

# COVID-19 vaccines

**frequently asked questions  
(FAQ)**



**World Health  
Organization**

**Sri Lanka**

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# VACCINES BACKGROUND



# What are vaccines?

Vaccines are products that trigger the body to produce immunity to a specific disease. When vaccines are given to humans, it is called vaccination. Vaccination is a simple, safe, and effective way of protecting people against harmful diseases. It uses your body's natural defenses to build resistance to specific infections before you come into contact with the germs that cause them. This makes your immune system stronger and pre-prepared.

## What is a vaccine composed of?

Some vaccines contain the same germ that causes disease (e.g., the measles vaccine contains the measles virus), but in a killed or weakened form that cannot make you sick (i.e., create the illness in you). Other vaccines contain only fragments of the disease-causing germ; others use different vectors to carry genetic materials that stimulate the cells to produce materials similar to vaccine particles. For example, the Oxford AstraZeneca vaccine uses the chimpanzee adenovirus as the vector, and the Sputnik V vaccine uses the human adenovirus. Both transport the virus' genetic materials that stimulate the human body to produce spike proteins of the COVID-19 virus.

Vaccines also contain other ingredients:

- adjuvants, which boost our immune response, helping vaccines to work better;
- preservatives, which ensure a vaccine stays safe by preventing contamination with other germs, and;
- stabilizers, which protect the vaccine during storage and transportation.

None of the COVID-19 vaccines currently available contain materials extracted from cows or pigs.

## How do vaccines work?

Vaccines introduce a foreign body (a substance not found in the body) that is very similar to the disease-causing germ into your system; this is called an antigen. Your body will recognize the introduced antigen as a threat, triggering your immune system to produce antibodies. Antibodies are proteins produced naturally by the immune system to fight disease. This is the same process that would occur if you were exposed to the actual disease-causing germ. However, because vaccines only contain killed or weakened forms of germs, fragments of the germ, or alternative vectors, they do not cause the disease or put you at risk of its complications.

After vaccination, your body will remember the disease-causing germ and how to fight it following an infection or exposure. Therefore, subsequently, you develop immunity. Immunity means that if you are exposed to the germ in the future, your immune system can quickly destroy it before you become unwell.

This is what makes vaccines so powerful. Unlike most medicines, which treat or cure diseases, vaccines prevent them.

# How are vaccines developed?

Most vaccines have been in use for decades, and millions of people receive them safely every year. As with all medicines, every vaccine must undergo extensive and rigorous testing to ensure it is safe before introducing it into a country's vaccination programme. New vaccines are first tested in animals in a pre-clinical phase to evaluate their safety and potential to prevent disease. Then, they are tested in human clinical trials in three phases.

## Phase 1

The vaccine is given to a small number of volunteers to assess its safety, confirm it generates an immune response, and determine the appropriate dosage. Generally, in this phase, vaccines are tested in young, healthy adults.

## Phase 2

The vaccine is then given to several hundred volunteers to further assess its ability to generate an immune response (efficacy) and possible side effects (safety). Participants in this phase have the same characteristics (e.g., age, sex) as the people for whom the vaccine is intended. There are usually multiple trials in this phase to evaluate various age groups and different formulations of the vaccine. This phase often includes a control group, a group of people who do not receive the vaccine, to determine whether the vaccinated group's changes (outcomes) can be attributed to the vaccine or if they happened by chance.

## Phase 3

In this phase, the vaccine is given to thousands of volunteers. Like in phase 2 trials, some volunteers are in a control group, while others receive the vaccine. This phase usually generates enough data to determine the efficacy and safety of the vaccine. Phase 3 trials are conducted across multiple countries, with multiple sites in each country, to ensure the findings are applicable to a diverse group of people.

## Phase 4 trials

Once phase 3 is completed, vaccines go through a review by regional or national regulatory authorities, who decide if the vaccine is safe and effective enough to be put on the market. Additionally, a policy committee decides how the vaccine should be used in the country or region's vaccination programme. Once a vaccine is authorized, it is manufactured and widely distributed. However, even when vaccines are in the market and are being used, continuous and thorough monitoring is conducted to detect and respond to any adverse effects and evaluate its effectiveness in routine population settings. This is called post-marketing surveillance.



