REPUBLIQUE ET CANTON DE GENEVE
Département de la sécurité, de la population et de la santé
Direction générale de la santé

Vaccination : Reasons why

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Why get vaccinated?

I am young and healthy, none of this concerns me...

Well, actually, it does. The pandemic has put us all in the same boat. It has been 18 months since the COVID-19 virus rocked our lives: each group of people has been affected differently. The elderly - who needed to be " shielded " - were secluded. Young people - whose task it is to study and socialise - have been deprived of their carefree spirit and stopped in their tracks, and there is now an increase in mental health problems in this age group.

In a nutshell: we want to get out of this situation!

By its magnitude and violence, this pandemic took us all by surprise. Epidemiological data and knowledge about the coronavirus are constantly and rapidly evolving thanks to the studies carried out. We now know two things:

- Firstly, we will move from a pandemic to an endemic situation. This means that even in the long term, we will not get rid of the virus but we will have to learn to live with it.
- Secondly, we have the answer to living with it: protective measures and VACCINATION.

I choose to be vaccinated firstly to protect myself.

The vaccine teaches our immune system to recognise the virus. When a vaccinated person comes into contact with the virus - which is bound to happen sooner or later since the virus is going to remain with us - the immune system recognises the virus and organises its defence: the person is protected.

I also vaccinate myself to avoid severe forms of the disease.

The vaccine does not work 100%. No vaccine works 100%. This means that some people who are vaccinated still get COVID-19. But in this case, the form of the illness remains mild. So yes, being ill isn't fun but it doesn't result in your being hospitalised and intubated. The vast majority of people who fall ill despite vaccination, and especially those who develop a severe form of COVID-19, are people with a weak immune system, such as elderly people over the age of 75, or people who are immunosuppressed.

For instance, the vast majority of people currently (September and October 2021) hospitalised in Switzerland and in other countries aren't vaccinated. Of the 171 people hospitalised in Geneva between 6 September and 3 October:

- 46 were vaccinated: among them, 34 were aged 75 years+; these are predominantly people whose defence system is "tired" and functions poorly

or very little; whatever vaccine they receive and despite its great effectiveness, their response is weaker;
- 125 people were not vaccinated or not fully vaccinated.

I also vaccinate myself to avoid long COVID.

The expression "long COVID" describes a form of illness some people develop and who - several weeks after infection - still have symptoms such as loss of taste or smell, coughing, fatigue, headaches, or shortness of breath. Little is known about long COVID, but hundreds of people in Geneva suffer from it and it has a major impact on their daily lives.

It is impossible to predict in advance who will develop long form of COVID. This is a risk that we want and we can avoid.

And lastly, I get vaccinated to limit transmission.

Here we reach the "solidarity" section. By being vaccinated, you are less likely to catch the disease (this is still not 100%, 100% and black and white do not exist in medicine). A vaccinated person contracts the virus less, and in any case, a vaccinated person transmits the disease much less than a non-vaccinated person because the former is contagious for less time than the latter. And as long as you are not infected, you do not transmit the virus, even if you have been in contact with someone who is positive.

So solidarity holds, but not only: it's a virtuous circle where, by participating in this "immunisation coverage" that everyone talks about, we drive the virus back into its trenches, and we move on to other things (our social life and our studies without the hassle of masks or certificates, or the fear of catching the disease or spreading it). What we do know is that we will overcome this together, or not at all.

Yes but…

The vaccine was developed in a rush and there is no hindsight.

On the one hand, thanks to similar viruses with which we have dealt in the past (such as SARS-CoV in 2003 and MERS-CoV in 2012), specialists already had acquired a certain amount of knowledge, even if not all of it applies to this new virus and its variants. On the other hand, technology regarding messenger RNA vaccines has been known for about ten years. Despite its appeal - a simple concept, quick to develop, easy to produce - it was not able to benefit from the necessary investments. With the pandemic, general mobilisation allowed to gather significant financial and human resources, thereby enabling laboratories to focus on a single problem and to develop vaccines in record time. This is always done within an ethical and legal framework: in Switzerland, it is supervised by Swissmedic. The authorisation procedures were carried out in an accelerated pace. Normally, the clinical phases I to III results are examined together. For the COVID-19 vaccine, Swissmedic received and reviewed the studies as they were submitted. However, the requirements in terms of effectiveness and safety remain the same as in a normal authorisation procedure.

