FREQUENTLY ASKED QUESTIONS ABOUT COVID-19 VACCINES

Version 5, 21 July 2021

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Frequently Asked Questions about COVID-19 Vaccines

Version 5, 20 July 2021

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Contents

COVID-19 Vaccine Approval

- **What are the COVID-19 vaccines with authorization from the World Health Organization (WHO)?**

COVID-19 vaccine	EUL approval	SAGE recommendations
Pfizer - BioNTech *(Comirnaty)*	31 Dec. 2020	Published 8 Jan. 2021 Updated: 15 Jun. 2021
AstraZeneca (AZ)/SK Bio *(ChAdOx1-S)*	15 Feb. 2021	Published 15 Feb. 2021 Updated: 21 Apr. 2021
Serum Institute India (SII) *(ChAdOx1-S, Covishield)*	15 Feb. 2021	
Sites approved for AZ / EU *(ChAdOx1-S)*		
AZ/SK-Catalent	16 Apr. 2021	
AZ/SK-Wuxi	30 Apr. 2021	
Chemo Spain	4 Jun. 2021	
Janssen (Ad26.COV2.S)	12 Mar. 2021	Published 17 Mar. 2021 Updated: 15 Jun. 2021
Moderna *(mRNA-1273)*	30 Apr. 2021	Published 25 Jan. 2021 Updated: 15 Jun. 2021
Sinopharm / BIBP *(BBIBP-CorV)*	7 May 2021	Published: 7 May 2021
Sinovac *(CoronaVac)*	1 Jun. 2021	Published: 1 Jun. 2021

More information:

- https://extranet.who.int/pqweb/vaccines/covid-19-vaccines
- https://www.who.int/groups/strategic-advisory-group-of-experts-on-immunization/covid-19-materials

- **How does WHO review the vaccines submitted for Emergency Use Listing (EUL) approval?**

  The Technical Advisory Group for Emergency Use Listing (TAG-EUL) is an independent advisory group that will provide a recommendation to WHO whether an unlicensed vaccine can be recommended for emergency use under the EUL procedure, and if so, under what conditions. The TAG-EUL shall have the following functions:

  1. To review the assessment reports prepared by the WHO Product Evaluation Group (PEG) as part of the EUL assessment process, including the initial evaluation and any updates based on additional information received by WHO. Additional information may be requested from WHO for consideration;
  2. To conduct a risk-benefit assessment of these Covid-19 vaccines' potential use in response to the Covid-19 pandemic;
  3. To provide a recommendation to WHO if the assessed vaccine should be listed for emergency use under the EUL procedure, and under what conditions;
  4. To advise on formulating conditions for the listing should the decision be positive. Conditions will include a detailed list of post-listing commitments from the manufacturer;
  5. To consider any emergency program needs as applicable.

More information: https://extranet.who.int/pqweb/vaccines/TAG-EUL

- **What's the difference between vaccine efficacy and vaccine effectiveness?**

  The two terms are often used interchangeably in the context of the performance of COVID-19 vaccines. But there is a key difference: Efficacy refers to the performance of a vaccine during clinical trials. This is an ideal performance since it takes place in a trial environment that can be more tightly controlled than everyday life. Effectiveness refers to the vaccine's performance in the "real world", after it has been released for consumer use. In this context, the vaccine is offered to a broader population, including those who may have health conditions or other factors that may affect how well the vaccine protects against disease. Therefore, effectiveness represents a more realistic measure of a vaccine's performance.

More information:

- https://www.who.int/influenza_vaccines_plan/resources/Session4_VEfficacy_VEffectiveness.PDF
- https://www.gavi.org/vaccineswork/what-difference-between-efficacy-and-effectiveness

Variants of Concern and COVID-19 Vaccines

More studies are needed to assess the effectiveness of the current COVID vaccines against the variants. A growing body of data suggests that most vaccines stimulate enough immunity to retain substantial efficacy against most variants, especially for severe disease, hospitalization, and death. The impact of the variants on efficacy against mild disease and against infection without disease is more impacted than for the more severe outcomes.

The reason vaccines substantially retain protection against disease is likely related to the broad immune response they induce, which means that virus changes or mutations are unlikely to make vaccines completely ineffective. If any of these vaccines become less effective against one or more variants, it will likely be possible to change the composition of the vaccines to protect against these variants, however this will take time and additional data to fully evaluate. Data continue to be collected and analyzed on new variants of the COVID-19 virus. WHO will update its guidance when more details are known about the impact of specific variants on specific vaccines. WHO's SAGE is reviewing this evidence on a regular basis.

