syndrome actually have a good enough cellular immune system e.g. those who have been told they can have the MMR are likely to tolerate the nasal spray very well although there is no specific data on to confirm this

Or those who are:

- receiving aspirin (salicylate)
- have severe asthma or who are wheezing at the time of intended vaccination or within the preceding week
- have egg allergy or are allergic to any of the vaccine ingredients, such as neomycin and gelatin

What if my child has a planned admission to hospital or is admitted to hospital unexpectedly?

It takes up to 14 days for flu vaccines to work and build protection against flu. Also, as the nasal spray contains weakened but live flu vaccine, recently vaccinated people should avoid others with severely weakened immune systems for a week or two after receiving the nasal spray because small amounts of the vaccine virus can be shed over this period.

So, it is in your child's best interests to have the nasal spray flu vaccine at least 2 weeks before being admitted to hospital. Let's keep it simply best to ensure that your child receives the flu vaccine as early as you can in the flu season!

If your child is admitted to hospital unexpectedly within 2 weeks of having had a flu vaccine, make sure

you tell your medical and nursing team, including the date, type of vaccine (jab or nasal spray) and number of doses.

If your child is in hospital for a long time and could miss their flu vaccine, it may be possible for him or her to have the flu vaccine in hospital. Some hospitals may offer the nasal spray vaccine, others the jab, based on their local policy; both are fine.

Remember to check with your doctors whether your child needs one dose of vaccine or two. If a second dose is needed, it should be given after about 4 weeks – make a note of this so you don't forget.

Should parents/carers of children with congenital heart disease have a flu vaccine?

Yes, it is recommended that all parents/carers get the flu vaccination, and also any siblings attending nursery or school.

Additional information about flu vaccines and other respiratory illnesses

- The nasal spray or injectable flu vaccines can be given alongside other routine vaccines
- Make sure your child – and all the children in your household – are up to date with all their routine childhood immunisations; if you are unsure, check with your GP practice today and arrange for any catch-up immunisations required **as soon as possible**.
- We worry about young babies being exposed to whooping cough from their siblings, parents or other family members – remember that whooping cough can be a mild illness in older children and adults but extremely severe in very young babies.
- Remember that flu viruses spread very easily between people (not the vaccine virus) – prevention is the **best** medicine!
- If your child is having a nose/throat swab to check for respiratory infections be sure to tell the nurse or doctor if your child has had any flu vaccine, (nasal or jab) and when

Meningitis B vaccine for babies

Meningococcal infections can be very serious, causing meningitis and septicaemia (blood poisoning), can lead to severe brain damage, amputations and, in sadly even death.

Meningitis and septicaemia caused by meningococcal group B bacteria can affect people of any age, but is most common in babies and young children.

- A new vaccine to prevent serious illness caused by meningococcal group B bacteria is being offered to babies as part of the routine immunisation schedule.
- The Men B vaccine is recommended for babies aged 2 months and at 4 months, with the third, booster dose, at 12 months.

- It will protect babies against infection by meningococcal group B bacteria, which are responsible for more than 90% of meningococcal infections in young children.
- The new Men B vaccine is called Bexero

The new programme makes England the first country in the world to offer a national, routine and publicly funded Men B vaccination programme.

Below is more information about this new and important vaccine to protect babies from meningitis and septicaemia; the information is taken from the [Public Health England website on vaccination](#) and you can get further details there.

Men B vaccine safety

Like all vaccines, the Men B vaccine can cause side effects, but studies suggest they are generally mild and don't last long. Almost 8,000 people, including more than 5,000 babies and toddlers, have had the new Men B vaccine during clinical trials to test its safety. Since the vaccine was licensed, almost a million doses have been given, with no safety concerns identified.

Men B vaccine and fever

Babies given the Men B vaccine alongside their other routine vaccinations at two and four months are likely to develop fever within the first 24 hours after vaccination. It is important that you give your baby liquid paracetamol following vaccination to reduce the risk of fever. Your nurse will give you more information about paracetamol at your vaccination appointment. Other common side effects include irritability and redness and tenderness at the injection site. The liquid paracetamol will also help with these symptoms.

Vaccine oral against rotavirus (a cause of gastro-enteritis) for babies

**There are no changes in the oral rotavirus vaccine introduced last year*

Rotavirus is a highly infectious stomach bug that typically affects babies and young children, causing a nasty bout of diarrhoea, sometimes with vomiting, tummy ache and some fever.

Most children recover at home within a few days but

- nearly 1 in 5 will need to see their doctor,
- 1 in 10 of these end up in hospital usually due to dehydration
- A very small number of children in the UK die from rotavirus infection each year.

