Before administering the vaccination, the following information is requested:

1. **Does the vaccine recipient have an acute disease?**
2. **Has the vaccine recipient any known allergies (for example, to chicken egg white or antibiotics)? If yes, which?**
3. **Did the vaccine recipient experience any allergic reactions, high fever or other unusual reactions after a previous vaccination?**

Information **Influenza No. 11**

on protective vaccination against influenza ("flu")

Acute diseases of the respiratory tract belong to the most common disorders. They are caused by a number of different pathogens, particularly by viruses. The influenza virus, the pathogen causing the 'genuine' flu that occurs every year in form of an epidemic, plays a special role. On top of that, influenza viruses mostly lead to more severe disease courses compared to other pathogens causing acute respiratory tract disorders. The best protection consists of a timely performed vaccination. The influenza vaccination does not protect from other usually mild acute respiratory tract disorders caused by different pathogens.
Influenza is an acute disease involving fever, cough and muscle pain which, from a merely clinical point of view, cannot always be distinguished from other disorders of the respiratory tract. Mainly in older and chronically ill people, severe courses of influenza are often observed. The viral flu occurs more frequently during the cold season. For this reason, people should generally be vaccinated in the autumn months. However, protective vaccination may be performed at any time. As the influenza viruses are permanently changing, the influenza vaccination has to be repeated every year with an up-to-date vaccine.

Vaccine

The influenza vaccine, a so-called seasonal vaccine, is manufactured on an annual basis according to the actual WHO (World Health Organization) recommendations.
These recommendations take account of the currently globally circulating influenza virus types A and B. The vaccine generally contains parts of two influenza A viruses (A/H1N1 and A/H3N2) and one influenza B virus. At larger intervals, there is the danger of a worldwide spread of a completely new influenza pathogen (pandemic). As of 2009, this was the case with the "new A/H1N1 influenza", sometimes also referred to as "swine flu". However, this pathogen has meanwhile displaced the previously circulating A/H1N1 influenza viruses and is thus contained as one of the three components in the current seasonal influenza vaccine. Even if the vaccine composition exceptionally remains unchanged in one season, the vaccine´s immune protection should be refreshed.
The inactivated vaccines (dead vaccines) contain those constituents of influenza viruses that create immunity against the disease. They are made from chicken eggs.
The vaccines are administered through intramuscular injection, i. e., injected into the upper arm muscle, for example; likewise, the vaccination can also be given deep subcutaneously (under the skin). One specific vaccine (for individuals aged 60 and older) is also injected into the skin (intracutaneous administration). The influenza vaccination can be performed together with other vaccinations. Children aged 6 to 35 months receive a 0.25 mL vaccine dose, whereas children aged 36 months and older, adolescents and adults are given a 0.5 mL dose of vaccine. Previously unvaccinated children receive 2 vaccinations at least 4 weeks apart. Vaccinal protection becomes effective about 2 to 3 weeks after vaccination.

Who should be vaccinated?

The influenza vaccination is recommended to all persons being at particular risk from influenza:

- Persons aged 60 and older
- All pregnant women from the 2nd trimester of pregnancy (women exposed to increased health risks due to an underlying disease already from the 1st trimester)
- Those who are in frequent contact with many people due to their profession, such as bus drivers or teachers
- Residents of nursing or rest homes
- Adults, adolescents and children exposed to increased health risks due to an underlying disease, such as chronic respiratory tract disorders, chronic cardiovascular, liver and kidney diseases, metabolic disorders (for example, diabetes), congenital and acquired disorders of the immune system (for example, HIV infection), chronic neurological diseases (for example, multiple sclerosis)
- Persons who may infect exposed individuals under their care, but who are at the same time at a higher risk of getting infected themselves by patients and persons in need of care; this includes, for example, medical

staff and those caring for old and sick people as well as any household members of the risk person
- Persons who are in direct contact with poultry and wild birds

The vaccination recommendation for pregnant women has been adopted already in 2010, as studies showed that pregnant women are exposed to a significantly higher risk of severe complications during an influenza infection. Adverse side effects have been observed neither in the mother nor in the child.
People affected by chronic neurological disorders, such as neuromuscular diseases, are also at higher risk for severe courses of influenza (including children). For this reason, the above named patients should be vaccinated as well as MS patients, in whom influenza may lead to exacerbations.

Who should not be vaccinated?

People affected by an acute disease with fever and requiring treatment should not be vaccinated. Vaccination is to be caught up at the earliest possible opportunity.
Individuals with a severe hypersensitivity to any components of the vaccine may not be vaccinated with this specific vaccine. For example, this may be the case if a person has a severe allergy to chicken egg white. Your doctor can give you respective advice.

After the vaccination

The vaccinated person does not need to take special care, but extraordinary physical exertion should be avoided within 3 days of vaccination. Any tendencies to circulatory reactions or known immediate allergies should be reported to the doctor before vaccination.

Possible local and general reactions after the vaccination

Besides providing the intended immunity and resulting protection from the disease, the vaccination may commonly to very commonly (1 to ≥ 10 percent of the vaccinated persons) cause redness or painful swelling at the vaccination site. This reflects the body´s normal way of dealing with the vaccine and usually occurs within 1 to 3 days of vaccination, rarely lasting very long. Occasionally (0.1 to 1 percent), nearby lymph nodes may become swollen or hard. The vaccinated persons may experience also general symptoms like fever, shiver, nausea, discomfort, diarrhoea, tiredness, sweating, headache, and pain in muscles and joints.

The above described general reactions are probably the reason why influenza vaccinations are erroneously considered to cause influenza-like diseases temporally related to vaccination. Normally, the above described local and general reactions are of a temporary nature and subside quickly without any lasting effects.

What about postvaccinal complications?

Postvaccinal complications are very rare adverse effects beyond the normal extent of a vaccination reaction which significantly affect the vaccine recipient´s health status. An influenza vaccination very rarely leads to allergic reactions of the skin (occasionally involving itching and hives) and respiratory tract. Other very rare complications are blood vessel inflammations or a temporary reduction of the platelet count which may result in bleeding events. Allergic immediate reactions (allergic shock) were reported in isolated cases only.
There have been isolated cases of nervous system complications (such as nerve inflammation, temporary paralysis), in case of which a causal relation with the vaccination is questionable.

Advice on possible side effects by the vaccinating doctor

In addition to this information leaflet, you can ask your doctor for an explanatory consultation.
If after a vaccination you experience any symptoms beyond the rapidly subsiding local and general reactions described above, the vaccinating doctor will also be there to advise you.

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