# What is herd immunity? What does it mean in terms of vaccination?

'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 a previous infection. WHO supports achieving 'herd immunity' through vaccination, and not by allowing disease to spread through any segment of the population, as this would result in unnecessary disease and deaths.

The percentage of people who need to be immune to achieve herd immunity varies with each disease. For example, herd immunity against measles requires about 95% of a population to be vaccinated; the remaining 5% will be protected because measles will not spread among those who are vaccinated. For polio, the threshold is about 80%. The proportion of the population that must be vaccinated against COVID-19 to begin inducing herd immunity is not yet known. This is an important area of research and will likely vary according to the community, the vaccine, the populations prioritized for vaccination, and other factors.

We are still learning about immunity to COVID-19. Most people who are infected with COVID-19 develop an immune response within the first few weeks, but we don't know how strong or lasting that immune response is or how it varies for different people. There have also been reports of people infected with COVID-19 for a second time. Until we better understand the disease and immunity towards COVID-19, it will not be possible to know what proportion of the population is immune and how long that immunity lasts, let alone make future predictions. These challenges should preclude any plans that try to increase immunity within a population by allowing people to get infected.

# COVID-19 VACCINES BACKGROUND



# What is the difference between traditional vaccine development and COVID-19 vaccine development?

The process to develop COVID-19 vaccines was fast-tracked while maintaining the highest standards. The same steps are used for COVID-19 vaccine development as are used for other vaccines. Traditional vaccine development follows each step in sequence; for COVID-19 vaccines, steps were carried out in parallel (simultaneously) to accelerate the process when it was safe to do so. Additionally, since the COVID-19 vaccine received unprecedented attention and funding, research groups did not have to pause for months between clinical phases to secure funding. Although COVID-19 vaccines are being developed quickly, all essential steps are followed, and the usual safety and efficacy monitoring mechanisms remain in place.

## What are the different types of COVID-19 vaccines?

Vaccines against viruses can be developed using a live attenuated virus, an inactivated virus, viral vectors, protein subunits, or nucleic acid materials such as RNA and DNA.

**The following types of COVID-19 vaccines are in phase 3 trials as of 10 Jan 2021:**

Type of vaccine platform	Some COVID-19 vaccines currently under trial
<p><b>Inactivated</b></p> <p>Inactivated vaccines are produced by growing a bacterium or virus and then inactivating it with heat, chemicals, or radiation. Inactivated vaccines are not alive and cannot replicate, but they still trigger an immune response.</p> <p>Since the virus itself has been destroyed, it cannot infect cells, and therefore inactivated vaccines can be given to people with compromised immune systems.</p>	<ul style="list-style-type: none"><li>• Sinovac</li><li>• Wuhan Institute of Biological Products/Sinopharm</li><li>• Beijing Institute of Biological Products/Sinopharm</li><li>• Bharat Biotech, ICMR, National Institute of Virology</li></ul>

<p><b>Non-replicating viral vector</b></p> <p>Viral vector-based vaccines differ from most conventional vaccines, as they don't contain antigens but rather use the body's own cells to produce them. They do this by using a modified virus (the vector) to deliver genetic code to instruct cells to produce the antigen, which then triggers an immune response. In the case of COVID-19, this is usually the viral spike protein gene, which will instruct the cells to produce copies of spike proteins, which is read by the body as an antigen to trigger an immune response. The modified vector virus cannot replicate inside the body.</p> <p>Viral vector vaccines mimic natural viral infection and trigger a strong immune response. However, since there is a chance that people may have already been exposed to the viruses, some may be immune to it, possibly making the vaccine less effective.</p>	<ul style="list-style-type: none"> <li>• University of Oxford/ AstraZeneca (Oxford AstraZeneca)</li> <li>• CanSino Biological Inc./Beijing Institute of Biotechnology</li> <li>• Gamaleya Research Institute (SPUTNIK V)</li> </ul>
<p><b>Protein subunits</b></p> <p>Rather than injecting a whole germ to trigger an immune response, subunit vaccines (sometimes called acellular vaccines) contain purified pieces of the germ that have been selected for their ability to stimulate an immune response.</p> <p>Because these fragments are incapable of causing disease, subunit vaccines are considered very safe with minimal side effects. These vaccines often require adjuvants and/or booster shots to help increase and sustain the immune response.</p>	<ul style="list-style-type: none"> <li>• Janssen Pharmaceutical Companies, Novavax</li> <li>• Anhui Zhifei Longcom Biopharmaceutical/Institute of Microbiology, Chinese Academy of Sciences</li> </ul>
<p><b>Virus-like particles</b></p> <p>Virus-like particles are molecules that mimic viruses but are not infectious.</p> <p>They are a very effective way of creating vaccines against diseases such as human papillomavirus (HPV) and hepatitis B,</p>	<ul style="list-style-type: none"> <li>• Medicago Inc.</li> </ul>

