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Smallpox - FAQs

What should I know about Smallpox?
Vaccination is not recommended, and the vaccine is not available to health providers or the public. In the absence of a confirmed case of smallpox anywhere in the world, there is no need to be vaccinated against smallpox. There also can be severe side effects to the smallpox vaccine, which is another reason we do not recommend vaccination. In the event of an outbreak, the CDC has clear guidelines to swiftly provide vaccine to people exposed to this disease. The vaccine is securely stored for use in the case of an outbreak. In addition, Secretary of Health and Human Services Tommy Thompson recently announced plans to accelerate production of a new smallpox vaccine.

Are we expecting a smallpox attack?
We are not expecting a smallpox attack, but the recent events that include the use of biological agents as weapons have heightened our awareness of the possibility of such an attack.

Is there an immediate smallpox threat?
At this time we have no information that suggests an imminent smallpox threat.

If I am concerned about a smallpox attack, can I go to my doctor and request the smallpox vaccine?
The last naturally acquired case of smallpox occurred in 1977. The last cases of smallpox, from laboratory exposure, occurred in 1978. In the United States, routine vaccination against smallpox ended in 1972. Since the vaccine is no longer recommended, the vaccine is not available. The CDC maintains an emergency supply of vaccine that can be released if necessary, since post-exposure vaccination is effective.

Are there plans to manufacture more vaccine in case of a bioterrorism attack using smallpox?
Yes. In 2000, CDC awarded a contract to a vaccine manufacturer to produce additional doses of smallpox vaccine. This vaccine (40 million doses will be available in 2002).

If someone comes in contact with smallpox, how long does it take to show symptoms?
The incubation period is about 12 days (range: 7 to 17 days) following exposure. Initial symptoms include high fever, fatigue, and head and back aches. A characteristic rash, most prominent on the face, arms, and legs, follows in 2-3 days. The rash starts with flat red lesions that evolve at the same rate. Lesions become pus-filled after a few days and then begin to crust early in the second week. Scabs develop and then separate and fall off after about 3-4 weeks.

Is smallpox fatal?
The majority of patients with smallpox recover, but death may occur in up to 30% of cases.

How is smallpox spread?
In the majority of cases, smallpox is spread from one person to another by infected saliva droplets that expose a susceptible person having face-to-face contact with the ill person. People with smallpox are most infectious during the first week of illness, because that is when the largest amount of virus is present in saliva. However, some risk of transmission lasts until all scabs have fallen off.

Contaminated clothing or bed linen could also spread the virus. Special precautions need to be taken to ensure that all bedding and clothing of patients are cleaned appropriately with bleach and hot water. Disinfectants such as bleach and quaternary ammonia can be used for cleaning contaminated surfaces.

If someone is exposed to smallpox, is it too late to get a vaccination?
If the vaccine is given within 4 days after exposure to smallpox, it can lessen the severity of illness or even prevent it.

If people got the vaccination in the past when it was used routinely, will they be immune?

Not necessarily. Routine vaccination against smallpox ended in 1972. The level of immunity, if any, among persons who were vaccinated before 1972 is uncertain; therefore, these persons are assumed to be susceptible. For those who were vaccinated, it is not known how long immunity lasts. Most estimates suggest immunity from the vaccination lasts 3 to 5 years. This means that nearly the entire US population has partial immunity at best. Immunity can be boosted effectively with a single revaccination. Prior infection with the disease grants lifelong immunity.

How many people have not had the vaccination?
Approximately half of the US population has never been vaccinated.

Is it possible for people to get smallpox from the vaccination?
No, smallpox vaccine does not contain smallpox virus but another live virus called vaccinia virus. Since this virus is related to smallpox virus, vaccination with vaccina provides immunity against infection from smallpox virus.

How safe is the smallpox vaccine?
Smallpox vaccine is considered safe. However, some people with pre-existing conditions such as eczema or immune system disorders have a higher risk for having complications from the vaccine. Adverse reactions have been known to occur that range from mild rashes to fatal encephalitis and disseminated vaccina. Smallpox vaccine should not be administered to persons with a history or presence of eczema or other skin conditions, pregnant women, or persons with immunodeficiency diseases and among those with suppressed immune systems as occurs with leukemia, lymphoma, generalized malignancy, or solid organ transplantation.

Is there any treatment for smallpox?
There is no proven treatment for smallpox, but research to evaluate new antiviral agents is ongoing. Patients with smallpox can benefit from supportive therapy (e.g., intravenous fluids, medicine to control fever or pain) and antibiotics for any secondary bacterial infections that may occur.

Is there a test to indicate if smallpox is in the environment like there is for anthrax?
Various agencies are currently validating tests designed to test for the smallpox virus in the environment.

If smallpox is discovered or released in a building, or if a person develops symptoms in a building, how can that area be decontaminated?
The smallpox virus is fragile and in the event of an aerosol release of smallpox, all viruses will be inactivated or dissipated within 1-2 days. Buildings exposed to the initial aerosol release of the virus do not need to be decontaminated. By the time the first cases are identified, typically 2 weeks after the release, the virus in the building will be gone. Infected patients, however, will be capable of spreading the virus and possibly contaminating surfaces while they are sick. Therefore, standard hospital grade disinfectants such as quaternary ammonias are effective in killing the virus on surfaces should be used for disinfecting hospitalized patients' rooms or other contaminated surfaces. Although less desirable because it can damage equipment and furniture, hypochlorite (bleach) is an acceptable alternative. In the hospital setting, patients' linens should be autoclaved or washed in hot water with bleach added. Infectious waste should be placed in biohazard bags and autoclaved before incineration.

What should people do if they suspect a patient has smallpox or suspect that smallpox has been released in their area?
Report suspected cases of smallpox or suspected intentional release of smallpox to your local health department. The local health department is responsible for notifying the state health department, the FBI, and local law enforcement. The state health department will notify the CDC.

How can we stop the spread of smallpox after someone comes down with it?
Symptomatic patients with suspected or confirmed smallpox are capable of spreading the virus. Patients should be placed in medical isolation so that they will not continue to spread the virus. In addition, people who have come into close contact with smallpox patients should be vaccinated immediately and closely

watched for symptoms of smallpox. Vaccine and isolation are the strategies for stopping the spread of smallpox.