

## Fear of flying

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There has been a lot of speculation about [SARS](#) [1][Severe Acute Respiratory Syndrome] A new respiratory illness which was first reported in Asian countries during late 2002 and early 2003. The symptoms include high fever, cough, malaise and difficulty in breathing. Several laboratory tests for the SARS virus are now available. and HIV. But in reality we know very little about the implications for positive people. Is it time to stock up on surgical masks, or is the story just another media beat-up? KIRSTY MACHON investigates.

If anyone deserves the title 'bug chaser,' surely at the moment it's the media, who seem to love nothing better than a new infectious illness, especially one arising from the dusty plains of Africa or the teeming streets of Southeast Asia.

From the point of view of press coverage at least, Severe Acute Respiratory Syndrome (SARS) has had a spectacular rise — but as is common in these situations, it seems that an unhelpful avalanche of fear mongering, speculation, pre-emptive information, and grandstanding has been getting in the way of the facts. This is especially so in relation to SARS and HIV.

There is no doubt that SARS, an [atypical pneumonia](#) [2] a type of community-acquired pneumonia which does not respond to standard antibiotic treatments. As well as SARS, atypical pneumonias include psittacosis and Q fever. caused by a [virus](#) [3] A small infective organism which is incapable of reproducing outside a host cell. similar to that which causes the common cold, has given world health authorities a scare. And it's not just health authorities that are scared: in a recent Australian poll, more than 50 percent of people said they were concerned about the spectre of SARS.

But how great is the threat posed by SARS, and what are the implications for HIV-positive people?

The illness has so far been a serious issue in a limited number of global hotspots, particularly areas in Southern China, Hong Kong, Beijing, and Taiwan.

Professor Steve Wesselingh, Deputy Coordinator of the National Centre in HIV Virology Research and Director of the Burnet Institute for Medical Research and Public Health, stresses that Australia's public health response has thus far been effective both in keeping SARS out of Australia and preventing it being transmitted here.

There have been no reported cases of SARS being transmitted within Australia. There have been just six cases of "probable" SARS in Australia reported to world health authorities, all of which were contracted overseas. No deaths have occurred in these cases.

### What we know about SARS in general

SARS is believed to be caused by infection with a kind of virus called a [coronavirus](#) [4] A genus of viruses of the family *\_Coronaviridae\_* which look like coronas or halos when viewed with a microscope. Coronaviruses can cause hepatitis (inflammation of the liver) in mice, gastroenteritis (inflammation of the digestive system) in pigs, and respiratory infections in birds and people.. Infection with the SARS virus can cause anything from mild transitory illness to severe atypical pneumonia requiring hospitalisation and in some cases leading to death.

The percentage of overall SARS infections which result in death is not clear, and it can be difficult to estimate this accurately, but the US Centers for Disease Control (CDC) currently estimates the death rate at 8 percent of all people infected.

The World Health Organisation reports 7,761 reported probable SARS cases worldwide (at the time of writing), with 623 deaths. Most of these cases and deaths have been in China and Hong Kong, with a much smaller number (23) associated with a localised outbreak in Toronto, Canada. People have been advised to avoid non-essential travel to SARS-affected areas; there are however no current restrictions in relation to travel to Canada.

## Transmission

Another reason why apocalyptic fears of a mass epidemic of SARS in Australia seem unwarranted is that transmission of the virus requires relatively close contact. The virus is spread via infected droplets (such as from coughing) but in general, you need to be quite close to an infected person to be infected.

There is no clear evidence of infections occurring via contact in public spaces like airports or shopping centres, or even planes. Most infections have occurred from infected persons to health care workers, or their families and households: in other words, people who have ongoing close personal contact.

For these reasons, Professor Wesselingh says, people can feel confident about travelling to areas not directly affected by outbreaks or the subject of travel warnings, but there may be some merit in taking sensible precautions, such as attention to hand washing and hygiene in public areas like airports.

