



Australian Government

Misinformation and truths about coronavirus (COVID-19)

As Australia continues to respond to the COVID-19 pandemic, we face the challenge 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 droplets and via contaminated surfaces.

Multiple scientific studies across the world demonstrate that highly reputable expert laboratories 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 four million deaths worldwide in just over 18 months.

In Australia, the Victorian Infectious Diseases Reference Laboratory (VIDRL) at the Peter Doherty Institute for Infection and Immunity, was one of the first laboratories to isolate SARS-CoV-2. VIDRL shared the isolated virus with other Australian laboratories, the World Health Organization and other countries, to enable the development, validation and verification of diagnostic tests for COVID-19.

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. The ability of these laboratories to scale-up testing capacity has been essential to Australia's success in flattening the curve and avoiding the devastating infection rates seen in other countries. 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 vaccine far outweigh its risks. Clinical trials of the Pfizer/BioNTech (Comirnaty) and AstraZeneca (Vaxzevria) 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 side effects include anaphylaxis and a rare condition called thrombosis with thrombocytopenia syndrome (TTS) associated with the COVID-19 vaccine AstraZeneca. TTS or Vaccine Induced thrombotic thrombocytopenia (VITT), is a rare newly identified condition with a different mechanism to other causes of thrombosis. 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.

Overall, there is a very low chance of TTS as a side effect. The risk of TTS is estimated in Australia at around 2.9 per 100,000 AstraZeneca doses in those under 60 years of age and 1.8 per 100,000 in those 60 years and older. TTS appears to be rarer following the second dose of AstraZeneca, with data from the United Kingdom (UK) indicating a rate of 1.5 per million second doses.

Of the TTS cases that have been classified by the TGA as confirmed or probable, the majority have been discharged from hospital. Since the beginning of the vaccine rollout to 26 August 2021, over 17.1 million doses of COVID-19 vaccines have been given. The TGA has received and reviewed a large number of reports of deaths in people who have recently been vaccinated and found only seven (7) that were linked to immunisation. These deaths were all related to the first dose of the AstraZeneca vaccine – six were TTS cases and one was a case of immune thrombocytopenia.

People who have a personal history or family history of blood clots, have risk factors for blood clots or take anticoagulant medication can have AstraZeneca. As a precaution there is a very small group of people with clotting disorders who should get an alternative COVID-19 vaccine.

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 Therapeutic Goods Administration (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 three COVID-19 vaccines currently approved and in use in Australia – the Pfizer vaccine and Moderna vaccine which use an mRNA platform, and the AstraZeneca vaccine which uses a viral vector platform.

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 Therapeutic Goods Administration (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 mutate. COVID-19 is no different and there have been reports in media recently about new variants of the virus. This does not mean the vaccines won't be effective on new variants.

All the vaccines that are currently approved for use in Australia and other countries 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 around 6 months after the acute COVID-19 illness.

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 can't obtain enough medical equipment and supplies (ventilators, masks, testing kits).

FACT Australia has plenty of personal protective equipment available, with more being produced in Australia and delivered to Australia all the time.

Advisory committees to the Australian Government, including the Communicable Diseases Network Australia and the Public Health Laboratory Network, meet frequently to reassess the guidance on COVID-19 testing approaches and requirements, to ensure that essential testing is conducted to support our public health response to the COVID-19 pandemic, ensuring access to and continuity of testing supplies, personal protective equipment and other medical supplies.

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 Polymerase Chain Reaction (PCR) tests continue to be regarded as a reliable and highly specific diagnostic tool. PCR tests are very sensitive and detect nucleic acid

sequences that are specific to the SARS-CoV-2 virus in a respiratory sample. COVID-19 PCR tests are designed to look for and then amplify a target region of the viral genome which is specific to the SARS-CoV-2 virus. No test is 100% perfect, but the COVID-19 tests used in Australia are highly specific, and are not likely to provide a positive result for any other pathogen. It is true that the PCR test may still result in a positive test for COVID-19 after the infectious period has passed because of remaining non-infectious viral material present within the patient.

Some people have misunderstood the change in testing advice from the United States Centers for Disease Control and Prevention which provided advice on the use of PCR tests which incorporate multiple pathogen targets for different viral causes of respiratory infections. For examples, these tests can diagnose infections like COVID-19 and influenza at the same time and correctly differentiate between the two. As the northern hemisphere enters winter with more circulating respiratory infections it makes sense to do this. 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're not at risk, or a risk to others. You can test negative to COVID-19 in the early stages of exposure to SARS-CoV-2 (the virus that causes COVID-19) as well as before you develop symptoms. Because of this, it is important to practice 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.

Testing must be carefully targeted to strike the right balance between maintaining epidemic control whilst protecting the sustainability of laboratory and testing site capacity.

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, COVID-19 tests are very accurate. All testing methods used in Australia have been comprehensively validated. They continue to be closely monitored by the TGA and through mandatory participation in quality assurance programs that have been developed specifically for SARS-CoV-2 (the virus that causes COVID-19).

In Australia, laboratory-based polymerase chain reaction testing (PCR) is the gold standard test used to diagnose acute SARS-CoV-2 infection in your body. It requires collection of a respiratory sample to conduct the test. PCR tests are very sensitive and detect nucleic acid sequences that are specific to the SARS-CoV-2 virus in a respiratory sample.

Any testing technology new to Australia requires careful assessment by the TGA to ensure the quality and reliability of results and enable its legal supply. 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 A period of 'lockdown' will stop the spread of COVID-19.

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

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 two-week lockdown period risks those that are asymptomatic with COVID-19 to unknowingly expose other people to the virus upon the lockdown's lifting.

Lockdowns also support State and Territory Government's to conduct contact tracing. Health experts continue monitoring the number of new cases each day in Australia and where community transmission is occurring. Recommendations will be 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) levels. 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.