While we are learning more, we need to do everything possible to stop the spread of the virus in order to prevent mutations that may reduce the performance of existing vaccines. This means staying at least 1 meter away from others, covering a cough or sneezing in your elbow, frequently cleaning your hands, wearing a mask and avoiding crowded, poorly ventilated rooms or opening a window.

More information: https://www.who.int/news-room/q-a-detail/coronavirus-disease-(covid-19)-vaccines

COVID-19 Vaccine Safety

- **How have COVID-19 vaccines been developed so quickly?**

  The development of a novel vaccine is a complex and lengthy process that on average takes 10 years. However, COVID-19 vaccines are the culmination of years of research in new technologies and have been built on lessons learned from work on SARS and MERS vaccines,

as well as the developed Ebola vaccines. Given the current COVID-19 pandemic, institutions, commercial developers, and researchers around the world worked at an unprecedented speed and scale to develop safe and effective COVID-19 vaccines in approximately 12-18 months from the start of the pandemic.

More information:

- https://www.who.int/news/item/13-04-2020-public-statement-for-collaboration-on-covid-19-vaccine-development
- https://www.who.int/news-room/feature-stories/detail/manufacturing-safety-and-quality-control
- https://www.nature.com/articles/d41586-020-03626-1

- **How do we know COVID-19 vaccines are safe?**

  There are strict protections in place to help ensure the safety of all COVID-19 vaccines. Before receiving validation from WHO and national regulatory agencies, COVID-19 vaccines must undergo rigorous testing in clinical trials to prove that they meet internationally agreed benchmarks for safety and effectiveness.

  Unprecedented scientific collaborations have allowed COVID-19 vaccine research, development, and authorizations to be completed in record time – to meet the urgent need for COVID-19 vaccines while maintaining high safety standards. As with all vaccines, WHO and regulatory authorities will continuously monitor the use of COVID-19 vaccines to confirm that they remain safe for all who receive them.

More information:

- https://healthalert.whofreebasics.org/sections/your-questions-answered/covid-19-vaccines-safety/
- https://www.who.int/news/item/11-06-2021-statement-for-healthcare-professionals-how-covid-19-vaccines-are-regulated-for-safety-and-effectiveness

- **How will the public know if they are having side-effects caused by the vaccine?**

  The effect of the COVID-19 vaccine varies from person to person, like it does for most vaccines. As more people get vaccinated, we may be able to determine patterns. This information continues to be collected and will be shared, but for now, we cannot anticipate who may have side effects.

  Persons who receive the vaccine are encouraged to follow local guidance on observation periods immediately following vaccination and to alert their respective health providers if they experience any side-effects or unexpected health events following vaccination. Monitoring reactions after vaccination is a standard practice in all national immunization programmes, regardless of the vaccine being administered.

More information:

- https://www.who.int/news-room/q-a-detail/coronavirus-disease-(covid-19)-vaccines
- https://www.apsresp.org/archive/covid-19/who-20210317.docx

- **Can vaccines be administered in another way, other than through injection?**

  No. All approved vaccines are given through injection. Researchers are looking for ways to simplify the delivery of COVID-19 vaccines and are currently testing different delivery

mechanisms. These tests are still at the early stage and have not reached clinical trials. For now, all vaccines are delivered through injection.

More information: https://www.who.int/groups/strategic-advisory-group-of-experts-on-immunization/covid-19-materials

COVID-19 Vaccine Doses

- **Should we apply 1 dose of AstraZeneca vaccine to as many people as possible, or should we prioritize the 2-dose schedule for high-risk groups?**

  The generic group of ChAdOx1-S [recombinant] vaccines includes AstraZeneca/AZD1222 and SII/Covishield vaccines. For prolonged efficacy using ChAdOx1-S vaccines, WHO recommends two standard doses (0.5ml) administered with an interval of 8 to 12 weeks between doses.

  Clinical trials have demonstrated that after vaccination with a single 0.5ml dose, an efficacy as high at 76.0% (95% CI 59.3–85.9) could be expected against laboratory-confirmed Covid-19, as measured from 22 days after vaccination through 12 weeks.

  Evidence has demonstrated sustained vaccine efficacy after a single 0.5ml dose for a period of up to 12 weeks (3 months), yet antibody concentrations declined by 34% through 90 days. Limited data is available on the duration of efficacy or rapidly waning immunity past 12 weeks, and a second dose has been shown to maintain high efficacy.

