

## COVID-19 VACCINE

The COVID-19 vaccine is designed to protect you from getting sick or from getting severe COVID-19 disease. If you are allergic to other vaccines, please consult with your doctor.

All medical treatment requires personal choices and individualised medical guidance. This information leaflet does not change that. We hope that this information is helpful for your decision-making process.

### Stopping a pandemic requires using all the tools available

Vaccines train your immune system so your body will be ready to fight the virus if you are exposed to it. Other steps, like covering your mouth and nose with a mask and staying at least 2 metres/6 feet away from others, help reduce your chance of being exposed to the virus or spreading it to others.

Together, COVID-19 vaccination and following CDC's/WHO/PHE recommendations to protect yourself and others will offer the best protection from COVID-19.

**Getting vaccinated protects health services globally to deliver other needed medical care, prevents financial hardship and honours the volunteers who have allowed the vaccines to be developed!**

### What's the difference between efficacy and effectiveness of a vaccine?

**Efficacy** is the degree to which a vaccine prevents disease, and possibly also transmission, under ideal and controlled circumstances - comparing a vaccinated group with a placebo group. This is how vaccines are administered and studied in clinical trials, which gives us the data on which we base clinical advice.

**Effectiveness** meanwhile refers to how well it performs in the real world. This difference matters because in the real-world vaccines may not perform as well as in the trials. That's not a concern since the vaccines remain highly effective at preventing COVID and especially severe COVID in real-world settings.

### How long does the COVID-19 vaccine induced immunity last?

### How long is someone immune after getting sick with COVID-19?

The first dose of the COVID-19 vaccine should give you good protection from new coronavirus infection from three weeks after the injection, whether you have been previously infected or not.

You need to have both doses of the vaccine to give you comprehensive and long lasting immunity. It is believed that COVID vaccine immunity will last longer than the immunity from getting sick with COVID-19. However, how long is not yet known.

Also, there is a small chance you might still get or spread coronavirus even if you have the vaccine, as the COVID-19 vaccines decrease but do not completely prevent transmission.

The protection someone gains from having an infection (called natural immunity) varies depending on the disease, and it varies from person to person. Since this virus is new, we don't know how long natural immunity might last. Current evidence has confirmed that reinfection with the virus that causes COVID-19 is extremely rare in the 90 days following infection and further studies have now shown that most people are still immune to reinfection after 6 months.

### Can the second dose of the vaccine be a different brand from the first dose?

Scientifically yes, but in the vaccine trials only one brand of vaccine was used in each of the studies. If there was a shortage of a particular brand, then a second dose of a different vaccine brand is likely more beneficial than not getting a second dose. The full two doses are needed for the vaccine to give full protection.

### Should you have the vaccine if you have already had COVID-19?

**Yes!** This prevents reinfection. COVID-19 vaccination should be offered to you regardless of whether you already had COVID-19 infection. It is believed that the COVID vaccines offer stronger and more durable immunity than that conferred from getting sick.

However, anyone currently infected with COVID-19 should wait to get vaccinated until after their illness has resolved and after they have met the criteria to discontinue isolation/quarantine. Additionally, as evidence suggests that reinfection with the virus that causes COVID 19 is uncommon in the 90 days after initial infection, people with a recent infection may delay vaccination until the end of that 90- day period if desired.

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## **Once vaccinated, do you need to wear a mask?**

Yes, the CDC, WHO and PHE recommend that during the pandemic you wear a mask that covers your nose and mouth when in contact indoors with others outside your household, when in healthcare facilities, and when receiving any vaccine, including a COVID-19 vaccine. This is because while we know the vaccine is very effective at preventing illness and especially severe illness from COVID-19, but it does not completely prevent transmission. Until more people are vaccinated, you can protect those who cannot get vaccinated now (like children) by wearing a mask.

## **When do you have immunity after the vaccine?**

You start having an immune response from 10 days after the first dose of the vaccine and the full impact of the immune response will be present after 21 days, (the same time that natural antibodies develop after infection) after the first dose. Full immunity is achieved 15 days after the second dose of the vaccines or after the one dose of the Johnson & Johnson vaccine. This pattern of achieving immunity is common for almost all vaccinations.

## **Will there be a booster vaccination next year and will this be needed each year?**

It is likely that people will need regular booster vaccine, as immunity wanes over time. It is also possible that if the virus mutates away from the vaccine, that the vaccine will need to be adapted as is done with flu. Luckily, the synthetic vaccines used for COVID-19 can be quickly and easily be adapted to new strains of the virus.

