

Causes

Expand Section **Smallpox spreads from one person to another from saliva droplets. It may also be spread from bed sheets and clothing. It is most contagious during the first week of the infection. It may continue to be contagious until the scabs from the rash fall off. The virus can stay alive between 6 and 24 hours.**

People were once vaccinated against this disease. However, the disease has been mostly wiped out. The United States stopped giving the smallpox vaccine in 1972. In 1980, the World Health Organization (WHO) recommended that all countries stop vaccinating for smallpox.

There are two forms of smallpox:

- **Variola major is a serious illness that can be life threatening in people who have not been vaccinated. It was responsible for a large number of deaths.**
- **Variola minor is a milder infection that rarely causes death.**

A massive program by the WHO wiped out all known smallpox viruses from the world in the 1970s, except for a few samples saved for government research. Researchers continue to debate whether or not to kill the last remaining samples of the virus, or to preserve it in case there may be some future reason to study it.

You are more likely to develop smallpox if you:

- **Are a laboratory worker who handles the virus (rare)**
- **Are in a location where the virus was released as a biological weapon**

It is unknown how long past vaccinations stay effective. People who received the vaccine many years ago may no longer be fully protected against the virus.

THE RISK OF TERRORISM

There is a concern that the smallpox virus could be spread as part of a terrorism attack. The virus could be spread in spray (aerosol) form.

Symptoms

Expand Section

Symptoms usually occur about 12 to 14 days after you have been infected with the virus. They may include:

- Backache
- [Delirium](#)
- Diarrhea
- Excessive bleeding
- Fatigue
- High fever
- [Malaise](#)
- Raised pink rash, turns into sores that become crusty on day 8 or 9
- Severe headache
- Nausea and vomiting

Exams and Tests

Expand Section

Tests include:

- DIC panel
- [Platelet count](#)
- [White blood cell count](#)

Special laboratory tests can be used to identify the virus.

Treatment

Expand Section

The smallpox vaccine may prevent illness or lessen symptoms if it is given within 1 to 4 days after a person is exposed to the disease. Once symptoms have started, treatment is limited.

There is no specific drug for treating smallpox. Antibiotics may be given for infections that occur in people who have smallpox. Taking antibodies against a disease similar to smallpox (vaccinia immune globulin) may help shorten the duration of the disease.

People who have been diagnosed with smallpox and people they have been in close contact with need to be isolated right away. They will need to receive the vaccine and be watched closely.

Outlook (Prognosis)

Expand Section

In the past, this was a major illness. The risk of death was as high as 30%.

Possible Complications

Expand Section

Complications may include:

- Arthritis and bone infections
- Brain swelling ([encephalitis](#))
- Death
- Eye infections
- [Pneumonia](#)
- Scarring
- Severe bleeding
- Skin infections (from the sores)

When to Contact a Medical Professional

Expand Section

If you think you may have been exposed to smallpox, contact your health care provider immediately. Contact with the virus is very unlikely unless you have worked with the virus in a lab or you have been exposed through bioterrorism.

Prevention

Expand Section

Many people were vaccinated against smallpox in the past. The vaccine is no longer given to the general public because the virus has been wiped out. If the vaccine needs to be given to control an outbreak, it can have a small risk of complications. Currently, only military personnel, health care workers, and emergency responders may receive the vaccine.