



SMALLPOX FACT SHEET

Smallpox Vaccination: An Important Decision

The smallpox vaccine was used to eradicate smallpox disease from the Earth. However, supplies of the smallpox virus still exist, and concern that smallpox might be used as a weapon has led the United States government to prepare for a fast and effective response to a smallpox outbreak.

Part of this preparedness effort is the creation of smallpox healthcare teams that would respond to a smallpox emergency. Members of these teams would investigate, manage and control a smallpox outbreak. Membership on these teams is voluntary, but vaccination of team members is required for their own safety and to ensure that team members cannot transmit smallpox.

Individuals considering smallpox vaccination should be well informed about smallpox disease; the vaccine and its side effects—including potentially life-threatening reactions; and health conditions that indicate an individual should not be vaccinated as part of this preparedness effort because they are at increased risk of experiencing adverse reactions to the vaccine. This fact sheet provides an overview of the information that will be provided to those offered the vaccine.

Smallpox Disease

- The deliberate release of smallpox is now regarded as a possibility.
- Smallpox is a serious, contagious and potentially deadly disease that can be prevented through vaccination.
- Vaccination within 3 days of exposure to smallpox will prevent or significantly lessen the severity of symptoms in most people. Vaccination 4 to 7 days after exposure offers some protection from disease or may reduce disease severity.

The Smallpox Vaccine

- The vaccine is safe and effective for most people who receive it. This same vaccine was used to eradicate naturally occurring smallpox.
- The vaccine to be used for smallpox response teams is licensed and passes all tests required by the Food and Drug Administration.
- The smallpox vaccine provides high-level immunity from smallpox for 3 to 5 years, with decreasing immunity thereafter.
- Persons receiving smallpox vaccinations previously (before 1980) should assume they have little or no immunity to smallpox today and will require a new vaccination if they wish to be a member of smallpox response team.
- Smallpox vaccine contains live vaccinia virus to protect against smallpox. The virus can spread to other parts of the body and to other people. The vaccine site ought to be cared for carefully for this reason.
- Smallpox vaccine does not contain smallpox virus and cannot give you smallpox.
- The vaccine can have side effects ranging from normal, typically mild reactions to potentially life-threatening reactions causing death (see "Possible Reactions to the Vaccine" in this fact sheet).
- People with certain conditions are at greater risk of experiencing serious reactions and should not get the vaccine unless they have been exposed to smallpox (see "Who Should Not Get the Vaccine" in this fact sheet).
- Careful screening can identify people more likely to have serious reactions and thus help prevent them.

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Possible Reactions to the Vaccine

- Minor reactions—including sore arm, fever and body aches—are common.
- Serious reactions can occur, including a toxic or allergic reaction at the vaccination site, spread of the *vaccinia* virus to other parts of the body or to other individuals, or spread of the *vaccinia* virus through the blood. (In the past, these occurred in about 1,000 people for every 1 million people vaccinated for the first time.)
- Life-threatening reactions can occur, including inflammation of the brain, ongoing infection of the skin with tissue destruction, and disfiguring and painful skin rashes. (In the past, between 14 and 52 people for every 1 million people vaccinated for the first time experienced these reactions.)
- Based on past experience, it is estimated that between 1 and 2 people per every 1 million vaccinated may die from complications of the vaccine.

Site Care

- The vaccination site must be cared for carefully until the scab that forms after vaccination falls off on its own (in 2 to 3 weeks).
- Proper care (including hand washing, covering the site with gauze, wearing long-sleeved shirts) can decrease the risk of spread of the *vaccinia* virus.
- Health care workers involved in direct patient care need to take additional measures for site care, such as using semi-permeable dressings.

Who Should Not Receive the Vaccine

Individuals who have any of the following conditions, or live with someone who does, should NOT receive the smallpox vaccine unless they have been exposed to the virus:

- Eczema or atopic dermatitis (even if it is not currently active, mild, or experienced as a child).
- Other skin conditions such as burns, chickenpox, shingles, impetigo, herpes, severe acne, or psoriasis (Individuals should not get the vaccine until the condition has completely healed).
- Weakened immune system (for instance, from cancer treatment, an organ transplant, HIV, or medications such as steroids to treat autoimmune disorders and other illnesses).
- Pregnancy or plans to become pregnant within 1 month of vaccination.

In addition, individuals should not receive the smallpox vaccine if they:

- Are allergic to the vaccine or any of its ingredients.
- Are less than 12 months of age. Also, the Advisory Committee on Immunization Practices advises against non-emergency smallpox vaccination in those younger than 18 years of age.
- Are currently breastfeeding.
- Have a moderate or severe short-term illness. (These people should wait until they recover to get vaccinated.)
- Have been diagnosed by a doctor as having a heart condition with or without symptoms, including conditions such as previous myocardial infarction (heart attack), angina (chest pain caused by lack of blood flow to the heart), congestive heart failure, and cardiomyopathy, stroke or transient ischemic attack (a “mini-stroke” that produces stroke-like symptoms but no lasting damage), chest pain or shortness of breath with activity (such as walking up stairs), or other heart conditions being treated by a doctor should not get the vaccine at this time. (Heart disease may be a temporary exclusion and may change as more information is gathered.)
- Individuals who have 3 or more of the following risk factors should not get the vaccine at this time: high blood pressure diagnosed by a doctor; high blood cholesterol diagnosed by a doctor; diabetes or high blood sugar diagnosed by a doctor; a first degree relative (for example, mother, father, brother or sister) with a heart condition before the age of 50; and/or, currently a cigarette smoker. (These may be temporary exclusions and may change as more information is gathered.)

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Cost of Treatment of Vaccine Reactions

- Treatments for the more serious reactions can be very expensive. There is no federal program to pay these expenses. Workers compensation or health insurance may cover these expenses. If not, individuals may end up being responsible.
- Individuals may lose time from work following vaccination because of illness or because of concern that they could transmit the virus to others. There is no program in place to cover this. Individuals should check with their employer to see if the employer or workers compensation would cover this.

For more information, visit www.cdc.gov/smallpox, or call CDC at 800-CDC-INFO (English and Spanish) or 888-232-6348 (TTY).

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