

Essential facts about

Covid-19

**The disease,
the responses and
an uncertain future**

**For South African Learners,
Teachers and
the General Public**



Commissioned by the Academy of Science of South Africa (ASSAf)



The **Academy of Science of South Africa** (ASSAf)

was inaugurated in May 1996. It was formed in response to the need for an Academy of Science consonant with the dawn of democracy in South Africa:

activist in its mission of using science and scholarship for the **benefit of society**, with a mandate encompassing all scholarly disciplines that use an **open-minded** and **evidence-based** approach to build **knowledge**. ASSAf thus adopted in its name the term 'science' in the singular as reflecting a common way of enquiring rather than an aggregation of different disciplines. Its Members are elected on the basis of a combination of two principal criteria, **academic excellence** and **significant contributions to society**.

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APPENDIX B

MISINFORMATION, MYTHS, FAKE-NEWS, AND FABRICATIONS AROUND COVID-19

We are flooded with information about Covid-19 from all kinds of sources—from social media, such as YouTube, Instagram, Twitter, Facebook, and various web pages; and also from newspapers, magazines, and governmental sources. We are presented with a confusing picture, with conflicting claims. It is sometimes not so easy to decide what to believe.

At the beginning of the pandemic some said that Covid-19 was “a hoax,” or that it was “like the flu” and would “go away within a few weeks.” Other sources claimed all sorts of miracle cures, including hydroxychloroquine and various herbal remedies. We also heard claims that seasonal effects would keep the disease away or make it disappear. Yet, months later, the disease still remains very much with us, with high numbers of people infected, hospitalised, and also deceased.

We live in the age where ‘fake news’ and ‘alternative facts’ abound. Care must be taken in deciding which sources to trust and which deserve to be doubted. These difficulties are compounded by the fact that much of the best information is tentative. As experts learn more, our best available understanding is being revised.

‘Fake news’ consists of deliberate misinformation or disinformation spread through various media platforms. Digital platforms currently lead in the spread of fake news—or ‘yellow journalism’. Such news often gains momentum in social media and sometimes finds its way into the mainstream media as well.





Information provided by local, internationally reputable institutions and medical experts about infection control measures and how the virus spreads competes with less reliable and conflicting information on social media. Myths associated with the spread and cure of Covid-19 in society often spread more widely and faster on social media platforms. Sometimes such 'fake news' and myths are spread by prominent members of society such as US President, Donald Trump, who claimed Covid-19 was just another flu and would be gone within just a few weeks. Such 'fake news' and myths can be very dangerous, because they can lead to over-complacency and to a laxity in the needed practices to curb the spread.

Myths associated with the spread and cure of Covid-19 in society often spread more widely and faster on social media platforms.

In South Africa, we once grappled with the question, 'Does HIV cause AIDS?' It took quite some time—some would say too long—for all involved to come to the realisation that HIV causes AIDS. This was a crucial step toward curbing the HIV/AIDS pandemic through programmes promoting safe sex, testing, and anti-retroviral therapy. Accurate public understanding of health-related issues is crucial to preventing avoidable diseases and improving outcomes.

Here are a few examples of widespread myths:

Can you protect yourself from Covid-19 by injecting, swallowing, bathing in or rubbing onto your body bleach, disinfectants or rubbing alcohols?

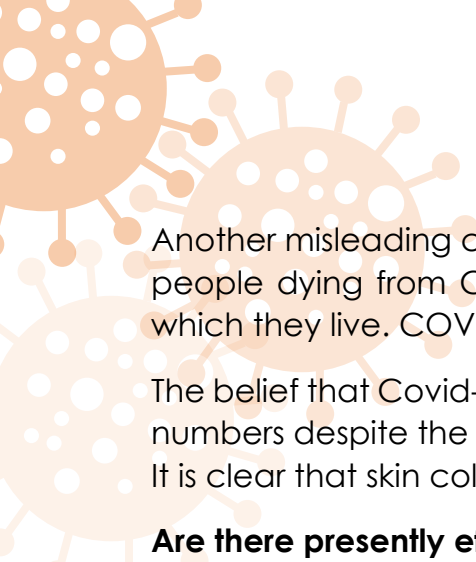
These products are highly toxic and should never be swallowed or injected into the body. Disinfectants, bleach, and soap and water may be used to clean surfaces. This is an important prevention step in stopping the spread of the coronavirus. But never attempt to self-treat or prevent Covid-19 by rubbing or bathing with bleach, disinfectants or rubbing alcohol anywhere on your body. Effective hand sanitisers do have alcohol, but they are formulated to be safe for use on hands.