  Unpublished mathematical modeling demonstrates that when supply is very limited during the initial introduction period, vaccinating more people in the highest priority population group with one dose as opposed to vaccinating half that number with two doses, would substantially increase the number of deaths prevented, if the 1-dose vaccine efficacy is at least 50% of the 2-dose efficacy.

  In view of the evidence suggesting the potential for disease rates to be reduced following administration of the first dose and data from mathematical modelling, national immunization programmes faced with limited supply of AstraZeneca/AZD1222 or SII/Covishield vaccine might elect a strategy of vaccinating a maximum number of persons within a higher number of priority groups with a first dose and preferentially planning for the second dose to be provided at 12 weeks (3 months) later, or as soon as possible thereafter.

  Given the equivalence of AstraZeneca/AZD1222 and SII/Covishield to ChAdOx1-S, the two products are interchangeable.

More information: https://www.who.int/publications/m/item/considerations-for-optimizing-deployment-ofastrazeneca-azd1222-and-sii-covishield-vaccines-in-a-time-limited-constrained-supply-situation

There is little information on clinical protection with only one dose beyond 12 weeks. The phase 3 clinical trial included a relatively small number of individuals who received a second dose beyond 12 weeks. Effectiveness and observational studies of national vaccination programmes are limited to an inter-dose interval of not more than 12 weeks at this time. However, binding antibodies against the COVID-19 spike protein have only a slow decay over a period of 6 months.[3] An immunological correlate of protection is yet to be established, but antibodies persist over at least through 26 weeks after the first dose, albeit

at a lower level compared with the peak antibody levels. Because ChAdOx1-S [recombinant] vaccines induce both a T cell and B cell response, it is likely that there is some degree of protection against clinical disease conferred by one dose beyond 12 weeks, in particular against severe disease, defined as requiring hospitalization or causing death. However, data to quantify this are not currently available. Both seroconversion rates and antibody titers are only slightly lower in older adults after administration of one dose, compared with younger adults.

More information: https://www.who.int/publications/i/item/WHO-2019-nCoV-Sci-Brief-ChAdOx1-S-recombinantvaccine-Second-dose

- **What are the specific SAGE recommendations for vaccines interchangeability and vaccines coadministration for the vaccines reviewed by SAGE (Pfizer, Moderna, AstraZeneca, Janssen, Sinovac and Sinopharm)?**

  Clinical trials in some countries are looking at whether you can have a first dose from one vaccine and a second dose from a different vaccine. There isn't enough data yet to recommend this type of combination.

More information: https://www.who.int/news-room/q-a-detail/coronavirus-disease-(covid-19)-vaccines

Pfizer: At this time, SAGE recommends that the same product should be used for both doses. Heterologous (mix-and-match) studies are ongoing with regards to the interchangeability of this vaccine with other COVID-19 vaccines. Preliminary results from a heterologous priming schedule where BNT162b2 [i.e., Pfizer] was given as the second dose following a first dose of ChAdOx1-S [recombinant] [i.e., AstraZeneca] vaccine showed a slightly increased but acceptable reactogenicity with superior or similar immunogenicity results, thus supporting the use of such a heterologous priming schedule in settings where the second dose for the ChAdOx1-S [recombinant] vaccine is not available due to vaccine supply constraints or other concerns.

More information: https://www.who.int/publications/i/item/WHO-2019-nCoV-vaccines-SAGE_recommendation-BNT162b2-2021.1

Moderna / AstraZeneca: Heterologous (mix-and-match) studies are ongoing with regards to the interchangeability of this vaccine with other COVID-19 vaccine platforms. It is currently recommended that the same product should be used for both doses. If different COVID-19 vaccine products are administered in the two doses, no additional doses of either vaccine are recommended at this time.

Sinopharm / Sinovac: No data are available on the interchangeability of doses of this vaccine with other COVID-19 vaccines. It is currently recommended that the same product should be used for both doses.

More information: https://www.who.int/groups/strategic-advisory-group-of-experts-on-immunization/covid-19-materials

COVID-19 Infection and Vaccination

- **What is WHO response to countries recommending only one dose for people who have had the COVID-19 infection?**

  WHO maintains that all approved vaccines with a 2-dose schedule should be administered in 2 doses.

More information:

- https://www.who.int/news-room/q-a-detail/coronavirus-disease-(covid-19)-vaccines
- https://www.cdc.gov/coronavirus/2019-ncov/vaccines/faq.html

- **Should people who already had COVID-19 be vaccinated?**

  Even if you have already had COVID-19, you should be vaccinated when it is offered to you. The protection that someone gains from having COVID-19 will vary from person to person, and we also don't know how long natural immunity might last.

