



Australian Government

Misinformation and truths about coronavirus (COVID-19)

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As Australia continues to respond to the COVID-19 pandemic, we face the challenge of navigating large amounts of information related to the virus. Some of this information may be false and potentially harmful. This is called misinformation.

Misinformation can spread widely and quickly and make it difficult for the public to identify verified facts and advice from misinformation.

With new COVID-19 updates and developments occurring daily, it's normal to have questions or concerns, and possibly feel hesitant about COVID-19 and getting vaccinated. This document aims to provide accurate, evidence-based answers to commonly asked questions and misinformation relating to COVID-19 vaccines.

For the latest updates and recommendations please visit www.health.gov.au or <https://covid19inlanguage.homeaffairs.gov.au/>

Covid-19 is a hoax

MISINFORMATION COVID-19 is a hoax.

FACT COVID-19 is caused by a novel coronavirus (SARS-CoV-2), which is part of a large family of viruses that can lead to respiratory infections in both humans and animals. These infections can range from the common cold to more serious illness. COVID-19 is spread between people by respiratory droplets and via contaminated surfaces.

Multiple scientific studies across the world demonstrate that highly reputable laboratory medicine experts have isolated and sequenced the virus that causes COVID-19, demonstrating that the virus exists, that it is different from the influenza virus, and that it causes a disease that has resulted in more than 5.3 million deaths worldwide in just over 23 months.

Australia is fortunate to be supported by an expert network of public and private pathology laboratories with the capability and appropriate accreditation to detect and confirm SARS-CoV-2. Scientists at the Victorian Infectious Diseases Reference Laboratory (VIDRL) at the Peter Doherty Institute for Infection and Immunity were the first to isolate SARS-CoV-2. This important information was immediately shared with local and overseas laboratories and also provided scientific evidence for the existence of this deadly virus.

Information on the number of people with COVID-19 and the number of deaths from the disease is collected in Australia and around the world. You can check the daily COVID-19 Australia-related data at www.health.gov.au

Vaccines

MISINFORMATION COVID-19 vaccines were developed too quickly, were not properly tested and are unsafe.

FACT COVID-19 vaccines have been developed rapidly without compromising quality,

safety, and effectiveness. Researchers around the world have been working hard to develop COVID-19 vaccines from the earliest stages of the pandemic. They have been able to speed up development of vaccines thanks to the collaboration between scientists, manufacturers, and distributors.

Unprecedented global funding has allowed for the development and implementation planning phases of COVID-19 vaccines to be run side-by-side, instead of one after the other. Most of the COVID-19 vaccines being developed have now included tens of thousands of people in their clinical trials.

In addition, research into how to respond to a pandemic had been occurring well before COVID-19. This research looks at data from previous coronaviruses such as SARS in 2002 and MERS in 2012, giving researchers a head start when it comes to building the COVID-19 vaccines.

In Australia, the Therapeutic Goods Administration (TGA) rigorously assesses the potential COVID-19 vaccines prior to approval for use for safety, quality, and effectiveness. The TGA is continually monitoring the safety of the COVID-19 vaccines and they also check each COVID-19 vaccine batch to make sure it meets the same quality standards.

MISINFORMATION COVID-19 vaccines are dangerous, and more people will die from adverse side effects of the vaccine than COVID-19 itself.

FACT The benefits of the COVID-19 vaccines far outweigh their risks. Clinical trials of the Pfizer/BioNTech (Comirnaty), Spikevax (Moderna), AstraZeneca (Vaxzevria) and Novavax (Nuvaxovid) vaccines have shown to be effective in preventing the development of COVID-19 symptoms and protection against severe disease.

Common side effects of vaccination include fatigue, headache, body aches and fever. More severe, but rare, side effects include anaphylaxis, pericarditis (inflammation of the lining around the heart), myocarditis (inflammation of the heart), and thrombosis with thrombocytopenia syndrome (TTS).

