

Immunisation - Usual UK Schedule

Immunisation has caused dramatic improvements in health. Because of immunisation, diseases such as diphtheria, tetanus, whooping cough, measles and polio which used to be major causes of ill health are now rare in many countries. Some immunisations are offered to all people through the childhood immunisation programme. Some are offered to 'at risk' groups - listed below.

Normal immunisation schedule for all people in the UK

AGE	- Immunisation (Vaccine Given)
2 months	- DTP/Polio/Hib (Diphtheria, Tetanus, Pertussis, Polio, and Haemophilus Influenza B) - all in one injection, plus: Pneumococcal (PCV) - in a separate injection
3 months	- DTP/Polio/Hib (2nd dose), plus: MenC (Meningococcus Group C) - in a separate injection
4 months	- DTP/Polio/Hib (3rd dose), plus: MenC (2nd dose) - in a separate injection, plus: Pneumococcal (PCV) (2nd dose) - in a separate injection
Around 12 months	- Hib/MenC (combined as one injection - 4th dose of Hib and 3rd dose of MenC)
Around 13 months	- MMR (Measles, Mumps and Rubella - combined as one injection), plus: Pneumococcal (PCV) (3rd dose) - in a separate injection
Around 4-5 years	- 'Pre-school' booster of: DTP/Polio , plus: MMR (second dose) - in a separate injection
Around 13-18 years	- Td/Polio booster. (A combined injection of Tetanus, low dose Diphtheria, and Polio.)
Adults	- Influenza and Pneumococcal if you are aged 65 or over Td/Polio - at any age if you were not fully immunised as a child

Note:

- DTP, Polio and Hib vaccines are combined into one injection - the DTP/Polio/Hib vaccine.
- Pneumococcal (PCV) is a separate injection and was added to the routine immunisation schedule in September 2006.
- Meningococcus group C vaccine (MenC) is sometimes given as a separate injection but is combined with Hib for one injection.
- Td/Polio is Tetanus, low dose Diphtheria and Polio vaccines combined as one injection.
- Polio immunisation changed in 2004. The polio vaccine is now combined with DPT/Hib or Td and given by injection. It used to be given by mouth (oral vaccine) as a few drops of vaccine on the tongue. If you have previously started a course of polio immunisation with oral vaccine you can finish off the course with polio injections. You do not need to start again.
- Measles, mumps and rubella vaccines are combined into one injection - the MMR vaccine.

Further immunisations for special 'at-risk' groups

If you travel abroad

If you travel abroad it is recommended that you are protected against the local infections if immunisations are available. Ideally, see your practice nurse or GP for advice on travel at least two months prior to your departure. Doctors and nurses are regularly updated with immunisation requirements for every country in the world.

Immunisation against tuberculosis (the BCG vaccine)

The BCG vaccine is offered to the following people in the UK:

- Babies living in areas of the UK where there is a high rate of TB. That is, areas where the incidence of TB is 40 cases per 100,000 people per year, or greater.
- Babies whose parents or grandparents have lived in a country with a high rate of TB. That is, countries where the incidence of TB is 40 cases per 100,000 people per year, or greater.
- The following groups of people who have not previously been immunised.
 - Immigrants to the UK from countries where TB is common.
 - People at risk due to their job. For example, health workers, prison staff.
 - Close contacts of people with active TB.
 - People who intend to live for one month or more in countries with a high TB rate.

Note: until 2005, all schoolchildren in the UK were routinely given the BCG vaccine at about the age of 13. The policy changed in Autumn 2005 and those now immunised are in the groups listed above. The policy change was due to the changing patterns of TB in the UK. Rates of the disease are now very low in many parts of the country and children living in these areas have a very low risk of infection. However, in other areas, rates of TB are increasing. This is why the BCG vaccine is now mainly targeted at babies living in areas where there is an increasing rate of TB cases. Your doctor or midwife will be able to tell you if you live in an area with a high rate of TB.

Children who would previously have been offered BCG through the schools' programme will now be screened for risk factors, tested and immunised as appropriate.

Influenza immunisation (the 'flu jab')

The aim is to protect people who are more likely to develop complications from flu. You should be immunised against flu each autumn if you:

- Are aged 65 or over.
- Have a chronic (ongoing) lung disease. For example: chronic obstructive pulmonary disease (COPD), emphysema, chronic bronchitis, asthma which requires regular use of inhaled steroids or steroid tablets (or if you have previously been admitted to hospital because of asthma), cystic fibrosis, interstitial lung fibrosis, pneumoconiosis, etc.
- Are a child who has previously been admitted to hospital with a lower respiratory tract disease such as pneumonia.
- Have a chronic heart disease. For example: if you require regular medication or follow-up for ischaemic heart disease (angina, heart attacks, etc), congenital heart disease, chronic heart failure, or heart disease caused by high blood pressure.
- Have a serious chronic kidney disease. For example: nephrotic syndrome, kidney failure, if you have had a kidney transplant.
- Have chronic (ongoing) liver disease such as cirrhosis.
- Have diabetes which requires insulin or tablets to control it.
- Have a poor immune system. (For example, if you have no spleen, are taking chemotherapy or steroid treatment, if you have HIV/AIDS, etc.)
- Live in a nursing home or other long stay residential care accommodation.

Also, you should have the flu jab if you are the main carer of an elderly or disabled person whose welfare may be at risk if you fall ill. (For example, if you were to develop flu.) Also, healthy staff involved in direct patient care may be offered a flu jab from their employer.

