Fact sheet: Vaccination for COVID-19

Why does vaccination for COVID-19 make sense?

- In most cases, the progression of an infection with Sars-CoV-2 is mild and without complications. However, *older people*, and *people with chronic diseases* in particular are at a significantly higher risk of suffering a severe case of the disease with complications.
- *Younger people without chronic diseases* can also suffer severe cases, albeit much more rarely than older people.
- An infection can result in *health impairments that last for a long time, even for younger people*.
- Given the large number of severe cases of the disease, *the healthcare system is overloaded*, meaning that care can no longer be fully guaranteed for members of the public.
- Measures to manage the Sars-CoV-2 pandemic are *severely restricting the social and economic life of individuals and the whole community*. The fewer people contract the disease, the more quickly *everyday life can return to normal*.
- The mRNA vaccine technologies available in the first phase have been undergoing testing for years and are now moving to clinical use. mRNA vaccines have demonstrated a very good efficacy and safety profile in clinical phase III trials. Vaccination is much safer for individuals than an infection and its potentially severe consequences.
- Vaccination can prevent a large percentage of *cases of the disease*. This will lead to a major reduction in the number of severe cases and deaths, and thus to a reduction in *admissions to hospital*.

Target groups

Under the vaccination strategy and vaccination recommendations formulated by the Federal Vaccination Commission (EKIF/CFV) and the Federal Office of Public Health (FOPH/BAG), in addition to other experts, on the basis of the elevated risk of severe cases of the disease, especially initially the below groups are to be vaccinated (in descending order of priority). Currently the vaccination recommendation applies to adults (for Comirnaty® from age 16):

1. People in vulnerable groups:
People aged 65 and over, as well as adults under 65 with chronic diseases. These include specific forms of

a. Heart disease
b. Arterial hypertension
c. Respiratory diseases (including COPD and pulmonary fibrosis)
d. Renal failure
e. Diabetes mellitus
f. Obesity (BMI greater than or equal to 35 kg/m^2)
g. Congenital or acquired immunodeficiency, and immunosuppressive therapy (including cancers)[1]

Vaccination as soon as possible is urgently recommended for adults with the highest-risk chronic diseases (the exact definition can be found in the vaccination recommendations)[2], in consultation with the attending physician.

Vaccination is intended to directly protect the person vaccinated from severe cases, as well as reducing or preventing hospitalisations and deaths.

2. *Healthcare personnel* with patient contact and *personnel caring for* people in vulnerable groups

3. *Close contacts* of people in the defined vulnerable groups (adult household members or caring family members)

Vaccination of groups 2 and 3 is designed to reduce the COVID-19 exposure of people in vulnerable groups. In addition, the aim is to directly protect those vaccinated from suffering mild (frequent) and severe (rare) cases. This will help safeguard the functioning of the healthcare system and care for people in vulnerable groups by reducing the number of staff absences resulting from COVID-19.

4. *Adults* under 65 *in community facilities* with an elevated risk of infection and outbreak

Vaccination is designed to prevent or reduce outbreaks in these facilities. On the one hand the vaccination will help reduce the number of cases of the disease; on the other hand it will prevent severe cases and deaths among those vaccinated, which will also reduce the number of hospitalisations.

5. Vaccinations are also recommended for *all other adults* as soon as sufficient vaccine is available.

For the time being, vaccination is not recommended for pregnant women or for children and young people under age 18 (for Comirnaty® under age 16). Insufficient data is available for the use of the vaccine with these groups.

1 Here the indication for vaccination must be assessed by the attending specialist, carefully weighing up the risks and benefits.
2 www.bag.admin.ch/covid-19-dokumente-gesundheitsfachpersonen

Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Swiss Confederation

Bundesamt für Gesundheit BAG
Office fédéral de la santé publique OFSP
Ufficio federale della sanità pubblica UFSP
Uffizi federal da sanadad publica UFSP

more info

Contraindication and indications after clarification of a reservation

Vaccination is contraindicated only in cases of known severe hypersensitivity to ingredients of the vaccine[3] (polyethylene glycol, PEG).