More information:

- https://www.who.int/news-room/q-a-detail/coronavirus-disease-(covid-19)-vaccines
- https://www.cdc.gov/coronavirus/2019-ncov/vaccines/faq.html

- **Is everyone who has had COVID-19 immune for the next 6 months?**

  Within 6 months after an initial natural infection, available data show that symptomatic reinfection is uncommon. Given limited vaccine supply, persons with PCR-confirmed SARS-CoV-2 infection in the preceding 6 months may therefore choose to delay vaccination until near the end of this 6-month period. However, emerging data indicate that symptomatic reinfection may occur in settings where variants of concern are circulating that are associated with markedly reduced vaccine effectiveness (for example Beta B1.351). In these settings earlier immunization after infection is advisable, e.g., within 90 days following natural infection.

More information: https://www.who.int/groups/strategic-advisory-group-of-experts-on-immunization/covid-19-materials

- **What is WHO's recommendation on vaccinating persons who are suspected to be infected with COVID-19?**

  Those with suspected COVID-19 symptoms should wait until they are out of isolation and fully recovered from COVID-19 before being vaccinated.

More information: https://www.who.int/groups/strategic-advisory-group-of-experts-on-immunization/covid-19-materials

- **What is the WHO advice for those who have had their first vaccine dose and then tested positive for COVID-19? Should they proceed with the second dose of the vaccine?**

  Those with COVID-19 infection should isolate and not visit vaccination centres while infectious. Once they completed the necessary quarantine period, they can proceed with the second dose of vaccines.

More information: https://www.who.int/groups/strategic-advisory-group-of-experts-on-immunization/covid-19-materials

- **Is it possible that someone vaccinated against COVID-19 will still get infected?**

  While several COVID-19 vaccines appear to have high levels of efficacy, no vaccine is 100% protective. As a result, there may be a small percentage of people who do not develop protection as expected after COVID-19 vaccination.

  In addition to a vaccine's specific characteristics, several factors such as a person's age, their underlying health conditions or previous exposure to COVID-19 may have an impact on a vaccine's effectiveness. We also do not yet know how long immunity from different COVID-19 vaccines will last. That is one reason why, even as COVID-19 vaccines start to be rolled out, we must continue using all public health measures that work, such as physical distancing, masks, and handwashing.

More information: https://healthalert.whofreebasics.org/sections/your-questions-answered/covid-19-vaccines-safety/

COVID-19 Vaccine Immunity

- **How long will immunity from vaccines last?**

  Because COVID vaccines have only been developed in the past months, it's too early to know the duration of protection of COVID-19 vaccines. Research is ongoing to answer this question. However, it's encouraging that available data suggest that most people who recover from COVID-19 develop an immune response that provides at least some period of protection against reinfection – although we're still learning how strong this protection is, and how long it lasts.

More information:

- https://www.who.int/news-room/q-a-detail/coronavirus-disease-(covid-19)-vaccines
- https://www.cdc.gov/coronavirus/2019-ncov/vaccines/faq.html

- **Will the vaccine have to be re-administered yearly?**

  We do not yet know how long protection from any of these vaccines lasts. We will get better insights over the next 12 months. The duration of protection provided by vaccines can vary. For example, the seasonal influenza vaccine is given annually, because the influenza virus mutates, and protection wanes over several months. Other vaccines, such as those for rubella or measles, provide multi-year or even life-long protection from disease. Mutations in key viral proteins can mean that virus variants emerge. The SARS-CoV-2-coronavirus is prone to mutations that creates variants, some of which have become established in multiple regions of the world. The scientific community and regulators are very actively monitoring whether the current vaccines can continue protecting people from infection with new variants.