Myocarditis is a very rare side effect of the Pfizer and Moderna COVID-19 vaccines. It is usually temporary, with most people getting better within a few days. Myocarditis is reported in around 1-2 in every 100,000 people who receive the Pfizer vaccine and around 2 in every 100,000 people who receive the Moderna vaccine. It is more common after the second dose in boys aged 12-17 years (13-21 cases per 100,000 people who receive these vaccines) and in men aged under 30 years (9-22 cases per 100,000 people).

TTS or Vaccine Induced thrombotic thrombocytopenia (VITT), is a very rare newly identified condition associated with the COVID-19 vaccine AstraZeneca that has a different mechanism to other causes of thrombosis (blood clots). Among case reports, there are no known markers for increased risk for TTS. TTS involves blood clots (thrombosis) and low levels of blood platelets (thrombocytopenia) that can occur in different parts of the body. It has been reported in about 2 in every 100,000 vaccinated people following the first dose and 0.3 in every 100,000 vaccinated people after the second dose.

Vaccines can lead to death in extremely rare instances. However, most deaths that occur after vaccination are not caused by the vaccine. The TGA closely reviews all deaths reported in the days and weeks after COVID-19 vaccination. Since the beginning of the COVID-19 vaccine rollout to 21 August 2022, about 63 million doses of COVID-19 vaccines have been given in Australia. The TGA has identified 13 reports where the cause of death was likely linked to vaccination. Of these, 8 were associated with TTS, 2 were linked with Guillain Barre syndrome, 2 related to very rare conditions involving the nervous system, and one was a case of immune thrombocytopenia (ITP). There have been no deaths in children or people aged under 34 years.

If you do experience a side effect from a vaccine, seek assistance from a health professional and report it to the TGA (phone: 1300 134 237).

MISINFORMATION The COVID-19 vaccine rollout is a cover to collect your DNA.

FACT There is not, and has never been, any intent to collect DNA during the vaccination process.

The objective of the Australian Government's COVID-19 vaccine rollout is to protect the health of Australians, providing COVID-19 vaccines to prevent individuals from developing severe disease and death from the SARS-CoV-2 virus.

COVID-19 vaccines approved for use in Australia are given by injection into a muscle, usually into the deltoid muscle of the upper arm. There is nothing taken from your body, including your DNA. COVID-19 vaccines also cannot alter your genes or DNA.

MISINFORMATION COVID-19 vaccines cause infertility.

FACT There is no scientific evidence to support that any of the COVID-19 vaccines currently approved by the TGA cause sterilisation and/or infertility. The TGA will not approve a vaccine for use in Australia unless it is safe and effective. This includes impacts on fertility. The COVID-19 vaccine, like other vaccines, works by training our bodies to develop antibodies to fight against the virus that causes COVID-19, to prevent future illness. There is currently no evidence that antibodies formed from COVID-19 vaccination cause any problems with pregnancy, including the development of the placenta.

MISINFORMATION COVID-19 vaccines alter your DNA.

FACT COVID-19 vaccines do not alter your DNA. The vaccines work with the body's natural defences to help develop immunity to COVID-19 disease.

There are 4 COVID-19 vaccines currently approved and in use in Australia – the Pfizer vaccine and Moderna vaccine which use an mRNA platform, the AstraZeneca vaccine which uses a viral vector platform, and the Novavax vaccine which is a protein-based vaccine.

Vector vaccines use a harmless, weakened animal virus that contains the genetic code for a protein unique to the coronavirus, usually the spike protein, while mRNA vaccines use a genetic code called RNA to spark the production of the coronavirus' specific spike protein. Neither vaccine can change your DNA.

A common COVID-19 vaccine myth falsely claims that mRNA vaccines can change your DNA, which is not true. mRNA vaccines use a genetic code called RNA to prompt the production of the coronavirus' specific spike protein. Once the mRNA enters the body's cells, the cells use the instructions contained in the RNA to make the spike protein. The cells display the spike protein on their surface and break down the mRNA that was delivered by the vaccine. Immune cells then recognise the spike protein as foreign and begin building an immune response against it. The RNA from the vaccine does not change or interact with our DNA in any way.