Yes but…

The vaccine is dangerous.

The vaccine is not benign. In an ideal world, where there is no risk of catching or transmitting COVID-19, you would not get vaccinated. You simply balance the risks, and the risks associated with the disease are much greater.

With the vaccine, you can have side effects: some people don't feel anything, while others don't feel well (pain, headaches, fever), but these effects don't last more than 48 hours. Looking back on the millions of vaccine doses distributed to this day - and billions worldwide - it is clear that reactions to messenger RNA vaccines are rare: for the vast majority of people, complications resulting from COVID-19 are much more frequent and severe than mild and transient reactions to the vaccine.

Yes but…

With the vaccine, there is a risk of myocarditis.

Myocarditis is an inflammation of the heart muscle tissue. Not something you want to have. Following vaccination with a messenger RNA vaccine, it has been observed that 6 out of 100,000 men under the age of thirty developed myocarditis.

So why do we recommend the vaccine anyway? Because, on the one hand, the situation is closely monitored and the condition is treatable, but above all because myocarditis is proportionally more frequent and more serious when the men in question catch COVID-19: 6 times more with the disease than with the vaccine. In this ideal world without viruses, we would not take this risk, but with the virus, the risk is higher so we choose to protect (through vaccination) and monitor the situation beforehand.

Adverse reactions to vaccines (ARV) against COVID-19 are subject to mandatory reporting to Swissmedic, the Swiss authority in charge of monitoring therapeutic products. In Switzerland, 151 reports of suspected myocarditis and/or pericarditis (as of 21 September 2021) have been reported to Swissmedic, out of 10,204,392 administered vaccine doses. This means 1 case out of 67,578 doses.

Yes but…

With the vaccine, there are cases of anaphylaxis.

Anaphylaxis, or anaphylactic shock, is a very strong allergic reaction. For the messenger RNA vaccine in Switzerland, it is estimated that about 100 people - out of 8.6 million inhabitants - are affected. When they do occur, these reactions happen within a few minutes of the vaccine being administered, which is why people are monitored for 15 minutes after the injection. Such complications are very rare and can be treated.

By the end of August 2021, 4,889,530 people in Switzerland had received at least one dose of the vaccine. Among them, 45 people had a severe allergic reaction (1 in 100'000 or 0.001%). For the same population number, 78 people experience strong allergic reactions to certain foods (0.002%, i.e. twice as many), and 268 people suffer from strong allergic reactions to insect stings (0.005%, i.e. 5 times as many as the number of people who developed a strong allergic reaction to the vaccine).

Yes but…

The vaccine is generating more dangerous variants.

Absolutely not! Natural selection between strains leads to new variants when viral circulation is high. The emergence of variants is a natural process that occurs when the virus circulates widely. By slowing down the circulation of the virus, the vaccine reduces this risk. In addition to fundamental ethics and solidarity, this is also why vaccination is a solution that must be global: if the virus circulates widely in countries that do not have access to vaccination, one may fear that an even more dangerous variant will emerge. And by dangerous, we mean a variant that is more easily transmitted, that is not stopped by our vaccines (this "vaccination breakthrough" is what makes specialists tremble and keeps them awake at night), or that kills people more frequently. This is what we must prevent.

Yes but…

I prefer to do tests.

Testing is what we've been doing for the past 18 months, and what we'll continue to do at the slightest symptom, whether we're vaccinated or not. But if you want to break out of this situation, you have to go through the third step (the first being protective measures, the second being tests and the third being vaccines). Vaccines and tests both have the same goal: to limit the spread of the virus. But they are helpful in different ways: tests tell you who is sick, while vaccines reduce the risk of getting sick. And the less we are sick, the fewer people who will get sick - such is the virtuous circle we're trying to create, and the reason why health authorities are advocating and pushing for vaccination.

Yes but…

The vaccine will enter the nucleus of my cell and transform my DNA and that of my descendants.