Pneumococcus immunisation

The pneumococcus is a bacterium that can cause pneumonia and meningitis. Immunisation against pneumococcus with the pneumococcal PCV vaccine became part of the routine childhood immunisation programme in the summer of 2006. In addition, people who are at increased risk of infection with this bacterium should be immunised. For children under five years old this is with the (routine) pneumococcal PCV vaccine *plus* a one-off dose of pneumococcal PPV vaccine as soon as possible after the second birthday. For people over five years it is with a one-off dose of pneumococcal PPV vaccine. You are at increased risk, and should be immunised, if you:

- Are aged 65 or over.
- Do not have a spleen, or if your spleen does not work properly.
- Have a chronic (ongoing) serious lung disease. For example: chronic obstructive pulmonary disease (COPD), emphysema, chronic bronchitis, asthma which requires regular use of steroid tablets, cystic fibrosis, interstitial lung fibrosis, pneumoconiosis, etc.
- Are a child who has previously been admitted to hospital with pneumonia.
- Have a chronic heart disease. For example: if you require medication or follow-up for heart failure, ischaemic heart disease (angina, heart attacks, etc), congenital heart disease, etc.
- Have a serious chronic kidney disease. For example: nephrotic syndrome, kidney failure, if you have had a kidney transplant.
- Have a chronic liver disease such as cirrhosis or chronic hepatitis.
- Have diabetes which requires insulin or tablets to control it.
- Have a poor immune system (immunosuppression). For example, if you have no spleen, are taking chemotherapy or steroid treatment, if you have HIV/AIDS, etc.
- Have a cochlear implant.
- Have a CSF shunt (a shunt to drain the fluid that surrounds the brain).
- Are a child under five years who has previously had a pneumococcal disease such as pneumococcal meningitis or pneumococcal bacteraemia.

Hepatitis B immunisation

Is advised for people who are at increased risk of contracting Hepatitis B. For example:

- Babies who are born to infected mothers
- Workers who are likely to come into contact with blood products, or are at increased risk of needlestick injuries, assault, etc. For example: nurses, doctors, dentists, medical laboratory workers, prison wardens, etc. Also, staff at day care or residential centres for people with learning disabilities where there is a risk of scratching or biting by residents.
- People who inject street drugs, and their sexual partners and children.
- People who change sexual partners frequently.
- People who live in close contact with someone infected with hepatitis B. This includes all prison inmates. Also, families who adopt or foster a child may be offered immunisation when the hepatitis B status of the child is not known. (You cannot catch hepatitis B from touching people or just normal social contact. So, household visitors and friends are not usually at risk. However, close regular contacts are best immunised.)
- People who regularly receive blood transfusions.
- People with certain kidney or liver diseases.
- People who live in residential accommodation for those with learning difficulties. People who attend day centres for people with learning difficulties may also be offered immunisation.
- Travellers to countries where hepatitis B is common who place themselves at risk when abroad. The risk behaviour includes sexual activity, injecting drug use, undertaking relief work and/or participating in contact sports. Also, if you may need a medical or dental procedure in these countries and the procedure may not be done with sterile equipment.

Immunisation against chickenpox

A vaccine is offered to health care workers (doctors, nurses etc) who have not previously had chickenpox and so are not immune and may catch chickenpox. (About 1 in 10 adults have not had chickenpox as a child.) If you are not sure if you have had chickenpox, a blood test can check if you have previously had it. The aim is to protect health care workers from developing chickenpox, but also patients. If chickenpox does not occur in any health care staff, this protects patients with a poor immune system (such as people with leukaemia) who may catch chickenpox from a health care worker who may be 'brewing' a chickenpox infection without realising it.

Close contacts of people with a poor immune system who are not immune to chickenpox should also have this immunisation. For example, brothers and sisters of a child with leukaemia who have not previously had chickenpox. Infection with chickenpox can be very serious for people with a poor immune system.

Other situations

In some special circumstances other immunisations are considered. For example, workers who handle animals may be offered rabies immunisation. Those in close contact with people who have certain forms of meningitis may be offered specific immunisations. Discuss with your doctor or practice nurse if you think you fall into one of these groups.

Adults - are you fully immunised?

Some adults are not fully immunised against polio and tetanus. These immunisations were first introduced into the UK in the late 1950s. If you were born before then you might not have received full protection from these illnesses. Your practice nurse will be able to advise if you are unsure.

Who should NOT be immunised?

There are very few reasons why people should not receive their full course of immunisations. Immunisations are generally safe and effective. For *some* immunisations the three commonest reasons why it might not be advisable are:

- Pregnancy.
- If your immune system is not working properly. For example, in people with HIV infection, people undergoing chemotherapy or who are receiving high doses of steroids.
- If you have previously had a severe reaction to the same vaccine.

See the notes on individual immunisations for details.

How does immunisation work?

The body is given a vaccine which is a small dose of an inactive form of a bacterium or virus (germ), or a toxin (poison) made by the germ. As it is inactive it does not cause infection. However, the body makes antibodies and/or immune cells (white blood cells) against the germ or toxin. Antibodies are proteins in the bloodstream that attack infecting germs. Once we are immunised the antibodies and/or immune cells are ready to attack the germ if it begins to invade our body. More antibody can quickly be made from cells which have previously made the particular antibody.

For some bacteria and viruses it has been difficult to produce a vaccine, but technology is advancing and new vaccines will be available in the future.

A new-born baby has 'passive' immunity to several diseases such as measles, mumps and rubella, from antibodies passed from its mother via the placenta. This passive immunity of babies usually only lasts for a few weeks or months, but for measles, mumps and rubella it lasts up to one year. Immunisation with vaccines is called 'active' immunity and provides long-term immunity.

Further information

Immunisation Against Infectious Disease (The Green Book)

www.dh.gov.uk/PolicyAndGuidance/HealthAndSocialCareTopics/GreenBook/fs/en

From the Department of Health. Aimed at health professionals but of interest to all.