

Published: January 2021

COVID-19 vaccines myths debunked: Don't be fooled by misinformation

There's never been a more important time to protect yourself against COVID-19 misinformation. Debunking misinformation is essential when it comes to the safety and efficacy of delivering vaccines to fight the virus.

What damage can COVID-19 vaccine misinformation do?

With widespread fake news and misinformation, the phrase "trust the science" is even more relevant when it comes to guiding us about the rollout of COVID-19 vaccines that will help us fight the global pandemic.

Did you know that in 2019, the World Health Organization (WHO) listed "vaccine hesitancy", fuelled by so-called "anti-vaxx" groups and movements across the world as one of the top ten threats to global health?

"Social media giants like Facebook and Instagram have reportedly struggled to control the spread of false content around COVID-19 vaccines on their platforms too," says Dr Noluthando Nematswerani, Head of Discovery Health's Centre for Clinical Excellence.

The speed at which COVID-19 vaccines have been developed and the political pressure to make them available as soon as possible have led people to question their safety.

"That's fine. We must ask questions, and we must be informed," adds Dr Nematswerani. "However, each of us has a **responsibility to ourselves and others to verify the information we use to make our decisions**. This includes any information we find online about COVID-19 and the rollout of the vaccines."

"It's crucial that we **check the accuracy of what we read, access our information from credible sources**, and we **do all we can to avoid spreading misinformation**."

The rollout of COVID-19 vaccines in South Africa and across the world represents a very positive milestone in the management of the pandemic," says Dr Nematswerani

Myth or truth? Debunking the top myths about COVID-19 vaccines

MYTH: The development of the COVID-19 vaccines was so fast, so they are untested and unsafe.

TRUTH: This is false, and we must all understand why:

Global efforts to develop a vaccine against COVID-19 began after the genetic sequence of SARS-COV-2, the virus that causes COVID-19 disease, was sequenced and the results were published on 11 January 2020.

While it's the first time that mRNA technology is being used in a vaccine, researchers have been studying this technology and the other technologies used in COVID-19 vaccines for decades. That is why you can trust the integrity of the vaccine development process has been maintained throughout.

There are a number of good reasons why COVID-19 vaccines have been developed so fast. These include the significant financial investment put towards their development, the innovative technology used in their design, and abundance of trial participants.

Keen to know more about the speed at which the vaccines were developed? We've written a detailed article on how the COVID-19 vaccines available to us have been developed so quickly and safely.

If you want to know all about South Africa's vaccine rollout programme, as well as how our South Africa Health Product Regulatory Authority (SAPHRA) must approve all vaccines before they can be used in South Africa, read our article on [#VaccineRolloutStrategySA](#).

MYTH: People have died as a direct result of receiving the COVID-19 vaccine.

TRUTH: No deaths have been linked to people receiving any of the vaccines during the various COVID-19 vaccine trials.

Available data on the few deaths observed in people who received the vaccine has been associated with other underlying pre-existing clinical conditions and not linked to the vaccine itself.

MYTH: The first phase of vaccine rollout to healthcare workers is a secret experiment to see how safe the vaccine is.

TRUTH: Vaccines that are approved for use in South Africa have already undergone rigorous clinical trials to evaluate them for safety and efficacy.

These clinical trials have included over 60 000 participants to ensure that the vaccines are safe and effective.

The South Africa Health Product Regulatory Authority (SAPHRA) is responsible for approving all medicine and vaccines for use in South Africa. The body conducts in-depth analysis on the safety and efficacy using clinical data before approving products for use in South Africa. The results of these clinical trials are available to the public.

The results show high levels of efficacy for the vaccines that have been approved - with most over 90% effective.

MYTH: The COVID-19 vaccine will give me COVID-19. Once vaccinated, I will test positive for COVID-19.

TRUTH: A COVID-19 vaccine does not contain any of the live virus that causes COVID-19 so it CANNOT give you COVID-19.

The vaccines use various methods to train your immune system to fight off COVID-19 before you contract it. The result is that when you do become infected, you experience less severe illness. One of the methods includes the use of harmless pieces of the virus.

You may experience some mild side effects after you have received the vaccine - these are signs that your immune system is responding to the vaccine. Side effects include flu-like symptoms such as fatigue, muscle aches, headaches, or fever.

MYTH: I am young and healthy and not in the high-risk category for severe COVID-19 illness, so I don't need a COVID-19 vaccine.

TRUTH: Vaccination works at an individual level to help our immune systems fight infection. By being vaccinated against COVID-19, we decrease our chances of developing severe COVID-19 illness or dying if infected. It is not always possible to predict how we respond to an infection and how sick we may become. Many young, and otherwise healthy people, have developed moderate to severe illness in South Africa's

experience of COVID-19. At a population level, vaccination allows us to halt the spread of the infection; we refer to this as "population immunity".

MYTH: I don't need the COVID-19 vaccine if I have already had COVID-19.

TRUTH: If you have recovered from COVID-19, your body will have produced antibodies against the disease.

However, as current research shows, these antibodies remain in the body for three to six months. This means that there is still a risk of contracting the infection again. We also know that while it is rare, it is possible to contract COVID-19 again after full recovery from another infection.