## **What are the vaccine ingredients?**

All of the vaccines contain code to help cells build the spike protein, salts to buffer the solution, and sugars to prevent cold damage. mRNA vaccines (Moderna and Pfizer) also contain lipids, which protect the mRNA or spike protein coding information from breaking down and polyethylene glycol to add structure. The viral vector vaccines (Johnson & Johnson and AstraZeneca) contain adenoviruses that cannot replicate to deliver the spike protein code and ethanol as emulsifier.

None of the currently licenced vaccines contain preservatives, animal products or egg. For a complete list of all ingredients, see the following links for: Pfizer ingredients, Moderna ingredients, Johnson & Johnson ingredients, and AstraZeneca ingredients.

The mRNA vaccines give the immune system instructions (IKEA) to recognize and protect against the spike protein if the real SARS-CoV-2 virus comes along.

\*Please see following page for a detailed list of ingredients that may be of interest to those who suffer from allergies.

**If you are allergic to other vaccines, please consult with your doctor.**

## **After getting a COVID-19 vaccine, will I test positive for COVID-19 on a viral test?**

No, the COVID-19 vaccine will not cause you to test positive on tests for COVID-19 infection. They may cause you to test positive on antibody tests that measure whether you have antibodies that respond to the SARS-CoV-2 virus but antibody tests are not used to determine if you are currently infected or infectious.

## **What are the side effects of vaccines?**

Just like with any vaccine, your arm may be sore for a day or two after getting the shot. Some people may also develop symptoms like low grade fever, chills, or aches. If this occurs, you can think of this as the vaccine doing its job and preparing you for an encounter with the virus.

Though please know that immunity is built even in those who do not experience any vaccine side effects whatsoever. Any "under the weather" feeling almost always goes away after one or two days.

Rest and acetaminophen (Tylenol) or ibuprofen (Advil) can help these symptoms. It is reported that these types of side effects may be more common after the second dose and in younger people. If you have any concerning side effects after getting the vaccine, please contact your doctor immediately.

AstraZeneca	Pfizer/BioNTec	Moderna
<ul style="list-style-type: none"> <li>• SARS CoV 2 Spike glycoprotein,</li> <li>• L-histidine</li> <li>• L-histidine hydrochloride monohydrate</li> <li>• magnesium chloride hexahydrate</li> <li>• polysorbate 80</li> <li>• ethanol</li> <li>• sucrose</li> <li>• sodium chloride</li> <li>• disodium edetate dihydrate</li> <li>• water for injections</li> </ul>	<ul style="list-style-type: none"> <li>• polyethylene glycol/macrogol (PEG) as part of ALC-0159.</li> <li>• ALC-0315 = (4-hydroxybutyl) azanediyl)bis (hexane-6,1-diyl)bis(2-hexyldecanoate)</li> <li>• ALC-0159 = 2-[(polyethylene glycol)-2000]-N,N-ditetradecylacetamide</li> <li>• 1,2-Distearoyl-sn-glycero-3-phosphocholine</li> <li>• cholesterol</li> <li>• potassium chloride</li> <li>• potassium dihydrogen phosphate</li> <li>• sodium chloride</li> <li>• disodium hydrogen phosphate dihydrate</li> <li>• sucrose</li> <li>• water for injections</li> </ul>	<ul style="list-style-type: none"> <li>• Lipid SM-102</li> <li>• Cholesterol</li> <li>• 1,2-distearoyl-sn-glycero-3-phosphocholine (DSPC)</li> <li>• 1,2-Dimyristoyl-rac-glycero-3-methoxypolyethylene glycol-2000 (PEG2000-DMG)</li> <li>• Trometamol (Tris)</li> <li>• Trometamol hydrochloride (Tris HCl)</li> <li>• Acetic acid</li> <li>• Sodium acetate trihydrate</li> <li>• Sucrose</li> <li>• Water for injections</li> </ul>

\*Vaccine ingredients

#### References:

[https://www.who.int/influenza\\_vaccines\\_plan/resources/Session4\\_VEfficacy\\_VEffectiveness.PDF](https://www.who.int/influenza_vaccines_plan/resources/Session4_VEfficacy_VEffectiveness.PDF) accessed on 11th Jan 2021

<https://www.gov.uk/government/publications/regulatory-approval-of-pfizer-biontech-vaccine-for-covid-19/information-for-healthcare-professionals-on-pfizerbiontech-covid-19-vaccine#efficacy> accessed on 11th Jan 2021

<https://www.gov.uk/government/publications/regulatory-approval-of-covid-19-vaccine-astrazeneca> accessed on 11th Jan 2021

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<https://www.cdc.gov/coronavirus/2019-ncov/vaccines/faq.html> accessed on 11th Jan 2021

<https://www.nhs.uk/conditions/coronavirus-covid-19/coronavirus-vaccination/coronavirus-vaccine/> accessed on 11th Jan 2021