No, the messenger RNA vaccine doesn't do that at all. Because it's physically impossible (and here, you have to trust biologists when they tell you that a polar bear doesn't fit in a milk bottle). Explanation (for the messenger RNA, not the polar bear):

Actually, messenger RNA is a fragile little thing. So when it is injected into your muscle, it is wrapped in a little blob of fat that protects it and allows it to enter the cells in your arm. A cell consists of an outer membrane, a central nucleus and the cytoplasm in which various elements are embedded. Once inside the cell, the messenger RNA remains in the cytoplasm where it uses the existing machinery of your cells to be transformed into protein. The messenger RNA in the COVID 19 vaccines contains the code to produce the Spike protein (also known as S protein). This protein – often represented by small spikes on the virus – is the identity card of SARS-CoV-2. Once created, the Spike proteins exit the cells and come into contact with your body's immune system. Being identified as foreign, they trigger an immune response that results in the formation of antibodies (usually, this is when you can sometimes feel a flu-like condition: your immune system is learning and doing its job). So when your body comes into contact with the virus, it will recognise it and know how to defend itself.

Messenger RNA is incapable of entering the nucleus of your cells. This is because the nucleus is constructed in such a way that it inevitably rejects any messenger RNA molecule that tries to enter. Your genetic code is stored as DNA in the nucleus of your cells. It cannot leave the

nucleus or it will be destroyed. So the messenger RNA in vaccines and the DNA in your cells never meet and it is impossible for one to change the other. Because messenger RNA is so fragile, its maximum life span in the body is a few hours, after which time it will be destroyed.

As for what could happen in 5 years or several decades, we have the perspective (not perfect but indicative) of other vaccines: "In the history of vaccines, side effects have always appeared within two months of administration. There are no long-term effects when you find that one year, two years later, you or your child develops a problem that was not detected at the beginning. That has never happened" (Paul Offit, paediatrician and infectious disease specialist in Philadelphia). That being said, it is not impossible that there may be exceedingly rare complications. This is the case, and the risk, with all kinds of treatment (and with life in general).

Yes but…

Big Pharma is lining their pockets, and I don't want any part of that.

Maybe. And that's an interesting ethical debate. A pandemic, like wars, is indeed an event that allows some actors to generate big profits, it is inevitable. In this logic, however, the vaccine is administered once (two doses) and then potentially requires boosters (on this matter, we do not yet have enough hindsight, and a new variant could change the situation). Vaccines are there to avoid getting sick, so in the long term they represent a loss of earnings for the pharmaceutical companies. Whereas tests, which benefit the same groups and cost a lot of money, have to be repeated very often and indefinitely. If you hesitate to vaccinate for these reasons and choose tests instead of vaccines, you are actually participating much more actively in the system that you condemn.

Yes but…

Vaccine makes you infertile.

Vaccination against COVID-19 has no effect on fertility.

However, this fear is common when new treatments or vaccines are created. It is legitimate because everyone's fertility is a precious asset, especially for young people.

Vaccination does not cause the formation of antibodies (the body's defence substance) against the placenta. It allows the body to develop a defence reaction against the coronavirus in a very specific way, without affecting the ability to have children.

There is a lot of information about hormonal changes that some women experience as a result of the COVID-19 vaccine: heavier bleeding, time changes in their periods or unexpected bleeding. These changes are in the vast majority of cases temporary and last for 1 or 2 cycles. It is possible that the immune response temporarily affects the production of sexual hormones or the uterine lining. It is important to note that women with COVID-19 also often experience increased and irregular bleeding as a result of the infection. It is not yet clear whether these changes are due to the infection or the vaccination, as they may be the result of stress.

Millions of pregnant women have been vaccinated, and since there were no effects on either the mother or the foetus, the vaccination was considered to be completely safe. Vaccination is therefore recommended during pregnancy from 12 weeks onwards (i.e. from the 2nd trimester) and during the breastfeeding period. The recommended vaccination schedule with messenger RNA vaccines does not differ from that of the general population. For the time being and

according to the current state of research, women who are under 3 months pregnant should wait until the 2nd term before being vaccinated.

In men, erectile dysfunction has been noted as a result of COVID-19. However, this side effect has never been reported following vaccination.

Yes, but...

There's too much pressure, why do they all want me to get vaccinated?

The mandate of the federal and cantonal health authorities is to guarantee the health and physical and mental well-being of all population groups. Their task is to protect citizens and to prevent, as far as possible, their death, hospitalisation, after-effects or mental problems. In the pandemic context, our best - and possibly only - tool is vaccination. Unlike a seatbelt - which provides individual protection - vaccination offers collective protection. Indeed, the situation is unique in that the vaccine protects the individual, but even more so the people around him or her and the population in general.

Vaccination - which has always generated objections and the wildest rumours - has also proved its worth. Thanks to vaccination, we live in a time and a country where the ravages of smallpox, diphtheria and polio are a thing of the past.