MISINFORMATION COVID-19 vaccines can connect you to the internet, Wi-Fi, 5G or Bluetooth.

FACT COVID-19 vaccines do not, and cannot, connect you to the internet, Wi-Fi, 5G, Bluetooth, or enable any sort of wireless connectivity.

Some of the mRNA vaccines being developed include the use of a material called a hydrogel, which might help disperse the vaccine slowly into our cells. Bioengineers have used similar hydrogels for many years in different ways. For instance, they've used them to help stem cells survive after being put inside our bodies. Because of this, some people believe that hydrogels are needed for electronic implants, which can connect to the internet.

The Pfizer/BioNTech vaccine (Comirnaty) does not use hydrogels as a component. The Pfizer/BioNTech vaccine contains a piece of mRNA which is coated in a lipid (fatty) droplet. The lipid helps the vaccine enter our cells, as the membrane holding our cells together is also made mostly of lipid. The vaccine and the membrane can fuse easily, depositing the mRNA inside the cell.

MISINFORMATION COVID-19 vaccines contain a microchip or form of tracking technology.

FACT The approved COVID-19 vaccines do not contain any form of software or microchips. They cannot be used to track people.

The Product Information available on the TGA website lists all ingredients in each vaccine. The TGA undertakes batch testing of all vaccines prior to use to ensure quality and monitor if any safety concerns arise.

MISINFORMATION COVID-19 vaccines give you COVID-19.

FACT None of the approved vaccines in Australia contain the live virus. This means they cannot give you COVID-19.

Some of the side effects from COVID-19 vaccinations, such as fever and fatigue can mimic the symptoms of COVID-19. These symptoms are normal and are a sign that the body is building protection against the virus that causes COVID-19.

It usually takes your body a minimum of 2 weeks to begin build immunity (protection against the virus that causes COVID-19) after each dose of the vaccine. That means it's possible a person could be infected with COVID-19 just before or just after vaccination and still get sick.

It is also possible for a person to become infected with COVID-19 even when they are fully vaccinated, but it is significantly less likely.

It is important that you get both doses of the vaccine and ensure that you isolate and get tested if you have any COVID-19 symptoms.

MISINFORMATION COVID-19 vaccines can 'shed' to affect those unvaccinated.

FACT COVID-19 vaccines do not 'shed' to affect unvaccinated people. This is not possible. Such shedding can only occur with vaccines that use weakened, live forms of the virus. None of the COVID-19 vaccines approved for use in Australia have live forms of coronavirus.

MISINFORMATION The COVID-19 vaccine does not work against mutated strains of coronavirus.

FACT All viruses, including SARS-CoV-2, change over time as part of their natural evolution. This does not mean the vaccines won't be effective on new variants.

All the vaccines that are currently approved for use in Australia have demonstrated they are highly effective in preventing severe illness from any variant of the SARS-CoV-2 virus that have emerged so far.

The TGA continue to closely look at this as part of their approval and monitoring processes. It may mean people need booster shots like tetanus and whooping cough, or it may mean we need to be vaccinated again – like we are for the flu vaccine each year. Researchers are still investigating this, but they do know the virus has not mutated enough to make current vaccines ineffective.

MISINFORMATION People who have had COVID-19 and recovered don't need to get vaccinated.

FACT Even if you have already had COVID-19, it is recommended you should get the COVID-19 vaccine.

Natural infection with SARS-CoV-2 virus stimulates immunity to offer some protection against reinfection, but the strength of the immune response and length of time that the protection lasts is still being actively researched around the world.

Due to the severe health risks associated with COVID-19, and the fact that reinfection and onward transmission of the virus is possible, those who have already had COVID-19 still need to have a COVID-19 vaccine to boost their immune system.

Australia's medical response

MISINFORMATION Australia's hospitals won't be able to cope with increased demand due to COVID-19.

