

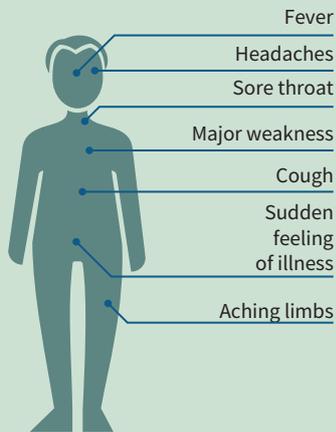
Influenza vaccination

Due to COVID pandemic: this autumn / winter particularly important for risk groups



What does the vaccination protect against?

Disease caused by Influenza viruses



Complications

- Pneumonia (also as secondary infection)
- Worsening of a chronic lung disease
- cardiovascular consequences (up to and including stroke, heart attack)
- infrequently: encephalitis, inflammation of the heart muscle
- On children: Otitis media
- In the case of a severe course or serious previous illness: death

Influenza ("real" flu)

- ! Influenza is an acute disease caused by influenza viruses, which is a seasonal and common disease. It can be serious to life-threatening.
- ! Severe courses of the disease are possible, especially in people at particular risk.
- ! The number of influenza-associated deaths varies greatly from year to year (from several hundred to over 20,000 deaths).
- ! Path of infection: mainly by droplet infection, but also via contaminated hands and surfaces with subsequent contact with mucous membranes.

Effects of Influenza in Germany

2016-2019 (waves of influenza are very different every season)



4 - 16 million infected persons



3,8 - 9 million consultations



2,3 - 5,3 million sick leaves



Who is the vaccination recommended for?

From the age of 60	People with fundamental chronic diseases	Residents of senior citizens' and care homes	Health care staff	Contact persons of people at certain risk (cocoon strategy)	Pregnant women



Why is there a new Influenza vaccine for each season?



Seasonal influenza is currently caused by four types of virus (two influenza A and two influenza B variants each), of which different variants circulate around the world. The mix of variants can change from year to year, but also within a season. The seasonal influenza vaccine contains surface components of the virus variants (antigens) expected for the coming season.



Match: The vaccine antigens match the virus in circulation. The vaccination is optimally effective.



Mismatch: The vaccine antigens do not perfectly match the circulating virus variants. Vaccination - coupled with existing residual immunity - can alleviate the course and complications.





FAQ (Frequently Asked Questions)

How safe is the vaccination?

The vaccination is well tolerated. There may be pain at the injection site for a short time. This usually subsides after one or two days without any consequences. Serious and irreversible side effects (e.g. neurological diseases) are very rare.

An influenza vaccination does not give you the flu! It is not possible to trigger infections with inactivated vaccines.

How effective is the vaccination?

The best available protection against influenza is vaccination. However, if circulating viruses change, the protective effect can also change during the season.

Several factors are responsible for the effectiveness of the vaccine (e.g. type of vaccine, antigen match, virus change in the previous season, existing residual immunity, age). A protective effect of up to 80 percent was observed in young adults and between 40 and 60 percent in older people.

Annually, the World Health Organisation (WHO) recommends a vaccine whose composition is adapted to the viruses circulating.

What is the difference between an influenza ("real" flu) and an flu-like infection ("common cold")?

In a flu-like infection other viruses than influenza viruses (over 200 different viruses) play a role. In principle, however, it can be said that influenza infections rarely lead to serious illness, are usually self-limiting and do not require hospitalisation. It is not possible to vaccinate against a "cold".

Important! Influenza vaccination does not protect against flu-like infections caused by other viruses. A "cold" is possible despite vaccination and does not indicate that the vaccination is not effective.

What are contraindications of vaccination?

- Febrile illness ($\geq 38.5^\circ\text{C}$)
- Acute infection

- Chicken egg protein allergy

Persons who have a mild reaction to the consumption of chicken egg protein can be vaccinated without special surveillance. In case of more serious allergies, the indication should be strictly considered and vaccination should only be carried out under intensive medical intervention. An influenza vaccine free of chicken egg protein, produced in cell cultures and suitable for allergy sufferers, is now also available.

The live vaccine (nasal spray), which is approved for children and adolescents, has the following restrictions on use: severe asthma, immunodeficiency, salicylate therapy.

Does influenza vaccination only prevent influenza?

There is (increasing) evidence that influenza is a risk factor for heart attacks and strokes. As a viral infection, influenza can lead to inflammation of blood vessels, which can lead to heart attacks or strokes if other risk factors are present. **The risk of heart attacks and strokes as a result of influenza can be significantly reduced by vaccination.**

What do older people need to be aware of?

With increasing age the efficiency of the immune system decreases so that infections can be difficult to treat.

Older people also have an increased risk of complications, which often have to be treated in hospital. Most deaths from influenza affect this age group.

The reduced immune response of older people means that the vaccination may be less effective than in younger adults. Therefore, adjuvant seasonal vaccines have been developed. With adjuvant vaccines, local side effects at the injection site (pain, redness, swelling) may be more pronounced and should be reported.



Important facts for the practice

The flu epidemic reaches its peak after the turn of the year. Vaccination protection usually occurs after 10 to 14 days, so planned vaccinations should be carried out by mid-December.

Vaccination scheme

Since November 2017 only quadrivalent influenza vaccines are recommended by STIKO:

- Inactivated vaccine are admitted from the age of 6 months
- Live vaccine (nasal) are approved at the age between 2 and 17 years
- Children under the age of 9 years who are being vaccinated for the first time should receive two doses of vaccine at 4-week intervals when using inactivated vaccines

Repayment by health insurance funds

Influenza vaccination is only a compulsory service provided by statutory health insurance companies for certain population groups. However, some health insurance companies also reimburse non-risk groups on request.



Public-Health-Perspective

Even if the effectiveness of influenza vaccination is not optimal, the frequency of influenza can prevent many (serious) cases of illness. In Germany, even with the current moderate vaccination rates, it is estimated that about 400,000 influenza cases per year are prevented in people over 60 years of age (Weidemann F et al. BMC Infectious Diseases 2017).

The COVID pandemic currently creates a special situation: it is important to avoid overloading the health care system. The differential diagnosis can be made easier. Pneumococcal vaccination should also be considered in this context.

