

# Immunisation for flu

## Flu jab

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 Meets Patient's **editorial guidelines**

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Getting the flu vaccine (also called the flu jab or flu shot) is a safe and effective way to protect against becoming seriously ill with flu.

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## What is the flu jab for?

**Influenza (flu)** is a common viral infection that comes in 'seasons' (winter in the UK).

Flu can cause more severe symptoms than the **common cold**. Some people can become seriously ill with flu, needing hospital treatment, and can sometimes be life-



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threatening. Certain groups of people, such as older adults and young children, are at higher risk from flu infection.

Getting the flu jab reduces the risk of catching flu, and also reduces the chances of becoming seriously unwell with flu. Exactly how well it works differs from year to year. The flu vaccine provides protection for about 6 months, so flu vaccines are offered annually.

If 10 people have the flu jab, it usually provides protection from flu for 7 or 8 of them. If the vaccine does not match the predicted flu types around that year, the protection rate can be lower. For example, in winter 2015/2016 the vaccine protected between 5–6 elderly people out of 10.

## When do flu jabs start?

In the UK, flu vaccines are usually available from October onwards.

For the 2024–25 season, flu vaccines for eligible children and pregnant women will be available from 1st September 2024. Flu vaccines for other groups of eligible adults (see below) will be available from 3rd October 2024.

It's better to have the flu vaccine before flu starts spreading, because it takes about two weeks for the vaccine to start to provide protection. Flu season usually starts in December or January, and lasts for 2–3 months.

## What's in the flu jab?

The flu injection is made from the three or four strains of flu virus that are most likely to cause outbreaks in the coming winter. A vaccine which protects against four strains is called a quadrivalent vaccine; if it protects against three strains, it is called a trivalent vaccine.

Each year these are slightly different, so a new jab needs to be made every year. You need a yearly jab to stay protected.

The World Health Organization (WHO) monitors flu viruses throughout the world and recommends which strains are to be included in the current year's vaccine.

## Types of flu vaccine

There are several different types of flu vaccines.



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Most flu vaccines are inactivated vaccines. Inactivated means that the virus, or parts of the virus, in the vaccine are not alive, and cannot survive or grow in the body. All of the inactivated vaccines are given as injections.

There is also a live attenuated flu vaccine, which is given as a nasal spray. Attenuated means that the flu virus is alive, but significantly weakened. The live attenuated flu vaccine comes as a nasal spray, and is given to children.

Each year, the UK national flu vaccine programme gives instructions on which type of vaccine should be given to each group of people. These are quite complex. The instructions for 2024–25 are given at the end of this leaflet, along with more detail on the different types of flu vaccine that are available (under "Different types of flu vaccine").

## Who is eligible for the flu jab?

Seasonal flu is the particular type of flu virus that arrives in the UK each autumn. The actual type varies from year to year. The new jab is developed each year to protect against the expected type. The flu jab takes up to 14 days to give full protection after having the jab.

The Department of Health issues advice as to who should be immunised. This is reviewed each year. The aim is to protect people who are more likely to develop complications from flu. People in these groups can get the flu vaccine as part of the national flu programme, free of charge.

It's also possible to pay to get the vaccine privately, if you're not eligible to get it as part of the national programme.

## For the 2024–25 flu season

Anyone in the following groups can receive the flu vaccine as part of the national programme:

- People aged 65 or older.
- Children aged 2 or 3 years on 31st August 2024.
- Primary and secondary school-aged children (from reception to year 11).



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- People aged between 6 months and 65 years who have medical conditions that put them at risk from flu, including:
  - Chronic (long-term) lung problems, including **asthma** and **COPD**.
  - Chronic heart and vascular problems, including **congenital heart disease**, **heart failure**, and **ischaemic heart disease**.
  - **Chronic kidney disease**.
  - Chronic liver diseases.
  - Neurological problems, including **strokes**, **multiple sclerosis**, cerebral palsy, and severe learning disabilities, including **Down's syndrome**.
  - **Diabetes** and adrenal insufficiency (eg, **Addison's disease**).
  - A **severely weakened immune system**, for example due to **chemotherapy** or **HIV**.
  - Conditions that affect the spleen, such as **sickle cell disease** and **coeliac disease**.
  - Morbid **obesity**.
- Pregnant women.
- People in long-stay residential care homes.
- People who are carers for an elderly or disabled person.
- People who are in close contact with people who have **severely weakened immune systems**.
- Frontline social care workers, if they are unable to get the flu vaccine via their employer.