FACT Australia has a world-class health system that is well placed to meet additional demand during the COVID-19 pandemic if required. This includes the capacity for additional hospital beds, medical equipment, supplies, and medical staff through a partnership between the Australian Government, state and territory governments and the private health sector.

Testing and treatment

MISINFORMATION Hydroxychloroquine, ivermectin, doxycycline, and zinc are safe and effective COVID-19 treatments and/or cures.

FACT The Australian Government is closely monitoring worldwide research into COVID-19 treatments and cures. COVID-19 vaccinations remain the most effective way to prevent the development of COVID-19 symptoms and protect against severe disease.

There is currently insufficient evidence to support the safe and effective use of ivermectin, doxycycline and zinc (either separately, or in combination) for the prevention or treatment of COVID-19.

Australia's National COVID-19 Clinical Evidence Taskforce does not recommend the use of hydroxychloroquine, ivermectin, doxycycline or zinc for the treatment of COVID-19.

The use of hydroxychloroquine (with or without zinc) for the treatment of COVID-19 is not recommended outside of randomised trials with ethical approval. Hydroxychloroquine has well known risks that can result in heart attacks, eye damage and severe depletion of blood sugar levels (potentially leading to a coma).

MISINFORMATION PCR (polymerase chain reaction) tests to detect COVID-19 are unreliable and cannot distinguish coronavirus from other illnesses, such as the common cold and influenza.

FACT In Australia, nucleic acid amplification (NAA) tests using polymerase chain reaction (PCR) on a respiratory sample collected by a throat and nasal swab is the gold standard test to diagnose viral infections (for example, COVID-19 and influenza). This test method is very sensitive and detects fragments that are specific to the viruses (that is SARS-CoV-2 or any other viruses). PCR testing has been approved for use and continues to be monitored by pathology laboratories both locally and internationally to ensure a high testing and performance standard is met.

Some people have misunderstood the change in testing advice from the United States Centers for Disease Control and Prevention that provided advice on the use of PCR tests that

incorporate multiple pathogen targets for different viral causes of respiratory infections. For example, these tests can diagnose infections like COVID-19 and influenza at the same time and correctly differentiate between the two. This happens regularly and has been standard practice in Australia since the advent of these PCR tests which incorporate multiple targets. In Australia, it's common to use PCR tests which will correctly detect influenza viruses, parainfluenza viruses, Human Metapneumovirus, Respiratory Syncytial virus as well as others including some of the commonly circulating human coronaviruses which were circulating before SARS-CoV-2.

MISINFORMATION Testing everyone will stop the spread of COVID-19.

FACT Testing does not stop the spread of the COVID-19.

Diagnostic testing plays a critical role in defining the epidemiology of the disease, informing case and contact management, and ultimately in reducing viral transmission. The COVID-19 vaccine is the best way to stop the spread of COVID-19 in the community.

Testing negative to COVID-19, however, does not mean you are not at risk, or a risk to others. It is important to note that no test is 100% accurate in all circumstances. Diagnostic tests may not always detect the virus when it is present in low levels. For example, after initial infection with SARS-CoV-2, it takes a number of days for the virus to be detected by PCR, roughly 2–3 days before symptoms become apparent. Testing during the start of infection may return a negative result, even when an individual is infected with SARS-CoV-2. Currently, there is no test that will reliably detect the virus during the beginning of infection when a person is asymptomatic. There is also no test that can reliably detect whether an individual is infectious.

It is important to practise good hygiene, physical distancing, and to stay at home when feeling unwell. These actions, together with targeted testing, are assisting to prevent the transmission of COVID-19 and other infectious diseases, reducing demand on the Australian health system.

The Australian Government continues to recommend that testing strategies, including workplace screening programs for asymptomatic people, be developed in consultation with relevant public health authorities. For more information on the Australian Government's position on widespread asymptomatic testing, please see the [Department of Health's website](#).

MISINFORMATION Testing kits are not accurate.