## Nucleic acid or mRNA

Nucleic acid vaccines use genetic material from a disease-causing germ (a virus or bacterium) to stimulate an immune response. Depending on the vaccine, the genetic material could be DNA or RNA; in both cases, it provides the instructions for making a specific protein from the germ, which the immune system will recognize as foreign (an antigen). COVID-19 mRNA vaccines give instructions for our cells to make a harmless piece of what is called the “spike protein.” The spike protein is found on the surface of the virus that causes COVID-19.

This is a relatively new technology with limited use in humans. As there are no live components, there is no risk of triggering disease; and since the antigen is produced inside our own cells and in large quantities, the immune reaction should be strong. mRNA vaccines require ultra-cold storage; Pfizer-BioNTech must be stored at -60C to -80C and Moderna at -20C; this poses storage and distribution challenges.

- Pfizer-BioNTech
- Moderna
- CureVac
- Zylus
- Inovio
- AnGes

For updated information on vaccine trials, please use the following links:

### World Health Organization

<https://www.who.int/publications/m/item/draft-landscape-of-covid-19-candidate-vaccines>

### London School of Hygiene and Tropical Medicine

[https://vac-lshtm.shinyapps.io/ncov\\_vaccine\\_landscape/](https://vac-lshtm.shinyapps.io/ncov_vaccine_landscape/)

## How many COVID-19 vaccines have completed phase 3 trials? Which vaccines are they?

Of the Nineteen (as of 20 Jan, 2021) COVID-19 vaccines in phase 3 trials, six vaccines have completed phase 3 trials and submitted dossiers to WHO with efficacy results.

The six COVID-19 vaccines which have currently completed phase 3 trials are Pfizer-BioNTech, Moderna, Oxford AstraZeneca, Sputnik V, Sinopharm, and Sinovac.

WHO has received efficacy results from all six products; however, only two have peer-reviewed efficacy results (Oxford AstraZeneca by the Lancet, and Pfizer-BioNTech by the New England Journal of Medicine)

**Updated information from WHO can be found here:**

<https://www.who.int/publications/m/item/draft-landscape-of-covid-19-candidate-vaccines>

## Are COVID-19 vaccines safe and high-quality?

Ensuring the safety and quality of vaccines is one of WHO's highest priorities. Although COVID-19 vaccines are being developed quickly, all essential steps are followed, and the usual safety and efficacy monitoring mechanisms remain in place. WHO works closely with national authorities to ensure global norms and standards are developed and implemented to assess the quality, safety, and efficacy of vaccines through their national regulatory authorities.

## Are nucleic acid or mRNA vaccines safe?

mRNA is a new platform for vaccines, and, therefore, there is limited evidence on its use in humans. However, there is no evidence to say that it is less safe than other platforms. There are, however, theoretical reasons as to why it could be safer than other existing platforms. For example, vaccines using attenuated viruses pose a minimal risk of the attenuated germ reverting to a dangerous form; this is not an issue with mRNA vaccines as there is no virus used.

Circulating misinformation has caused concern that this type of vaccine can affect our DNA or genetic code. To clarify, as humans do not have a mechanism to convert RNA back into DNA, mRNA vaccines cannot interfere with the human genetic system or code.