The vaccination should be considered as described for the following people:
There is currently no data available for people with immunosuppression. However, since these people are at a higher risk of severe cases of the disease, they can be vaccinated in accordance with the provisions of the vaccination recommendations and following a careful assessment of the benefits and risks by the attending specialist. The efficacy for these people might possibly be reduced.

Vaccines[3]

The vaccines available initially are so-called messenger ribonucleic acid (mRNA) vaccines manufactured by Pfizer/BioNTec and Moderna. This type of vaccine has been in testing in research for ten years already.

The vaccines contain lab-produced messenger RNA (mRNA)[4] with the information for the SARS-CoV-2 virus's spike protein. After vaccination, some cells produce *the viral spike protein (antigen)*. This provokes the immune system into an immune response involving the formation of antibodies and cellular defences against SARS-CoV-2. The mRNA remains in the cytoplasm, is not transported into the cell nucleus, and accordingly cannot affect the human genetic material. The mRNA and the proteins produced are quickly broken down again.

Efficacy

According to the phase III trials, the mRNA vaccines offer a very high degree of protection from COVID-19 of 95% or more (95% confidence interval between 66% and 100% depending on the target group), and also from severe cases. Very good protection has also been demonstrated for older people.

There is still no data on the question of whether the vaccination also provides protection in terms of transmission of the virus to other people. Data on the duration of protection will be available in due course, so the necessity of any booster vaccinations will be decided in the future.

Known side-effects

According to the results of the phase III trials, the vaccines are well tolerated. The most common side-effects are the kind of local reactions that also occur with other vaccinations. The most frequent side-effects[3] include pain at the injection site (>80%), fatigue (>60%) and headache (>50%). Muscle and joint pain (20–30%) and fever and swelling at the injection site (>10%) may also occur. These reactions are in most cases mild to moderate and short-lived. Older people display fewer side-effects.

Severe allergic reactions to a vaccine ingredient (in particular PEG) are very rare and mostly occur immediately after the vaccination. The first signs of a severe reaction, such as shortness of breath, drop in blood pressure or severe reactions at the injection site mostly occur within minutes. The risk of rare extraordinary or serious side-effects cannot currently be ruled out. Other health problems may continue to arise, sometimes also in direct temporal relation to a vaccination. This does not mean, however, that this is necessarily a result of the vaccination.

The risk of a severe side-effect from the vaccination is definitely much smaller than the risk of a complication of COVID-19, the disease from which the vaccination protects.

A doctor, pharmacist or vaccination centre should be notified of any serious and unexpected side-effects. These notifications are recorded in Swissmedic's vigilance system[5]. If necessary action will be taken on this basis.

Vaccination regimen

The vaccination comprises 2 injections into the deltoid muscle at an interval of 28 days (for Cominarty® at least 21 days). Both vaccinations should be with the same vaccine. The anticipated vaccinal immune protection occurs around 7 days after the second dose is administered.

Note: For people with confirmed, symptomatic COVID-19, the vaccination is recommended starting 3 months after infection, but is already possible once the symptoms have resolved.

Care after the vaccination

Given that all vaccinations entail the risk of allergic reaction, a doctor or qualified pharmacist should be available to be brought in if required. The necessary precautions to treat an anaphylactic reaction must be taken. The person vaccinated should remain on site for 15 to 30 minutes after the vaccination and instructed in possible adverse vaccination events and the procedure if they occur. This especially applies when people with known severe allergic reactions are vaccinated.

The generally recommended hygiene and behavioural measures (masks, distancing, hand hygiene) must continue to be observed before, during and also after the vaccination.

Availability of vaccine

Responsibility for organising vaccinations for COVID-19 lies with the cantonal departments of health. They will provide information on how and where people can be vaccinated. The vaccination is free of charge.
You will find further information at

→ www.bag.admin.ch/covid-19-dokumente-gesundheitsfachpersonen
→ www.infovac.ch
→ www.foph-coronavirus.ch/vaccination

3 www.swissmedicinfo.ch
4 mRNA is basically also produced by the human body itself, and serves as a readable template for the production of endogenous proteins. Afterwards the mRNA is broken down again. The vaccine provides another template of this sort which is then broken down again via the normal processes.
5 www.swissmedic.ch/swissmedic/en/home/humanarzneimittel/market-surveillance/pharmacovigilance/elvis.html