## Treatment

There is a big question mark over the best treatment for SARS. Therapies used have included certain (non-HIV) [antiviral](#) [5]A medication or substance which is active against one or more viruses. May include anti-HIV drugs, but these are more accurately termed antiretrovirals. treatments (like [ribavirin](#) [6]An antiviral drug which is effective against a range of viruses including herpes, the hepatitis C virus and several strains of influenza. ), and oral or intravenous steroids combined with certain antiviral drugs or antimicrobials. There have been no clinical trials, and no standard of care has been established. But on the evidence so far, it seems people respond best to steroids, which dampen the immune response and may also suppress the inflammatory symptoms to the infection, reducing the severity of symptomatic illness.

## HIV and SARS

This brings us to the question of HIV. Initially, the arrival of SARS was greeted with concern that HIV-positive people, particularly those not responding to treatment or with low CD4 counts, might be at greater risk of severe illness or death should they become infected with the SARS virus.

According to Professor Wesselingh, there is “no evidence” that HIV-positive people exposed to the SARS virus will be worse off, or develop more severe illness. This may be partly due to an overall lack of experience with or knowledge of SARS and HIV coinfection.

It could also be possible that HIV actually offers some protection against the severity of SARS illness, particularly in people with dampened or depressed immunity, in the same way that steroids seem to: by reducing the inflammatory symptomatic response to the virus.

In such a case Professor Wesselingh does not believe that the infection is likely to remain somehow ‘dormant’, or to become symptomatic if immune response is improved, say, due to HIV treatment.

Wesselingh cautions that this view is not based on data, but on informed speculation, and the intriguing case of a hospital in southern China in which patients infected with HIV did not develop SARS illness while others in the hospital, including health care workers who cared for both SARS and HIV patients, did.

## Perspective

The bottom line, it seems, is to take reasonable precautions, but keep the risk of SARS — which is very low — in perspective. There is no need for positive people to be slipping on gas masks before entering the local butcher shop, restaurant, café, chemist or backroom, nor to cancel travel plans to New Zealand, Europe, or even Thailand.

“If people want to travel, they should,” says Professor Wesselingh, adding that information for travellers about affected areas and restrictions or warnings are regularly updated by Australian health authorities, and organisations

like the Centers for Disease Control, who are carefully monitoring the global movement of SARS.

What would make good sense, given what is known and not known, would be to check out and observe any travel warnings or restrictions that may relate to countries in which high SARS rates have been reported, or where SARS

If travelling overseas, you should also ensure that any local infection control recommendations or procedures are observed.

It is also be worth remembering that while SARS is a serious issue, the influenza virus extracts a much higher global death rate every year than SARS has thus far — not to mention the effect of infectious illnesses such as malaria, TB and of course, HIV.

In Australia, 1898 people died from flu and pneumonia in 2001. No deaths have occurred as a result of SARS. In the US, 'flu accounts for as many as 36,000 deaths a year, but there have been no SARS deaths. Apart from sensibly following advice, there seems no reason for positive Australians to make drastic changes to their life or to curtail their travel plans for fear of SARS.

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For more information on SARS, visit these websites which are updated daily:

- [www.cdc.gov/ncidod/sars](http://www.cdc.gov/ncidod/sars) [7]
- [www.who.int/csr/sars/en](http://www.who.int/csr/sars/en) [8]

For the latest Australian government travel advice, visit this website:

- [www.dfat.gov.au](http://www.dfat.gov.au) [9]

- [Health, Treatments and Research](#)
- [the media](#)

**Links:**

[1] <http://www.napwa.org.au/glossary/term/353>

[2] <http://www.napwa.org.au/glossary/term/348>

[3] <http://www.napwa.org.au/glossary/term/125>

[4] <http://www.napwa.org.au/glossary/term/349>

[5] <http://www.napwa.org.au/glossary/term/123>

[6] <http://www.napwa.org.au/glossary/term/352>

[7] <http://www.cdc.gov/ncidod/sars/>

[8] <http://www.who.int/csr/sars/en/>

[9] <http://www.dfat.gov.au/>