## What are ultra-cold chain vaccines? What does it mean in terms of use?

Some of the COVID-19 vaccines must be stored in very cold temperatures, which require special equipment. In particular, mRNA vaccines require ultra-cold storage; Pfizer-BioNTech must be stored at -60C to -80C and Moderna at -20C.

This is a challenge for many countries; however, existing technologies that maintain the required temperature can help with ultra-cold chain vaccines, including freezers, "Arkteks" (specialized transport containers), and dry ice. Specifically, Pfizer has developed a thermal shipper for its vaccine that can hold the vaccine for 10-15 days if kept unopened. Before mixing, it can also be kept in the refrigerator at temperatures between 2C and 8C for up to five days.

## Do COVID-19 vaccines provide long-term immunity?

As these are new vaccines, we do not yet know if they will provide long-term immunity against COVID-19.

## How effective are COVID-19 vaccines?

While several COVID-19 vaccines appear to have high levels of efficacy, no vaccine is 100% protective. Therefore, a small percentage of people, due to their genetic and/or biological characteristics, will not develop protection as expected after receiving the COVID-19 vaccination.

In addition to a vaccine's specific characteristics, several factors such as a person's age, underlying health conditions, or previous exposure to COVID-19 infection may impact to what extent they will be protected from COVID-19. Continued evaluation of a vaccine's effectiveness in routine use settings is crucial to optimizing the use of these vaccines and developing a more effective vaccine. This process is a normal part of the lifecycle of vaccine development and assures that we continue to improve vaccines and their use.

## Can a person get COVID-19 through vaccination?

None of the authorized and recommended COVID-19 vaccines nor any of the COVID-19 vaccines currently in development contain the live virus that causes COVID-19. This means that a COVID-19 vaccine cannot cause the disease.

There are several different types of vaccines in development. All vaccines teach our immune systems how to recognize and fight the virus that causes COVID-19. Sometimes this process can cause symptoms, such as fever. These symptoms are normal and are a sign that the body is building protection against the virus that causes COVID-19.

## Can a person who has received the COVID-19 vaccine get COVID-19?

It typically takes a few weeks for the body to build immunity (protection against the virus that causes COVID-19 disease) after vaccination. That means it is possible for a person to become infected with the virus that causes COVID-19 just before or just after vaccination and become sick. This is because the vaccine has not had enough time to provide protection, not because the vaccine was ineffective. Moreover, because no vaccine will have 100% efficacy, some persons who are vaccinated with COVID-19 vaccines may not develop sufficient immunity against the disease and, therefore, would remain at risk of contracting the disease.

## **If a person already had COVID-19 and recovered, do they still need to get a COVID-19 vaccine?**

Due to the severe health risks associated with COVID-19 and the fact that reinfection with COVID-19 is possible, vaccines should be offered to all people regardless of whether they have already had COVID-19. Viral or serological testing for prior infection is not recommended for the purpose of decision-making about vaccination.

The immunity someone gains from having an infection, called natural immunity, varies from person to person. Both natural immunity and vaccine-induced immunity are important aspects of COVID-19 that experts are trying to learn more about. At this time, whether you have had COVID-19 or not, the best ways to prevent infection are to wear a mask in public places, stay at least six feet away from other people, frequently wash your hands with soap and water for at least 20 seconds, and avoid crowds and confined spaces.

## **Do COVID-19 vaccines protect against the various strains of COVID-19?**

WHO closely monitors the changes reported in the SARS-CoV-2 virus through genomic sequencing. This virus, like other viruses, constantly changes over time. It is important to monitor these changes and their effect on diagnostics, treatment, and vaccines. What we presently know is that the vaccines currently available and in development should provide protection against the various strains of SARS-CoV-2 reported so far. This is because these vaccines elicit a broad immune response and a host of antibodies and cell-mediated immune responses. We need to continue to follow the virus evolution and its potential impact.

