

***Smallpox last appeared in Australia in 1938, and the last naturally occurring case in the world was reported from Somalia in 1977. The virus is now only held officially in two secure laboratories. Any reappearance of smallpox is likely to be the result of bioterrorism, but the risk of this is extremely low.***

# Smallpox (Variola)

**Publication date: 25 June 2018**

## What is smallpox?

Smallpox was a highly infectious disease caused by variola virus, which often terribly scarred or killed infected people. Since the World Health Organization declared smallpox eradicated from the world population in 1979, no new case has occurred.

## What are the symptoms?

A person with smallpox generally had sudden onset of:

- fever
- headache
- backache
- rash with vesicles (blisters)

The time between exposure to the virus and getting sick was usually 7 to 19 days (commonly 10 to 14 days with a further 2 to 4 days until the rash appeared).

## How is it spread?

The variola virus only affected humans. It was spread from one person to another through close contact (by inhaling the infected droplets), or direct contact with infected bodily fluids or contaminated objects, such as bedding or clothes. In normal conditions, the virus was unlikely to survive longer than 48 hours outside a human host.

## Who is at risk?

At present, no one is at risk of contracting naturally occurring smallpox in Australia. Any new cases of smallpox are likely to result from an act of bioterrorism, but the risk of this occurring is extremely low. In the unlikely event that smallpox reappears in the community, people could be exposed if they were in close contact with a person with the disease.

## How is it prevented?

Since smallpox was eradicated in 1979, routine smallpox vaccine for the general population has not been necessary. Should smallpox return, then rapid isolation of cases and vaccination of contacts would help prevent its spread.

## Smallpox vaccination

The smallpox vaccine is made from the vaccinia virus, which is related to smallpox but is harmless to most people. The vaccine does not contain the smallpox virus and will not give you smallpox. Vaccinia is a "live" virus, therefore, the vaccination site must be cared for to prevent spread of the virus to others.

For a number of reasons, vaccination is not routinely recommended for the general public: it does not give life-long immunity, smallpox is unlikely to be seen in Australia again, and vaccination can cause rare but serious side effects.

Should smallpox reappear in the community, the vaccine can be given up to three days after exposure to the virus to protect against or reduce the severity of the illness.

### **How is it diagnosed?**

Diagnosis depends on the doctor suspecting smallpox in a patient with suggestive symptoms. Infection can be confirmed by testing the blister fluid or scabs from the skin rash, or by blood tests that detect antibodies to the virus.

### **How is it treated?**

Currently, there is no proven treatment for smallpox. Patients would need supportive management, such as intravenous fluids and medicine to control fever or pain. Severe cases may need intensive care.

### **What is the public health response?**

Any case of smallpox represents a public health emergency. Doctors, hospitals and laboratories must notify any suspected cases to the local public health unit immediately. Public health unit staff will then advise on the appropriate response.

### **Further information**

For further information please call your local public health unit on 1300 066 055 or visit the New South Wales Health website [www.health.nsw.gov.au](http://www.health.nsw.gov.au)