

It is brutally true that the outbreak of COVID-19 has caused numerous economic and social shifts. Millions of people have been forced to change their normal life and adapt to a new way they never anticipated. Sadly, many families have lost their loved ones, while others are still battling the pandemic in hospitals and quarantine centers.

As all these changes affect many souls worldwide, the big question is, is there light at the end of the tunnel? Of course, there is hope at last. And, that is why this article tries to answer numerous questions surrounding the Covid-19 vaccines, their effectiveness, and who are eligible for vaccination.

Quick Covid-19 Facts

According to Hopkins University, there are over 195.3 million confirmed Covid-19 cases globally since China reported the first case in December 2019. This is followed by over 4.17 million confirmed deaths with more than 3.94 billion vaccination doses being administered so far.

The effects of the pandemic are seen to shift to other parts of the world as the majority of cases and deaths are now recorded outside China. For instance, the number of deaths recorded in Europe and North America now surpass those recorded in Asia. There has been also a rising number of deaths in Latin America, South America, and the Caribbean.

As of 28th July 2021, the US is the most affected county with over 34.7 million confirmed cases and 611,000 confirmed deaths. This puts the virus's mortality rate at about 2%, according to the director of the US National Institute of Allergy and Infectious Diseases, Dr Anthony Fauci. However, the WHO has given its estimation at 3.4%

Type of Covid-19 Vaccines

For the past months, there have been reports on various vaccines being administered to citizens against COVID-19. These vaccines have been approved for general or emergency use by both World Health Organization (WHO) and Food and Drug Administration (FDA) to be safe for humans. However, numerous confusions are surrounding these vaccines and if they are safe for the general population.

In this section, we are not going to tell you which is the right vaccine for you since this should remain a personal choice. What we can say is that all vaccines help in boosting your immune response and protect you against future infection by exposing your body to

particular molecules. As such, here are the five authorized Covid-19 vaccines and their effectiveness:

Pfizer-BioNTech Vaccines

Pfizer became the first Covid-19 vaccine to receive the Food and Drug Administration (FDA) Emergency Use Authorization (EUA) on December 11, 2020. This was after the company reported successful clinical trial results, including proving that the vaccine is up to 95% effective against symptomatic diseases. Pfizer is also seeking another FDA authorization for its third dose of the original vaccine and is planning to kick-start clinical trials in August to test a booster shot against the new highly contagious Delta variant.

The Pfizer vaccine is recommended for anyone above 12 years. The recommended dosage is two shots 21 days apart. Some of the common effects include chills, headaches, pain, tiredness, and redness, and swelling at the injection site. These effects often disappear within a day or two after taking enough rest, hydration, and medications like acetaminophen.

If the symptoms do not resolve within 72 hours and are accompanied by other respiratory symptoms like cough or breath shortness, you should consult your doctor. [mRNA vaccines](#) are believed to trigger anaphylaxis, though on rare occasions. This severe reaction is treatable with epinephrine; hence CDC recommends vaccination centers to monitor everyone for 15 minutes after every shot.

Moderna Vaccines

Moderna was the second vaccine to receive FDA EUA on December 18, 2020, after Pfizer. It also uses mRNA technology like Pfizer-BioNTech and also has high effectiveness in preventing symptomatic diseases. However, the two notable features of this vaccine are; Moderna vaccine can be shipped and kept in long-term storage in standard freezer temperatures and up to 30 days in normal refrigeration. Moderna is also slightly less effective in clinical trials with about 86% in people who are 65 years and older.

Moderna is recommended for people above 18 years. The recommended dosage is two shots 28 days apart. The common side effects include chills, headaches, tiredness, pain, and redness, and swelling at the injection points. It can also cause anaphylaxis on rare occasions, though the symptoms should disappear within two days after injection.

Johnson and Johnson Vaccines

FDA approved **Johnson and Johnson** vaccine for emergency use on February 27, 2021, making it a different type of vaccine called **carrier** or **virus vector**. Johnson and Johnson became the easiest vaccine to store in refrigerator temperatures, making it easier to ship and administer. An analysis released by the FDA showed that this vaccine has an overall efficiency of 72% and 86% efficacy against severe diseases.

Adults above 18 years are all eligible for Johnson and Johnson vaccination. Currently, only a single shot is recommended for this vaccine. However, the Johnson and Johnson company is planning to launch a second Phase 3 clinical trial to give two doses, two months apart, to determine if the regimen can provide better protection.

Common side effects of the vaccine include fever, headache, pain at the injection point, and myalgia (pain in muscle or muscle groups). All these effects should only last within a day or two, but medical consultation is recommended if the symptoms persist.

Oxford-AstraZeneca Vaccines

AstraZeneca is currently being distributed globally and stands out as the cheapest vaccine in terms of production and shipping. The vaccine can be stored, shipped, and handled in normal refrigeration for at least six months. However, some countries have suspended the use of AstraZeneca with claims that it causes blood clots in recipients. After research by a European Medicines Agency (EMA), it was concluded that unusual blood clots with low blood platelets should only be listed as rare side effects of the vaccines.

Anyone above 18 years can receive the AstraZeneca vaccine. There are currently two doses given between 4 and 12 weeks apart. The vaccine is said to be 76% effective against symptomatic disease after 15 days or more of vaccination. It is also 100% effective against severe diseases and 85% effective in preventing Covid-19 in 65-year-old people and above. Its side effects include tenderness, pain, warmth, redness, itching, and swelling or bruising at the injection site. These symptoms should resolve within two days.

Novavax Vaccines

Novavax is said to be effective against the original Covid-19 and other mutations recorded in Great Britain and South Africa. This vaccine uses the new technology called **protein subunit (adjuvant)**, unlike the previous vaccines that are either **mRNA** or **vector** vaccines.

It is also easier to store and refrigerate.

Novavax is recommended for adults between 18 and 84 years. The recommended dosage is two shots three weeks apart. According to the statement released by the company, Novavax is 90% effective against lab-confirmed symptomatic infection and 100% against moderate and severe disease. It is also 91% protective for people in high-risk populations like those older than 65 years, those with health complications, and those who are frequently exposed to [the virus](#).

Common side effects include tenderness at the injection point, headache, fatigue, and muscle pain.

The Bottom Line

Though the FDA and Centers for Disease Control and Prevention (CDC) have authorized the use of these vaccines, individual and mass education is recommended to learn about the possible risks and blood clotting problems. The Pfizer-BioNTech vaccine is the most recommended vaccine in the US due to its numerous benefits that outweigh the side effects. However, more vaccines are expected to be authorized to feed the growing population.