## **Are there side effects from COVID-19 vaccines?**

Like any medicine or vaccine, COVID-19 vaccines can cause mild side effects such as fever, headache, tiredness, muscle pain, and/or pain or redness at the injection site. Mild reactions go away within a few days on their own. Severe or long-lasting side effects are extremely rare. Vaccines are continually monitored for safety, to detect rare adverse events. Following the introduction of a vaccine, close monitoring continues to take place to detect any unexpected adverse side effects and further assess effectiveness among even larger numbers of people, to continue assessing how best to use the vaccine for the greatest protective impact. Therefore, it is important that vaccine recipients inform designated health authorities of any experienced side effects or adverse events.



## **Can one vaccine be interchangeably administered with another vaccine?**

Currently, no data is available on the interchangeability of one vaccine with another in COVID-19 vaccine platforms. WHO currently recommends that the same product be used for both doses. If different COVID-19 vaccine products are inadvertently administered in the two doses, no additional dose of either vaccine is recommended at this time. Recommendations may be updated as further information becomes available.

# COVID-19 VACCINE APPROVAL



# How are COVID-19 vaccines regulated and approved for use?

A vaccine is introduced into national healthcare systems only after regulatory approval and thorough quality control. Once a vaccine has undergone established development, manufacturing, and clinical testing procedures and is demonstrated to be safe, efficacious, and in line with good manufacturing standards, manufacturers must submit data to be assessed by regulators to authorize use.

Once manufacturers believe they have the necessary data to secure authorization or a license for the product, they can submit their product for evaluation to a national regulatory authority, a stringent regulatory authority, or to WHO for prequalification or WHO emergency listing (EUL). A stringent regulatory authority (SRA) is a national drug regulation authority that is considered by WHO to apply stringent standards for quality, safety, and efficacy in its process of regulatory review of drugs and vaccines for marketing authorization. WHO EUL or prequalification is usually a prerequisite for a vaccine supplied through procurement partners such as UNICEF and PAHO, and for funding through Gavi.

## What is emergency use listing (EUL)?

The WHO emergency use listing (EUL) procedure assesses the suitability of novel health products during public health emergencies. The objective is to make medicines, vaccines, and diagnostics available as quickly as possible to address an emergency while adhering to stringent criteria of safety, efficacy, and quality. The assessment weighs the threat posed by the health emergency and the benefits of the proposed product against any potential risks.

The EUL pathway involves a rigorous assessment of late phase 2 and phase 3 clinical trial data and substantial additional data on safety, efficacy, quality, and risk management. The data is reviewed by independent experts, not by WHO authorities.

Experts from individual national authorities are invited to participate in the EUL review. Once a vaccine has been listed for WHO emergency use, WHO engages its regional regulatory networks and partners to inform national health authorities of the vaccine and its anticipated benefits based on data from clinical studies to date.