More information: https://www.who.int/news/item/11-06-2021-statement-for-healthcare-professionals-how-covid-19-vaccines-are-regulated-for-safety-and-effectiveness

- **What is herd immunity? What will it take to achieve herd immunity with SARS-CoV-2?**

  'Herd immunity', also known as 'population immunity', is the indirect protection from an infectious disease that happens when a population is immune either through vaccination or immunity developed through previous infection. WHO supports achieving 'herd immunity'

through vaccination, not by allowing a disease to spread through any segment of the population, as this would result in unnecessary cases and deaths.
We do not know what it will take to achieve herd immunity. We need additional information on the impact of vaccines on infection and transmission. Also, herd immunity depends on the virus itself: the more transmissible it is, the higher the vaccine coverage needed for herd immunity. Modelling studies provide some insight, but the results should be interpreted with caution because they identify which attributes of the vaccine are most influential on reaching herd immunity given the current epidemiological context, rather than providing a specific prediction of the coverage level.
Also, we should not rely on a single number. An overall high rate of vaccine coverage does not imply that we are all safe. We have seen examples of clusters of measles in subpopulations, even when the overall population had high rates of vaccine coverage. Instead of focusing on an overall statistic, we should take advantage of our knowledge of COVID-19 transmission to have a smart and targeted approach. Herd immunity is relevant from a local perspective. It is about the coverage in the community where you live, and the social mixing patters, and the degree of transmission of the virus in that community.

More information: https://www.who.int/news-room/q-a-detail/herd-immunity-lockdowns-and-covid-19

- **If a person is vaccinated against COVID-19 and is a contact of a confirmed COVID-19 case, must he/she still quarantine?**

  The WHO recommends that "Workers should be regularly reminded to stay home if feeling unwell and to self-quarantine after contact with a COVID-19 patient." The document does not mention vaccination status as an exception to this guidance. Also, the document does not make exceptions for workers who are asymptomatic (Preventing and mitigating COVID-19 at work, published on 19 May 2021). Also, consider that:

  - None of the vaccines approved by WHO is 100% effective in preventing COVID-19 infection.
  - Immunity takes ~14 days to become fully activated after the administration of the last vaccine dose.
  - There is no sufficient evidence to determine whether vaccination against COVID-19 has an impact in preventing onward transmission of SARS-CoV-2, and, hence, on the international spread of the virus (Interim position paper: considerations regarding proof of COVID-19 vaccination for international travelers, published on 5 February 2021: https://www.who.int/news-room/articles-detail/interim-position-paper-considerations-regarding-proof-of-covid-19-vaccination-for-international-travellers).

  Therefore, the WHO guidance on self-isolation procedures for contacts of COVID-19 cases remains in place, regardless of vaccination status.

More information: https://www.who.int/emergencies/diseases/novel-coronavirus-2019/covid-19-vaccines/advice

- **What is WHO advice on what vaccinated people can safely do (i.e., gather in small groups without masks, etc.) compared to what non-vaccinated people should do?**

  Vaccination protects you from getting seriously ill and dying from COVID-19. For the first fourteen days after getting a vaccination, you do not have significant levels of protection, then it increases gradually. For a single dose vaccine, immunity will generally occur two

weeks after vaccination. For two-dose vaccines, both doses are needed to achieve the highest level of immunity possible.
While a COVID-19 vaccine will protect you from serious illness and death, we are still learning about the extent to which it keeps you from being infected and passing the virus on to others (transmission). The data emerging from countries show that the vaccines that are currently in use are protecting against severe disease and hospitalization. However, no vaccine is 100% effective and breakthrough infections are regrettable, but to be expected. The current evidence shows that vaccines provide some protection from infection and transmission, but that protection is less than that for serious illness and death. We are still learning also about the variants of concern and whether the vaccines are as protective against these strains as the non-variant virus. For these reasons, and while many of those in the community may not yet be vaccinated, maintaining other prevention measures is important especially in communities where SARS CoV-2 circulation is significant. To help keep you and others safe, and while efforts continue to reduce viral transmission and ramp up vaccine coverage, you should continue to maintain at least a 1-metre distance from others, cover a cough or sneeze in your elbow, clean your hands frequently and wear a mask, particularly in enclosed, crowded or poorly ventilated spaces. Always follow guidance from local authorities based on the situation and risk where you live.

More information:

- https://www.who.int/news-room/q-a-detail/coronavirus-disease-(covid-19)-vaccines
- https://www.cdc.gov/coronavirus/2019-ncov/vaccines/faq.html

- **Is immunity conferred by COVID-19 higher than the one conferred by the vaccine?**
  There is not enough data to make a conclusive statement one way or another, but it can be said that COVID-19 vaccines have prevented disease as expected and are much safer than contracting the infection. Even people who did not have symptoms when they were infected can have these ongoing health problems. Most infected people produce at least some antibodies and immune cells that can fight infection, but the magnitude of the immune response varies greatly. In people with mild disease, the immune protection that could prevent a second infection may disappear in a matter of months.