Was the new coronavirus deliberately created or released by people?

Viruses change over time, and from time to time an outbreak among humans will occur when a virus common in an animal species (such as a pig, bat, or bird) undergoes a change allowing it to spread among humans. This is likely how the new coronavirus outbreak in 2019 began. Genetic fingerprinting of the virus supports this natural explanation.

Is it true that black people cannot be infected by Covid-19?

No, and by now the answer has become obvious. However, it had been claimed on social media that the virus affected only people of Asian and European descent. Around March 2020, a lot of people falsely thought that melanin would assist with Covid-19 resistance.



Another misleading claim on the other extreme is to provide statistics of more black people dying from Covid-19 without looking at the socio-economic conditions in which they live. COVID-19 affects everyone.

The belief that Covid-19 does not affect black people has led some to party in large numbers despite the rules, claiming to law enforcement that they are not affected. It is clear that skin colour is not a pivotal factor in determining who gets infected.

Are there presently effective remedies against Covid-19?

Although the currently available vaccines are highly effective in preventing Covid-19, currently there is no effective drug or vaccine against Covid-19 for persons already showing symptoms. The immunity given by vaccines takes time to take effect, approximately two weeks after the vaccination. Consequently, vaccines must be administered well in advance to have the desired effect, before it is too late. Vaccines can either prevent one from being infected but there have been cases of infection after vaccination. Fortunately those who fall into the latter category do not develop serious symptoms requiring hospitalization and extreme measures such as ventilation. Most people infected, especially younger people, will recover on their own without medical attention after their body's immune system teaches itself to fight off the disease. Other people, especially older people and people with other conditions, will require supportive care in a hospital, such as supplemental oxygen (and in some cases mechanical ventilation) or anti-clotting drugs. But these measures fight only the symptoms, buying time so that the body can fight the disease off on its own.

Despite this situation, however, a long list of remedies have been advertised on the web claiming to be able to fight off the disease. The list of such remedies is too long to recite here. Modern medicine has developed an elaborate system to vet new remedies, to determine by controlled trials which remedies have been proven safe and effective and which have been not (see appendix C for details). The correct way to deal with recommendations is to follow the advice of a licensed physician or websites maintained by public health authorities. As discussed above, happily vaccines have proved to be a highly effective preventative measure, working better than initial expectations.

What about indigenous knowledge?

Many widely used and effective modern medicines originated from indigenous knowledge. The cichona bark from South America was used as one of the early cures of malaria. Later it was found that the chemical quinine in this bark was the active ingredient. Artemisinin, a modern anti-malaria drug, derives from traditional Chinese medicine. In South Africa, 'umhlonyane' is one of the indigenous medicines under investigation for use against Covid-19. Traditional knowledge together with modern testing to determine which drugs are safe and effective promise to continue to make new and effective drugs available.



How do I find reliable information?

The Government, in collaboration with top scientists, doctors, and medical researchers, strives to provide the most reliable information about Covid-19 available. The media is responsible for sharing and interpreting that information for relevance. In Appendix A, we list a sampling of reliable sources of information as well as suggestions for further reading.

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The Parliament of South Africa passed the Academy of Science of South Africa Act (No 67 of 2001), which came into force on 15 May 2002. This made ASSAf the only academy of science in South Africa officially recognised by government and representing the country in the international community of science academies and elsewhere.

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