## Which COVID-19 vaccines have been granted EUL?

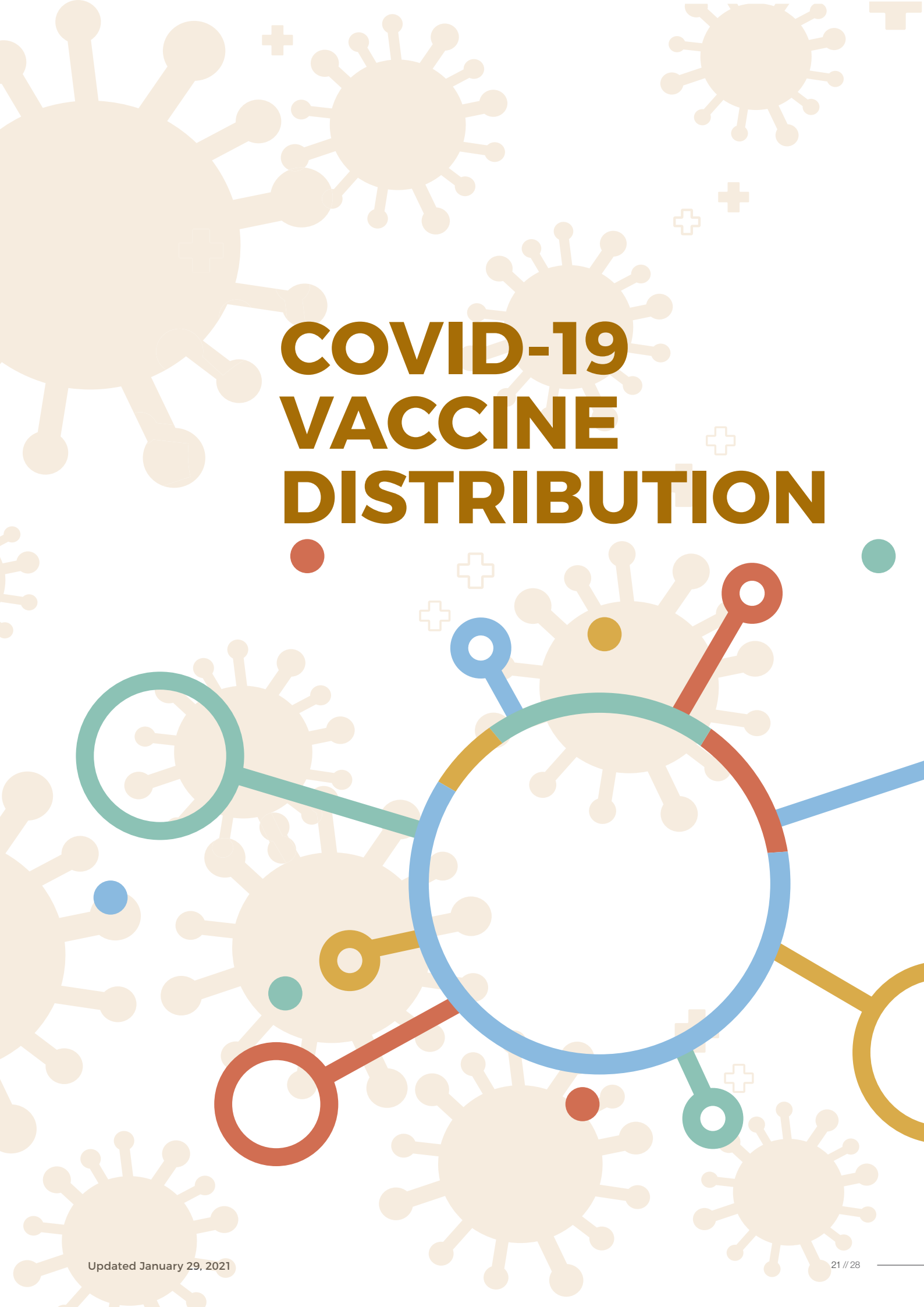
Currently, WHO EUL has been granted for the Pfizer-BioNTech vaccine. Dossiers are being reviewed for the Moderna and Oxford AstraZeneca vaccines, and others (Gamaleya, Sinopharm, Sinovac, Janssen, and Serum Institute of India) are in discussions with the WHO prequalification team for data submission to WHO.

**Updated information can be found at the following link:**

<https://www.who.int/teams/regulation-prequalification/eul/covid-19>

## Once a vaccine has EUL, can it be used in every country?

Each country is sovereign and has the right to choose the tools and products it considers to be best suited for its population. This choice must be guided by the highest standards of science and ethics. WHO has guidance around the exceptional authorization of vaccines and other products in the context of emergencies. Therefore, even with WHO EUL, all vaccines need to be approved and registered by regional or national regulatory authorities before use.

The background features a repeating pattern of stylized, light-orange virus particles with multiple spikes. Overlaid on this is a network diagram consisting of a central large blue circle and several smaller circles in red, yellow, and teal. These circles are connected by lines of the same colors, forming a web-like structure. Some of the smaller circles have internal details, such as a yellow dot in a teal circle or a red dot in a yellow circle. The title text is centered in the upper half of the image.

# COVID-19 VACCINE DISTRIBUTION

## What is the ACT-Accelerator?

The Access to COVID-19 Tools Accelerator (The ACT-Accelerator) is the only global framework for ensuring the fair and equitable allocation of COVID-19 tools like tests, medicines, and vaccines. It brings together governments, health organizations, scientists, businesses, civil society, and philanthropists to speed up efforts to end the pandemic. It was launched in April 2020 as an integrated, end-to-end global solution to the pandemic.