It is for this reason, for you and for "us", that the health authorities are hammering out this message: get vaccinated.

Besides, as long as the number of people who fall seriously ill is high, the hospital network is in danger. So what does it matter to me if the hospital network is in danger? It concerns everyone, because it means that under these conditions hospitals cannot guarantee to take care of everyone, COVID and non-COVID patients. That's why there are still measures and restrictions. Basically, as soon as the number of people who become seriously ill has dropped sufficiently, the restrictions can be lifted and we can return to "normal" life.

On 10 October, the proportion of non-immune people in Geneva was estimated at 38%. The non-immune are neither vaccinated nor cured, and so their immune system has no clue about COVID-19. With a population of 500'000 people in Geneva, this 38% represents about 190'000 people. If these 190,000 people don't get vaccinated, they will end up catching COVID-19 naturally. So if we were to lift all the restrictions now, these people would get infected very quickly and at the same time, and the hospital would not have enough beds to take in all the seriously ill people.

This is also why the health authorities are hammering out this message: get vaccinated.

Yes but…

Even experts don't come to a consensus.

This is the first time since the Spanish flu that we have experienced a pandemic of this scale. There are things we knew. There are the things we have learned, discovered and experienced. There is the knowledge and experience we have been able to transfer from other areas. And there are the things we have yet to understand or confirm. We don't know everything. But just because we don't know everything doesn't mean we don't know anything.

In this unprecedented context, we are looking for the best way forward, weighing up the interests of all parties and following an ethical line where nothing is simple, black or white. Political and

health authorities, scientists and the medical profession are in constant dialogue to determine the best solutions for the population.

The different opinions that citizens are confronted with are the result of a democratic state where everyone can freely express their personal opinion. But not all opinions are equal. On the one hand, there are people whose statements are based on erroneous, simplified or truncated beliefs (it's good to be informed, but you don't become an epidemiologist or immunologist by reading three abstracts of Nature articles); and on the other hand, there are specialists who deal with the facts, however complex they may be.

None of these groups (political, scientific, medical) is made up as a homogeneous entity, and it is normal that some of them have different opinions. The vast majority, however, support the positions of the Federal Office of Public Health (FOPH) and the cantonal health authorities.

Finally - and this goes without saying, but it is even better when it is said - the aim of these groups and institutions is not to harm citizens by banning a remedy or inoculating them with poison.

Yes but…

My yoga teacher thinks that vaccines are bad and that by boosting my immune system I can beat the virus.

Your yoga teacher, your grandmother and her immemorial remedies, your reiki therapist, or your chromatotherapist are also specialists: those of well-being, care and meaning. Alternative and non-conventional therapies hold a choice position and play an essential part in this pandemic: to help us take care of ourselves, while we are all being harmed by an ongoing situation that is taking hold.

But they are not experts on the virus, the immune system or vaccines. You don't let your lawyer build your house, your anthropology professor fix your car or your baker correct your thesis on the place of women in 15th century German literature.

Vaccinate yourself, and take care of yourself: have a healthy diet, exercise, meditate, get a massage. Do whatever makes you feel good, because we need it more than ever.

Yes but…

This is a sanitary dictatorship, down with power, long live the revolution!

Again, this is debatable. We can no longer see one another, go out, party, be carefree, there are certificates here, controls there, everything is complicated, we are being tracked, our data is being collected. That's true. But that's the fault of the virus, not the health authorities.

Firstly, it is not the protective measures that are the problem - the pandemic is the problem; these measures are our protection against it. Don't mistake the enemy.

Secondly, these measures - which can be experienced as coercive - are transitory. Behind the scenes, the definition, implementation and monitoring of these measures are extraordinarily complicated, expensive and time-consuming activities. No one wants to spend the next ten years doing this. The aim was to hold out until a solution (the vaccine) came along, and then relax the measures and suspend them. (We can see that not enough people are embracing this solution to get us out of there.)

Third, if decisions can sometimes seem constraining and oppressive, it is because we are dealing with a virus that is relentless and does not allow the luxury of dialogue or negotiation. The epidemic reality is uncompromising. It is not the virus of the federal or cantonal authorities, but the problem of us all. A problem that will be solved with solidarity and, even better, with consideration for each and every one of us and for ourselves.

Yes but…

I'm not sure, maybe I should get the Janssen vaccine?