The rotavirus vaccine should

- prevent 80% of cases of vomiting and diarrhoea caused by rotavirus
- reduce hospital admissions by 70%

Some key facts about the rotavirus vaccine

- The vaccine, called Rotarix, and it helps your baby build up immunity so that the next time they come into contact with rotavirus they will not get the disease.
- The rotavirus in the vaccine is weakened, so your baby won't get rotavirus disease from having the vaccination.
- Very effective and gives good immunity to rotavirus infection.
- It protects against around 90% of the rotavirus strains that are in circulation in the UK.
- Rotavirus vaccine is safe, it has been extensively used in many countries for more than 5 years and there have been no safety concerns.

How is rotavirus vaccine given?

- It is now part of the routine childhood vaccination programme for babies aged 2 months and 3 months
- It is given as a liquid from a dropper straight into the baby's mouth and swallowed.
- Your baby needs two rotavirus vaccinations at least a month apart to be fully protected.
- The rotavirus vaccination is only suitable for young babies and there is no 'catch-up' vaccination of older children: the 1st dose cannot be given any later than 15 weeks of age, and the 2nd dose no later than 24 weeks; babies can only have the 2nd dose if they had their 1st dose before 15 weeks.
- It's perfectly safe for your baby to have the rotavirus vaccine at the same time as other childhood vaccines

Which babies should not have the rotavirus vaccination?

Children with heart conditions can safely have the rotavirus vaccine unless they have any of the following:

- complex single ventricle and are on the home monitoring programme
- serious illness with either diarrhoea and vomiting or a fever on the day of the appointment; postpone the vaccination until your baby has recovered
- as a rule of thumb there's no need to delay rotavirus vaccination if your baby is well enough to have their other routine childhood vaccinations
- confirmed severe allergic reaction to a previous dose of rotavirus vaccine or any of its ingredients.
- are older than 24 weeks of age.
- a disorder of the intestines called intussusception
- a rare genetic disease called severe combined immunodeficiency (SCID) disorder
- certain rare inherited disorders (fructose intolerance, glucose-galactose malabsorption or sucrase-isomaltase insufficiency)

What if your child has a planned admission to hospital or is admitted to hospital unexpectedly?

The vaccine contains only a weakened form of the rotavirus, so traces of it in a baby's nappy won't harm healthy people, but could affect those with severe problems with their immune system

- Take special care with personal hygiene, including washing your hands carefully after changing the baby's nappy
 - Let the medical team know that your child had had the live rotavirus vaccine when your child is admitted to hospital
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What is Respiratory Syncytial Virus (RSV)

The Respiratory Syncytial Virus (RSV) is a virus that causes cold and breathing symptoms. In adults it generally just causes a cold, but as small children have small airways, it can cause difficulty in breathing.

How can Respiratory Syncytial Virus (RSV) be prevented?

Palivizumab is an immunisation that is given monthly over the winter months to high risk children under the age of two to try and prevent them getting RSV, or to lessen symptoms if they do get it. Palivizumab gives the child antibodies against the virus (as opposed to a vaccination which makes the child create a response to a virus) - this is why a dose is needed each month.

Does my baby/child need the RSV immunisation (Palivizumab)?

Babies are identified by their named cardiologist/paediatrician with expertise in cardiology and will be offered the immunisation if they are eligible (this will be at the local hospital).

A letter will be sent to the local hospital copying in the parents and GP. The local hospital should then be in touch to organise the immunisation. If this is not happening then please contact the local hospital.

Conditions which are included are those with single ventricle circulations with low oxygen saturations, those with low oxygen saturations awaiting surgery and some babies who are awaiting early surgery. It is not usually needed in children who have had corrective surgery. Some children who have milder heart conditions but were born prematurely or who are on non-invasive or long-term ventilation may be offered it via their respiratory team.

My child had a course last year, will they need a second course this

year?

For patients that received Palivizumab last year, only the highest risk patients who have ongoing problems will have a second course. The main change this year is that we have been advised to start in July and give extra doses rather than October. If you have any concerns about this, then please discuss with your child's cardiologist or the clinical nurse specialists.

Vaccination guidance for teenagers

HPV vaccination for teenage girls

Recent research has shown that the antibody response after 2 doses of HPV vaccine is as good as after 3 doses in this age group – so more good news, one less injection required.

Meningococcal ACWY vaccination young people aged 14-18

Since 2009 there has been an increasing of cases of meningitis and septicaemia in young people caused by meningococcus type W. After careful review of the evidence, a vaccine to protect against this meningococcus type is being offered to children aged 14-18 years until March 2016. Vaccinating this group with MenACWY vaccine will provide protection to the wider community too.

Meningococcal C vaccination of new university goers

Children are routinely offered the Men C vaccine as part of the NHS childhood vaccination programme at 3 months, 12 months and 13-15 years (teenage booster).

From late summer 2014, students under the age of 25 who are starting university will also be offered a catch-up booster of Men C vaccine. This student catch-up programme will continue for several years until all university entrants have received a MenC teenage booster or the Men ACWY vaccine.