All frontline health and social care workers, including both clinical and non-clinical staff who have contact with patients, should also be offered the flu vaccine. This is usually given by their employer as part of their occupational health programmes, but, if this is not possible, they may also be able to get it on the NHS.

People who aren't in any of these groups cannot get the flu vaccine free on the NHS. This is because they are very unlikely to become seriously ill with flu. However, they can pay to get the flu vaccine privately; some pharmacies and private doctors offer



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## Can children get the flu jab?

Yes, children can, and should, get vaccinated against flu.

Children who get vaccinated against flu are less likely to catch flu – meaning they are less likely to need time off school – and are less likely to pass flu on to other people, such as elderly relatives. The flu vaccine also protects children against serious illness and death from flu. Children under 5 are the age group most commonly admitted to hospital with flu.

Most children are offered a nasal spray flu vaccine. It's given as a nasal spray into both nostrils.

The nasal flu vaccine contains a tiny amount of purified gelatin, derived from pork. This is important to keep the virus stable in the vaccine and ensure that it works. Some religious leaders, including certain Jewish and Muslim leaders, feel that this does not break religious dietary laws, although there are a range of opinions.

If the nasal flu vaccine isn't suitable, an injectable flu vaccine can be given instead.

### For the 2024 to 2025 flu season

- Children from 6 months to 2 years of age with certain long-term health conditions can get the flu vaccine at their GP surgery.
- Children who were aged 2 or 3 years on 31st August 2024 can get the flu vaccine at their GP surgery.
- Primary and secondary school children (reception to year 11) can get the flu vaccine at school. Home-schooled children, and children not in mainstream education, should be invited for vaccination by the local school-aged immunisation service.
- School-age children with certain long-term health conditions can get the flu vaccine either at their school, or at their GP surgery.

## Can pregnant women get the flu jab?

Yes, pregnant women can get the flu jab, and it's recommended to do so. Pregnant women are at increased risk of becoming severely unwell with flu. They are also more likely than non-pregnant women to be admitted to hospital.



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Having flu when you are pregnant may also be associated with serious pregnancy problems, prematurity and lower birth weight for the baby.

The flu jab reduces the chances of this happening. Pregnant women who are vaccinated against flu also pass on some of their immunity to their babies at birth, which lasts for the first few months of their lives.

Your GP (or possibly midwife) should offer you a flu vaccination during your pregnancy, if it runs over the winter. If they don't, do ask for one.

If you become pregnant during the flu season you should be offered a flu vaccine as soon as possible.

It's safe to have the flu jab at any time during pregnancy. There are no known problems from giving the seasonal flu jab to women who are pregnant.

## Flu jab side-effects

Most people get few, or no, side-effects from the flu jab.

Common side-effects are:

- Soreness, pain, bruising, or redness at the injection site.
- A mild raised temperature (fever).
- Muscle aches.
- A headache.
- Nausea (feeling sick).
- Feeling generally unwell.

These are usually mild and disappear after a day or two.

The injected flu vaccines do not contain a live flu virus. They cannot cause a flu infection.

The live flu vaccine (nasal spray) used for children does contain live, but weakened, flu virus. This is more effective in children than the injected vaccines. The weakened viruses can only grow at colder temperatures inside the nose, and can't grow in the



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lungs, or other, warmer, areas of the body. Sometimes, the live flu vaccine can cause a mild runny or blocked nose for a day or two, but it doesn't cause flu infection in healthy people.

As a precaution, though, the live flu vaccine isn't given to children with **severely weakened immune systems**. Children who have very close contact (eg, living together) with people with very severely weakened immune systems (eg, people who have had a bone marrow transplant and are in isolation) should also not be given the live flu vaccine, in the very rare case they pass on the virus. Children who can't have the live flu vaccine can have an injectable one instead.

Serious reactions to the flu vaccine can occur, but are very rare. Severe allergic reactions (**anaphylaxis**) occur in about 1 per million people who have the flu vaccine (although it's thought that the true number might be even lower).

Other, very rare, reactions have been reported after the flu vaccine, such as inflammation of nerves (**Guillain-Barré syndrome**) and **inflammation of the brain (encephalitis)**. The risk seems to be about 1 per million people who have the vaccine. However, there is very limited evidence that the vaccine is directly responsible for these problems, and some scientists have suggested that they may not be linked at all.