FACT In Australia, we use 2 types of tests to detect SARS-CoV-2:

1. RT-PCR (reverse transcription polymerase chain reaction)
2. RAT (rapid antigen testing)

Both test if the SARS-CoV-2 virus is present in your throat, nose, nasal secretions or saliva.

PCR tests are better at detecting the presence of the SARS-CoV-2 virus and are currently used for confirming a diagnosis of COVID-19. PCR tests can detect the virus early in its infection, and can sometimes even detect the virus before a person becomes unwell.

Laboratory-based PCR tests are high-throughput although complicated to do. They need specialist scientists to run the tests in a laboratory. Some low-throughput point-of-care PCR tests are available for specific settings, such as emergency departments and remote areas.

Rapid antigen tests work by detecting the presence of specific proteins of the virus. They are most accurate when used to test people who have symptoms.

Rapid antigen tests are generally best performed within the first 7 days after symptoms first appear. They are not as accurate if you do not have symptoms and can produce false negative or false positive results.

Most rapid antigen tests produce a result within 10–20 minutes.

If you have a positive RAT at home, you do not have to get a PCR test at a testing clinic to

confirm that result.

The Therapeutic Goods Administration (TGA) assesses and approves all testing methods used in Australia. The TGA applies strict performance criteria to ensure tests are effective and reliable.

For up-to-date information on which COVID-19 tests are included on the Australian Register of Therapeutic Goods, please visit TGA's website at: www.tga.gov.au

Lockdown and masks

MISINFORMATION . 'Lockdowns were in effective at stooping the spread of COVID-19.

FACT Imposing restrictions and a period of lockdown and then lifting such restrictions to return to our 'normal lives' does not stop the spread of COVID-19 entirely. However lockdowns do help reduce the rate of transmission of COVID-19 in the community.

The most effective way to help slow the spread of COVID-19 is to get the COVID-19 vaccine, wear a mask, maintain physical distancing, practice good hand and respiratory hygiene, stay at home and get tested if you feel unwell.

A significant number of people with COVID-19 have either mild symptoms or are asymptomatic during the infectious period. A short lockdown period reduces the risk from those that are asymptomatic with COVID-19 unknowingly exposing other people to the virus.

Lockdowns also support State and Territory Governments to conduct contact tracing. Health experts continue monitoring the number of new cases each day in Australia and where community transmission is occurring. Recommendations are made based on the evidence as to any new rules or restrictions that need to be enforced. Everyone should stay up-to-date with current restrictions by visiting www.australia.gov.au

MISINFORMATION Masks are ineffective against COVID-19 and/or are unsafe to use.

FACT Masks are a key measure to suppress transmission of COVID-19. Masks should be used as part of a comprehensive approach that includes physical distancing, avoiding crowded, closed and close-contact settings, good ventilation, cleaning hands, covering sneezes and coughs, and more. A mask is not a substitute for physical distancing.

Masks are a simple barrier to help prevent your respiratory droplets from reaching others. Studies show that masks reduce the spray of droplets when worn over the nose and mouth. Depending on the type, masks can be used for either protection of healthy persons or to prevent onward transmission.

There is no evidence that wearing a mask is unsafe or that it leads to problems such as lack of oxygen or increased inhalation of carbon dioxide (CO₂). Health care providers have worn masks for extended periods of time for many years without such problems.

All healthcare workers should follow standard and transmission-based precautions as described in the Australian Guidelines for the Prevention and Control of Infection in Healthcare. The National COVID-19 Clinical Evidence Taskforce provided a consensus recommendation that all healthcare workers providing direct patient care or working within the patient/client/resident zone for individuals with suspected or confirmed COVID-19 should have access to P2/N95 respirators.

Access this website regularly to stay informed about key developments in the Australian Government's response to COVID-19. SBS also has a range of information on COVID-19 in your language. You can also use mobile phone apps and browser extensions to translate government information. Search for one that meets your needs. To access additional information in English, visit www.australia.gov.au.