More information: https://www.cdc.gov/coronavirus/2019-ncov/vaccines/vaccine-benefits.html

- **Can the COVID-19 vaccine be administered to immunocompromised persons o persons taking immunosuppressing medication?**
  Pfizer / Moderna: Immunocompromised persons are at higher risk of severe COVID-19. Available data are currently insufficient to assess vaccine efficacy or vaccine-associated risks in severely immunocompromised persons. It is possible that the immune response to the vaccine may be reduced, which may alter its effectiveness. In the interim, given that the vaccine is not a live virus, immunocompromised persons who are part of a group recommended for vaccination may be vaccinated. Information and, where possible, counselling about vaccine safety and efficacy profiles in immunocompromised persons should be provided to inform individual benefit–risk assessment.
  AstraZeneca / Janssen / Sinopharm / Sinovac: Immunocompromised persons are at higher risk of severe COVID-19. Available data are currently insufficient to assess vaccine efficacy or vaccine-associated risks in severely immunocompromised persons, including those receiving immunosuppressant therapy. It is possible that the immune response to the vaccine may be reduced, which may lower its clinical effectiveness. In the interim, given that the vaccine is

nonreplicating, immunocompromised persons who are part of a group recommended for vaccination may be vaccinated. Information and, where possible, counselling about vaccine safety and efficacy profiles in immunocompromised persons should be provided to inform individual benefit–risk assessment.

More information: https://www.who.int/groups/strategic-advisory-group-of-experts-on-immunization/covid-19-materials

- **If a person is vaccinated, can an antigen-based COVID-19 test return a positive result because of the vaccine?**

  No, the COVID-19 vaccine will not cause a positive test result for a COVID-19 PCR or antigen laboratory test. This is because the tests check for active disease and not whether an individual is immune or not. If the person received a viral test, the positive result is likely to indicate a current infection. The specificity of antigen tests is generally high, which means that false positive results are unlikely to be obtained when using an antigen test according to the manufacturer's instructions. However, the lower the prevalence of infection in the community, the higher the rate of false positive results.

  However, because the COVID-19 vaccine prompts an immune response, it may be possible to test positive in an antibody (serology) test that measures COVID-19 immunity in an individual. Also, protective levels of antibodies are achieved around 15 days after inoculation, and also that no vaccine is 100% effective.

  These explanations assume that the rapid antigen test was used according to the directions of the producer. Reading the test before or after the specified time could result in false positive or false negative results.

More information:

- https://www.who.int/news-room/q-a-detail/coronavirus-disease-(covid-19)-vaccines
- https://www.cdc.gov/coronavirus/2019-ncov/vaccines/faq.html

- **Should persons who have had elective surgery postpone the COVID-19 vaccine?**

  Ideally, persons undergoing elective surgery should receive the vaccine before the procedure, especially if there are any risks of complications. A modeling study from the UK recommends that persons who are eligible for surgeries (any kind) should be prioritized to receive the COVID-19 vaccine to reduce their COVID-related mortality rate: https://academic.oup.com/bjs/advance-article/doi/10.1093/bjs/znab101/6182412

  If vaccination cannot be provided before the surgery, it is better to wait until all signs (ex., fever) related to the surgery are past.

  The Royal College of Surgeons of England. This body recommends that: “Non-urgent elective surgery can also take place soon after vaccination. There is some rationale for separating the date of surgery from vaccination by a few days (at most 1 week) so that any symptoms such as fever might be correctly attributed to the consequences of either vaccination or the operation itself.” The information can be found at: https://www.sps.nhs.uk/articles/use-of-covid-19-vaccine-in-people-with-recent-or-imminent-elective-surgery/

  Whatever the situation, the WHO SAGE documentation related to each of the 6 EUL-approve vaccines recommends that: “Anyone with an acute febrile illness (body temperature over 38.5 ºC) should postpone vaccination until they are afebrile.” This would include any person who is febrile because of a recent surgery procedure.

Vaccination in Priority Groups

- **What is the minimum age of vaccination against COVID-19?**

  Pfizer: Persons aged 12 years and above.

  Moderna / AstraZeneca / Janssen / Sinopharm / Sinovac: Persons aged 18 years and above.

More information: https://www.who.int/groups/strategic-advisory-group-of-experts-on-immunization/covid-19-materials

- **What is the recommendation for pregnant women? Should they be vaccinated against COVID-19?**

  Because their immune systems change throughout pregnancy, pregnant women are more vulnerable to respiratory infections like COVID-19. If they become ill, they tend to develop more severe symptoms whose treatment may require longer hospitalization in intensive care units, a greater need for ventilatory assistance, and a greater chance of dying when compared to nonpregnant women of the same age and ethnicity. Data from 24 countries indicate that more than 200,000 pregnant women have contracted COVID-19 in the Americas, and that at least 1,000 have died from complications.