The two overriding objectives of ACT-Accelerator are to:

1. accelerate the development of new diagnostics, treatment, and vaccines;
2. achieve equitable global access for member states to all COVID-19 tools

## What is the COVAX facility?

COVAX is the vaccine pillar of the ACT-Accelerator. COVAX is co-led by Gavi, the Coalition for Epidemic Preparedness Innovations (CEPI), and WHO. COVAX aims to accelerate the development and manufacturing of COVID-19 vaccines and to guarantee fair, rapid, and equitable access for every country.

Currently, about 190 countries and economies will benefit from the COVAX facility, including 92 lower-income countries that are eligible for financial assistance through the Advance Market Commitment (AMC). An initial proportional allocation of donor-funded doses will be distributed across AMC-eligible countries as “jumpstarting” introductions. Countries will progressively receive doses until resources are exhausted. COVAX aims to disseminate donor-funded doses to 20% of each AMC-country’s population; the final allocation will be determined by vaccine development success, dose price, vaccine characteristics, and available resources.

## Who will receive the COVID-19 vaccine first?

Vaccines are a global public good: everyone benefits when anyone is vaccinated. It is in all countries’ interest that the vaccine is made available across the world. There will be no true global (including economic) recovery unless all parts of the world bring transmission under control.

As the supply of vaccines will be limited during the initial phase, to ensure equitable access for vaccines, WHO’s Strategic Advisory Group of Experts on Immunization (SAGE) issued policy recommendations on population prioritization based on evidence generated during the COVID-19 pandemic.

SAGE recommends prioritizing frontline workers (healthcare workers and others), older people, and people with comorbidities. Countries can recommend more high-risk groups if they feel it is rational and urgent to cover these groups in the initial phase.

Protecting high-risk health workers has a threefold purpose: (i) to protect the individual health workers; (ii) to protect critical essential non-COVID-19 services during the COVID-19 pandemic, and (iii) to prevent onward transmission to vulnerable people. Protecting older people will have the greatest public health impact in terms of reducing the number of deaths.

Certain comorbidities have been identified as increasing the risk of severe COVID-19 disease and death. Phase 2 and Phase 3 clinical trials have demonstrated that the vaccine has similar safety and efficacy profiles in persons with various underlying medical conditions. Comorbidities include hypertension, diabetes, asthma, pulmonary disease, liver disease, kidney disease, and chronic (stable and controlled) infection with human immunodeficiency virus (HIV), hepatitis C virus (HCV), and/or hepatitis B virus (HBV). Vaccination is recommended for persons with comorbidities that have been identified as at an increased risk of experiencing severe COVID-19.

As more vaccine becomes available, additional priority groups should be vaccinated as outlined in the WHO Prioritization Roadmap, taking into account national epidemiological data and other relevant considerations.

## Who will not receive the COVID-19 vaccine?

Restrictions on vaccine distribution according to individual characteristics will vary based on the type of vaccine. However, there is limited or no data on the safety of the COVID-19 vaccine in the following groups of people; therefore, all COVID-19 vaccines are not recommended for these groups at present. However, with evolving evidence, these decisions will be reviewed and revised.

- Children and adolescents below the age of 16 years – As there is currently no efficacy or safety data for children or adolescents below the age of 16 years, these individuals should not be vaccinated at this time.
- Pregnant women – The available data on vaccination of pregnant women are insufficient to assess vaccine efficacy or vaccine-associated risks in pregnancy. Further studies are planned in pregnant women in the coming months. As data from these studies become available, recommendations on vaccination will be updated accordingly. In the interim, WHO recommends not to use COVID-19 vaccines during pregnancy, unless the benefit of vaccinating a pregnant woman outweighs the potential vaccine risks, such as in health workers at high risk of exposure and pregnant women with comorbidities placing them in a high-risk group for severe COVID-19.
- People with current acute COVID-19 – Vaccination of persons with acute symptomatic SARS-CoV-2 should be deferred until they have recovered from acute illness and the criteria for discontinuation of isolation have been met. There is no data to support a recommendation of a minimal interval between onset of symptoms and vaccination.