## Who should not have the seasonal flu jab?

The flu jab is safe for almost everyone.

The only group of people who shouldn't have the flu vaccine are people who have previously had a serious allergic reaction to a flu vaccine before, or to one of the ingredients in the flu vaccine. However, it might still be safe to have a different vaccine – ask your healthcare professional.

Some types of flu vaccine should be avoided in certain groups of people. For example, the live flu vaccine shouldn't be given to children with a severely weakened immune system (eg, children with **leukaemia** or **HIV**). However, they can still safely have the inactivated (injected) flu vaccine.

Flu immunisation can be given at the same time as other immunisation; **it is often given at the same time as the pneumonia immunisation**, or Covid-19 immunisations. It is also safe to be given if you are either pregnant or breastfeeding.



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## What if I have an egg allergy?

Some types of flu vaccine are made using eggs. These are:

- The live attenuated flu vaccine (nasal spray).
- Egg-based quadrivalent vaccines and adjuvanted egg-based quadrivalent vaccines (both types of injections).

Small amounts of egg protein can be found in those vaccines. However, the amount of egg protein in the vaccines is extremely small, and so many people with egg allergy can safely have them. For example, the live attenuated flu vaccine is safe to use even for children who have severe egg allergies.

There are also flu vaccines that are completely egg-free, which can be used when egg-containing vaccines aren't suitable.

See the [Vaccines and Egg Allergies](#) leaflet for more information.

Always tell your healthcare professional if you have allergies to egg, or anything else. They can make sure you get the right vaccine.

## Where can I get the flu jab?

If you're eligible, you can get the flu jab free at:

- Your GP practice, or a clinic set up by them in conjunction with other local practices.
- Schools as part of the flu vaccine programme.
- Your local pharmacy (if they offer this service).
- Your midwife (if they offer it for pregnant women).
- Your employer, if you work in health or social care.

**Note:** if you have the vaccination somewhere other than your GP surgery, they should notify your GP on your behalf.

You can also pay to get the flu vaccine privately. Some pharmacies and private clinics offer this service.



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## Different types of flu vaccine

In the UK, there are four different types of inactivated flu vaccine, all made in slightly different ways. These are all given as injections. They are:

- An egg-based quadrivalent vaccine (QIVe). This contains parts from four different flu strains, which are made by growing flu virus in eggs, then extracting and killing the virus.
- A high-dose egg-based quadrivalent vaccine (QIV-HD). This is similar to the QIVe, but has higher levels of particles from the flu virus, which may make it more effective in older people.
- An adjuvanted quadrivalent vaccine (aQIV). This is a type of egg-based quadrivalent vaccine that has had an adjuvant added. An adjuvant is a substance which increases the immune system's response to the vaccine. It's thought to make this vaccine more effective in older people.
- A recombinant quadrivalent vaccine (QIVr). This contains parts from four different flu strains. DNA from the flu virus is inserted into cells in a laboratory, which makes them produce parts of the flu virus. These virus parts are then collected.
- A cell-based quadrivalent vaccine (QIVc). This contains parts from four different flu strains. These parts are made by infecting cells with flu virus in special lab conditions, and collecting parts of the virus for use in a vaccine.

There is also a live attenuated flu vaccine (LAIV), which is given as a nasal spray.

For 2024-25, the UK recommendations are that:

- People aged 65 years or over should get the aQIV, the QIV-HD, or, if neither of these are available, the QIVc.
- People aged 18 to 59 who are in eligible groups should get the QIVc, or, if this is not available, the QIVe.
- People aged 60 to 64 who are in eligible groups should get the QIV-HD or the QIVc, or, if neither of these are available, the QIVe.



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- Children aged 2 to 18 in an at-risk group, all children aged 2 to 3 years, and children eligible for the vaccine at school should be given the LAIV, or the QIVc if this is not suitable. The QIVe can be given if it there is no way to obtain the QIVc.
- Children aged 6 months to 2 years who are at-risk of flu should be given the QIVc. The QIVe can be given if it there is no way to obtain the QIVc.

## Further reading and references

- **Guidance on use of antiviral agents for the treatment and prophylaxis of seasonal influenza**   
([https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/833572/PHE\\_guidance\\_antivirals\\_influenza\\_201920.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/833572/PHE_guidance_antivirals_influenza_201920.pdf)); UK Health Security Agency (November 2021)
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