The first reason to get the vaccine even if you have already had COVID-19 is that this is the only way to maintain your immune response for longer than natural immunity lasts for. The second reason is that there is preliminary evidence that shows that the vaccine stimulates your immune system to fight COVID-19 more strongly than the infection.

MYTH: The side effects of having the vaccine will far worse than having COVID-19.

TRUTH: Safety data from over 60 000 people who have taken part in COVID-19 vaccine trials show that the most common reactions were mostly injection reactions, as well as (in order of occurrence) tiredness, headaches, muscle pain, joint pain, chills, and fever. These side-effects are short-lived and the same as what we see in some people who have the flu or other common vaccines.

Severe reactions to the COVID-19 vaccines were rare and occurred in less than 1% of trial participants.

MYTH: I don't need to wear a mask or take other preventive measures once I receive a COVID-19 vaccine.

TRUTH: Once vaccinated, continue taking preventive measures for some time.

Until such time when enough people have been vaccinated (when we have reached population immunity) and COVID-19 infection is no longer spreading in communities, wearing masks, washing hands and social distancing will remain important measures in preventing the spread of the infection.

Keep in mind that population immunity is a form of widespread immunity which occurs when most of the population has been vaccinated. In South Africa, it is predicted that up to 40 million South Africans or 67 % of the population need to be vaccinated to achieve population immunity.

MYTH: The COVID-19 vaccines will alter my DNA.

TRUTH: Having a COVID-19 vaccine will NOT alter your DNA.

COVID-19 vaccines rely on and use messenger RNA (mRNA), which has a piece of the genetic code that does not in any way alter the DNA in our cells. mRNA is fragile and quickly degrades once inside our body. So, our cells break down and get rid of the mRNA soon after it is finished using the instructions.

Gain a full understanding of how COVID-19 vaccines have been developed: Understand mRNA and viral vector technology easily.

MYTH: Having a COVID-19 vaccine will put me at risk of becoming sick from other illnesses.

TRUTH: Receiving the vaccine does not make you more susceptible to COVID-19 or other illnesses.

MYTH: We have no idea what is actually in the COVID-19 vaccines. They may contain microchips and other worrying elements that will control people who are vaccinated.

TRUTH: The vaccine manufacturers publish ingredient lists for the vaccines.

They contain the DNA or mRNA elements that stimulate the body's immune system to create a strong immune response against the COVID-19 virus, fats that help to deliver the vaccine elements into your cells, as well as other common vaccine ingredients.

Vaccine manufacturers have to declare their ingredients to the South African Health Products Regulatory Authority (SAHPRA) before any vaccine gets approval. There are many false theories on social media that the vaccines contain microchips, tracking devices or nano-transducers. This is all untrue.

According to the information posted by our National Department of Health, "Government would never allow a situation where any country or nation would be allowed to oppress our people through any means".

Scientists and governments from all over the world, including ours, have contributed to the development of the vaccines.

MYTH: The COVID-19 vaccines contain cells from aborted fetuses.

TRUTH: No, COVID-19 vaccines do not contain foetal cells from aborted fetuses.

Foetal cell lines are not the same as foetal tissue. Foetal cell lines used in the vaccine manufacture process come from cells taken after two elective abortions that took place in the 1960s and 1970s (and that were not performed for vaccine development). Those cells have since been grown in labs and multiplied into new cells over five decades creating foetal cell lines, which are far removed from the original foetal tissue they came from.

Neither the Pfizer nor the Moderna vaccine used foetal cell lines during vaccine design and development or production. However, the cell lines were used in the confirmation phase. The AstraZeneca (University of Oxford) vaccine used foetal cell lines in all three phases of vaccine development.

While foetal cell lines are used in vaccine development, there are no foetal cell lines inside the injections of approved COVID-19 vaccines that will be given to people.

MYTH: Pregnant or breastfeeding women must not get the COVID-19 vaccine.

TRUTH: Limited data is currently available on the safety of COVID-19 vaccines in pregnant women.

The data available from studies on animals offer no safety concerns. More studies will be carried out soon. For now, pregnant women who are in the prioritised high-risk groups can receive the COVID-19 vaccine.

MYTH: The COVID-19 vaccine causes infertility in women.

TRUTH: There is currently no evidence to suggest this.

According to the US Centers for Disease Control and Prevention (CDC), "Based on current knowledge, experts believe that COVID-19 vaccines are unlikely to pose a risk to a person trying to become pregnant in the short or long term. Scientists study every vaccine carefully for side effects immediately and for years afterwards. The COVID-19 vaccines are being studied carefully now and will continue to be studied for many years, similar to other vaccines. There is currently no evidence that antibodies formed from COVID-19 vaccination cause any problems with pregnancy. People who are trying to become pregnant now or who plan to try in the future may receive the COVID-19 vaccine when it becomes available to them."

MYTH: Government is involved with big businesses and are pushing vaccine use despite the risks.

TRUTH: This information is false. Government is committed to saving lives and livelihoods.

The fastest way to return to normal life is by ensuring that the majority of the population are protected from the virus. Vaccines are the simplest and most effective way to do this.

MYTH: The COVID-19 vaccines have the mark of the beast

TRUTH: COVID-19 vaccines have [absolutely no link](#) to any religious organisation or belief.

Resources

<https://www.healthtap.com/coronavirus-vaccines-safety/>"><https://www.healthtap.com/coronavirus-vaccines-safety/>