  The current SAGE Roadmap for prioritizing uses of COVID-19 vaccines states that pregnant women should be included as part of the "Groups with comorbidities or health states determined to be at significantly higher risk of severe disease or death" and should be prioritized for COVID-19 vaccination.

  At this time, it is not known whether there is an association between pregnancy and a higher risk of experiencing Thrombosis with Thrombocytopenia Syndrome (TTS) after vaccination with AstraZeneca or Janssen vaccines.

More information: https://www.who.int/groups/strategic-advisory-group-of-experts-on-immunization/covid-19-materials

COVID-19 Vaccine Documentation

- **Is WHO recommending vaccine passports now as it recommends waiving the requirement for vaccinated travellers to test/quarantine?**

  The International Health Regulations (2005) Emergency Committee strongly recommends that countries do NOT require proof of vaccination against COVID-19 for international travel as the only pathway or condition permitting international travel, given limited global access and inequitable distribution of COVID-19 vaccines. State Parties should consider a risk-based approach to the facilitation of international travel by lifting measures, such as testing and/or quarantine requirements, when appropriate, in accordance with the WHO guidance.

  The reasons for WHO NOT to recommend the use of proof of vaccination against COVID-19 as a condition for exiting/entering a country and for boarding a conveyance/undertaking an international voyage fall under the following categories:

  - Scientific reasons: At present, there is no sufficient evidence to determine whether vaccination against COVID-19 has an impact in preventing onward transmission of SARS-CoV-2, and, hence, on the international spread of the virus. There is evidence, though, that vaccination against COVID-19 is effective in reducing the severity of the COVID-19 illness and related mortality.

- Ethical reasons: Due to the current limited availability and accessibility to COVID-19 vaccines worldwide, the introduction of proof of vaccination against COVID-19 as a condition for exiting/entering a country and for boarding a conveyance/undertaking an international voyage, would widen inequalities.
- Information technology reasons: Under the WHO-led Smart Vaccination Certificate Consortium, work is in progress to provide a global IT infrastructure for national authorities to record the COVID-19 immunization status in a globally harmonized manner for domestic purposes. Should, in the future, the introduction by national authorities of proof of vaccination against COVID-19 become a legitimate requirement for international travel (entering/exiting/boarding/undertaking international travel), such proof of vaccination would have to be recorded according to guidance issued by WHO according to the provisions of the International Health Regulations, both in digital or paper format.
- Legal reasons: A proof of vaccination against COVID-19 as a requirement for international travel (entering/exiting/boarding/undertaking international travel) would have to be regulated by the International Health Regulations, through the issuance of specific recommendations for which different legal options are possible. Lacking the scientific and ethical grounds, no such recommendations currently exists.

During the COVID-19 pandemic, international travel should always be prioritized for essential purposes, including emergency and humanitarian missions, travel of essential personnel, repatriations, and cargo transport of essential supplies. As countries gradually resume or readjust non-essential international travel, the introduction of risk mitigation measures aiming to reduce travel-associated exportation, importation and onward transmission of SARS-CoV-2 should be based on thorough risk assessments conducted systematically and routinely. The application of a precautionary approach is warranted in the presence of scientific uncertainties such as emergence of variants of concern (VOCs) or variants of interest (VOIs). National authorities implementing testing or quarantine as a condition for entry of international travelers may consider individualized approaches to exempting them from these measures based on acquired immunity from vaccination or previous SARS-CoV-2 infection. Adherence to personal protective measures such as mask use and physical distancing must continue to be respected by all international travelers, both while on board conveyances and at points of entry. International travelers should not be considered by default as suspected COVID-19 cases or contacts or as a priority group for testing. The overall health and well-being of communities should be at the forefront of considerations when deciding on and implementing international travel-related measures, which should be communicated publicly and in a timely manner.

In the future, should the introduction by national authorities of proof of vaccination against COVID-19 become a legitimate requirement for international travel (i.e., entering/exiting/boarding/undertaking international travel), only vaccinations with vaccines either pre-qualified by WHO or included in the WHO Emergency Use Listing (EUL) would be regarded as a legitimate proof.