# Which vaccines will we receive through COVAX?

The COVAX Facility will provide participating countries with access to the world's largest and most diverse vaccine portfolio. COVAX will consider procuring any candidate vaccine that meets the global standards set by WHO.

The COVAX Facility signed an advance purchase agreement with AstraZeneca for the Oxford AstraZeneca vaccine and a memorandum of understanding (MoU) with Johnson & Johnson for 500 million doses of the Janssen vaccine, which is currently being investigated as a single-dose vaccine. Additionally, COVAX has existing agreements with the Serum Institute of India (SII) for 200 million doses, with the option of up to 900 million more doses, of either the Oxford AstraZeneca or Novavax vaccines, as well as a statement of intent for 200 million doses of the Sanofi/GSK vaccine.

As part of the COVAX research and development portfolio, CEPI has invested in ten vaccine candidates. Nine of these candidates are still in development, and seven are in clinical trials, as of 7 Jan 2021.

1. Oxford AstraZeneca (Phase 3)
2. Clover Biopharmaceuticals, China (Phase 1 )
3. CureVac, Germany (Phase 2B/3)
4. Inovio, USA (Phase 2)
5. Institut Pasteur/Merck/Themis, France/USA/Austria (Phase 1 )
6. Moderna, USA (Phase 3)
7. Novavax, USA (Phase 3)
8. SK bioscience, South Korea (Preclinical)
9. University of Hong Kong, Hong Kong (Preclinical)
10. University of Queensland/CSL, Australia  
(Phase 1, programme discontinued)



# ADDITIONAL QUESTIONS



## How are COVID-19 vaccines administered?

Most of the currently available vaccines recommended two doses. Vaccines are given intramuscularly via injection with an interval of 21-28 days between the doses.

## What is country readiness?

Country readiness is a measure of preparedness in the deployment of COVID-19 vaccines. Currently, WHO, UNICEF, Gavi, and other partners are working together to help countries prepare to introduce COVID-19 vaccines.

The Vaccine Readiness Assessment Tool (VIRAT) is a national-level tool to be used by Ministries of Health and Ministries of Finance, with support from WHO, UNICEF, and World Bank country teams and partners. The tool acts as a planning roadmap signaling the main activities that need to be established to adequately prepare for COVID-19 vaccine introduction and support participants to self-monitor their readiness and progress now and over time against key milestones.

The development of a National Deployment and Vaccination Plan (NDVP) is a prerequisite to monitor a country's readiness for COVID-19 vaccine rollout. The Country Readiness and Delivery (CRD) workstream of COVAX provides guidance on developing an NDVP for COVID-19 vaccines. The CRD also provides a template, which will help countries develop an operational plan for COVID-19 vaccine introduction.

## Will Sri Lanka receive a single type of vaccine?

As the COVAX Facility is considering multiple vaccines for distribution among AMC-countries, countries might receive more than one type of vaccine. Sri Lanka has joined the COVAX facility as an AMC member and will therefore benefit from the vaccines allocated by this facility. National authorities have discretion on how to use their allocated doses or vaccines based upon the country's situation, guidance from national policy-making bodies, and recommendations and advice from the WHO Strategic Advisory Group of Experts on Immunization (SAGE).

# Does the development of a COVID-19 vaccine mean the pandemic is over?

Vaccines are important tools, and vaccination is a key intervention, but by themselves, they will not end the pandemic. As we roll out the vaccines globally, we need to take all necessary measures to prevent the virus from spreading and causing more deaths. We need to stay the course and “do-it-all” and do it better. This means, along with vaccination, we need to continue practicing physical distancing, wearing masks, washing our hands with soap, increasing ventilation, avoiding crowds, disinfecting surfaces, and staying home if asked.

Additionally, so far, vaccines appear to be efficacious against developing the disease, but we don’t know their impact on preventing transmission. We need more evidence on this, and ongoing studies will help us answer these questions. Hence, it’s very important that everyone who gets the vaccine continues to take necessary precautions to protect everyone in the community. This means continuing to practice physical distancing, wearing masks, washing our hands with soap, increasing ventilation, avoiding crowds, disinfecting surfaces, and staying home if asked.



**World Health  
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