Here is what you need to know about the Janssen vaccine, developed by Johnson & Johnson. It is a DNA vaccine that uses a benign DNA virus into which the code for the COVID-19 S protein has been inserted. Once in the human body, this DNA is transformed and expresses the COVID-19 S protein, against which the body develops its defences.

The Janssen vaccine is available to all people who have a severe allergy to a component of the messenger RNA vaccines. It is also available to all people who wish to make this choice.

It reduces the risk of infection and protects against the risk of hospitalisation (severe infection). But it is less effective than the messenger RNA vaccines: 70% instead of 90%.

A single dose is sufficient, and the certificate is valid on the 22nd day after the injection (time for the immune system to undergo its accelerated "covidology" training, to integrate the new information and to get ready to react to the virus).

As with other vaccines – and with treatments in general – Janssen also has a potentially serious side effect: thrombosis. And yet it is recommended? But now you know the logic: the balance of interests. On the one hand, the occurrence of these thromboses is very rare - 8 occurrences per 100,000 vaccinations in women under the age of 30 - and on the other hand the situation is monitored and the problem can be treated. But above all, the risk of thrombosis in the case of COVID-19 infection is 6 to 8 times higher than with the vaccine.

Yes but…

No…

You have the right not to want to be vaccinated. Everyone has the right, and the duty, to make a choice.

According to the three-phase model established by the Confederation, we are currently in the so-called "normalisation" phase. In this phase, a large part of the restrictions have been lifted, while all those who wished to have access to the vaccine have been able to do so, and while a certain, inevitable circulation of the virus has been assumed. Indeed, unvaccinated or uncured people will, in time, become immune following infection. In this context, the main risk to be managed is that of overloading the health system, whereby COVID-19 is not the only disease that requires hospital care. The essential activities of daily life - work, education, transport, food shopping - are still possible for everyone, with a little logistics (mask and/or test).

Whatever you decide, please continue to apply the protective measures - keeping a distance of more than one and a half metres, wearing a mask, washing your hands well, ventilating regularly, cleaning surfaces - and to test yourself at the slightest symptom (the test is always free if you have symptoms). All these measures, which are free, will only work if the population demonstrates solidarity.

Your sources

Staying informed is good. But just because Karen_79 from Ohio says something (and Ken_52 from St. Louis agrees with her) doesn't mean it's true.

Here are some information sources to explore:

Epidemiological situation:

- In Geneva:
  - Données cantonales de l'épidémie de COVID-19 (unige) *(in French only)*
  - COVID-19 - bilan épidémiologique hebdomadaire (ge.ch) *(in French only)*
- In Switzerland:
  - Status report, Switzerland and Liechtenstein (FOPH)
- In the world:
  - Statistics and Research: COVID-19, Deaths (Our World in Data)

Vaccines:

- Coronavirus disease (COVID-19): Vaccines (WHO)
- Coronavirus / COVID-19 (infovac.ch) *(in French, German and Italian only)*
- The effects of virus variants on COVID-19 vaccines (WHO)
- COVID-19 Vaccine Breakthrough Case Investigation and Reporting (CDC)
- Covid-19, allergies et asthme (Centre d'allergie Suisse) *(in French, German and Italian only)*
- General information on the COVID-19 vaccination with an mRNA vaccine (Pfizer/BioNTech, Moderna) (English) (FOPH)
- Coronavirus: Frequently Asked Questions (FAQs (FOPH)
- Comment développe-t-on un vaccin? (infovac) *(in French, German and Italian only)*
- Which countries are on track to reach global COVID-19 vaccination targets? (Our World in Data)

Ok I'm in. I've decided I'd like to be vaccinated

- **To make an appointment**
  (with your insurance card and access to a mobile phone):
  https://ge.covid-vaccin.ch/
- **Without an appointment by going directly in an walk-in vaccination site:**
  https://www.ge.ch/en/getting-vaccinated-against-covid-19/vaccination-without-prior-appointment

- **By telephone:**
  Dial 0800 909 400 (COVID-19 helpline in Geneva)

- **For undocumented migrants**
  If you do not have health insurance, you can go to the Geneva Red Cross centre, 9 route des Acacias to set up an appointment.
  You shall have to bring a document (telephone bill, TPG subscription, letter from the HUG, etc.) to show that you have been living in Geneva for more than 3 months:
  https://www.croix-rouge-ge.ch/aide-lacces-la-vaccination