More information:

- https://www.who.int/news/item/15-07-2021-statement-on-the-eighth-meeting-of-the-international-health-regulations-(2005)-emergency-committee-regarding-the-coronavirus-disease-(covid-19)-pandemic
- Interim position paper: considerations regarding proof of COVID-19 vaccination for international travellers (who.int)
- Technical considerations for implementing a risk-based approach to international travel in the context of COVID-19: Interim guidance, 2 July 2021 (who.int)

- **Which COVID-19 vaccines are recognized by the United States? By Europe?**

  United States: This guidance applies to COVID-19 vaccines currently authorized for emergency use by the Food and Drug Administration: Pfizer-BioNTech, Moderna, and Johnson and Johnson (J&J)/Janssen COVID-19 vaccines. This guidance can also be applied to COVID-19 vaccines that have been authorized for emergency use by the World Health Organization (e.g., AstraZeneca/Oxford). See WHO's website external icon for more information about WHO-authorized COVID-19 vaccines.

  European Union: Member States should allow travel into the EU of those people who have received, at least 14 days before arrival, the last recommended dose of a vaccine having received marketing authorization in the EU. Member States could also extend this to those vaccinated with a vaccine having completed the WHO emergency use listing process. In addition, if Member States decide to waive the requirements to present a negative PCR test and/or to undergo quarantine for vaccinated persons on their territory, they should also waive such requirements for vaccinated travelers from outside the EU.

More information:
- https://www.cdc.gov/coronavirus/2019-ncov/travelers/international-travel-during-covid19.html
- https://ec.europa.eu/commission/presscorner/detail/en/ip_21_2121

Revolving Fund, COVAX, and Logistics

- **What is the Revolving Fund?**

  PAHO's Revolving Fund for Access to Vaccines is a technical cooperation mechanism that supports PAHO Member States to plan for their annual vaccine needs, consolidates forecasted vaccine demand and leverages economies of scale to achieve lower prices and contribute this way to the sustainability of the National Immunization Programs. For more than 40 years, the Revolving Fund has facilitated access to high-quality life-saving vaccines and related products at the most affordable price for countries in the Americas. Currently, 42 Member States and 7 territories benefit from services offered by the Revolving Fund.

More information: https://www.paho.org/en/paho-strategic-fund

- **What is the COVAX Facility?**

  The COVID-19 Vaccine Global Access (COVAX) Facility is the vaccine pillar of the ACT Accelerator and the globally coordinated mechanism to provide equitable access, risk pooling, and affordable options for all participating countries. COVAX is co-led by Gavi (The Vaccine Alliance), the Coalition for Epidemic Preparedness Innovations (CEPI), and the World Health Organization (WHO). Gavi is the COVAX Facility administrator and, as such, is

responsible for making investments across a broad portfolio of promising vaccine candidates and EUL authorized vaccines being delivered to participating countries.

More information: https://www.who.int/initiatives/act-accelerator/covax

- **What is the shelf life of a COVID-19 vaccine once it is defrosted?**

  Pfizer:
  - Before dilution, the vials must reach room temperature and be diluted within 2 hours.
  - Thaw the vaccine within a maximum of 3 hours at a temperature between +2°C and +8°C in a refrigerator or within 30 minutes at +25°C before dilution.

  Moderna
  - Thaw vaccine at room temperature at +15°C to +25°C for 1 hour. OR
  - Thaw vaccine in refrigerator at +2°C to +8°C for 2 hours and 30 minutes. Let vial sit at room temperature for 15 minutes before vaccine administration.

  AstraZeneca
  - Once the first dose is drawn, keep at between +2°C to +8°C during the period of use, and discard the unused vaccine from the vial at 6 hours, or at the end of the immunization session, whichever comes first. Keep the open vaccine vial on the foam pad of the vaccine carrier.

  Janssen & Janssen
  - Thaw vaccine at room temperature up to 25°C. Individual vials take about 1 hour to thaw. A carton of 10 vials takes about 2 hours to thaw, OR
  - Thaw vaccine in refrigerator at +2°C to +8°C. Individual vials take about 2 hours to thaw. A carton of 10 vials takes about 12 hours to thaw.
  - Once thawed, do not re-freeze.

  Sinopharm
  - During vaccination sessions, vials and/or monodose pre-filled syringes should be kept between +2 and +8 °C and protected from light.

  Sinovac
  - The vaccine is provided as a refrigerated liquid formulation stored at 2–8 °C in a multidose vial containing 40 doses (0.5 ml each). The vials should be protected from light.

  https://www.who.int/groups/strategic-advisory-group-of-experts-on-immunization/covid-19-materials

PAHO/FPL/IM/COVID-19/21-0032