

SMALLPOX

Background:

Smallpox is a serious, highly contagious, and sometimes fatal infectious disease. There is no specific treatment for smallpox disease. There are two clinical forms of the disease, Variola major and Variola minor. Variola major is the severe form of smallpox and has a historical case-fatality rate of about 30 percent. Uncommon variations of Variola major, such as flat and hemorrhagic smallpox, are almost always fatal. Hemorrhagic smallpox has a much shorter incubation period and is likely not to be initially recognized as smallpox when presenting to medical care.

Chart of Incubation Period and Signs/Symptoms:

<p>Incubation Period (Range: 7 to 17 days) Not contagious</p>	<p>Exposure to the virus is followed by incubation period. Patients do not have any symptoms and may feel fine. This period averages about 12 to 14 days but can range from 7 to 17 days. During this time, patients are not contagious.</p>
<p>Initial Symptoms (Lasts 2 to 4 days) <i>Prodrome</i> Sometimes contagious</p>	<p>The first symptoms include fever, malaise, head and body aches, sometimes vomiting. Fever is usually high (101°F to 104°F). Patients are too sick to carry on normal activities.</p>
<p>Early Rash (Days 1 to 5) Contagious</p>	<p>Macular rash appears on the tongue and mouth. Sores develop; break open, spreading virus into the oral cavity.</p> <p>Rash appears on the face and spreads to the arms, legs, hands and feet. The rash spreads to all parts of the body within 24 hours. As the rash appears, fever falls and the patient may feel better.</p> <p>Day three rash becomes papular. By day four, papules become vesicles filled with thick, opaque fluid with a depression in the center that looks like a belly-button (major distinguishing characteristic of smallpox.) At this time fever rises until scabs form.</p>
<p>Pustular Rash (Days 5 to 10) Very contagious</p>	<p>The vesicles become pustules, sharply raised, usually round and firm to the touch. They feel like there is a small round object under the skin; it has been described as if there is a BB pellet embedded under the skin.</p>
<p>Pustules/Scabs (Days 11 to 14) Contagious</p>	<p>The pustules form a crust and then scab. Two weeks after the rash appeared, many of the lesions have scabbed over.</p>
<p>Resolving Scabs (Days 15 to 21) Contagious</p>	<p>The scabs begin to fall off; leaving marks on the skin that eventually become pitted scars. Three weeks after the rash appeared most scabs have fallen off. The patient is contagious until all of the scabs have fallen off.</p>
<p>Scabs resolved (Day 21 and beyond) Not contagious</p>	<p>Scabs fall off. Patient is no longer contagious.</p>
<p>Isolation</p>	<p>Airborne and contact.</p>

(continued, next page)

If you suspect a poisoning exposure from any bioterrorism agent, immediately contact your local county health department, and the Illinois Poison Center at 1-800-222-1222.

Laboratory and Diagnostic Testing:

Call the local department of health and IDPH to inform the state of a smallpox-infected patient and to obtain additional instructions for testing, treatment and isolation.

Smallpox infection can be rapidly confirmed in the laboratory by electron microscope examination or PCR testing of vesicular or pustular fluid or scabs.

Treatment:

Supportive care, along with antibiotics as indicated for treatment of occasional secondary bacterial infections is the mainstay of treatment. Infected patients should be kept in isolation and health care workers should use isolation precautions because of the potential for transmission of smallpox.

Differentiating Smallpox From Varicella (Chicken Pox)

	Smallpox	Varicella
Prodrome	High fever (>102°F) and systemic symptoms (prostration, severe headache, backache, abdominal pain, or vomiting) 1-4 days before rash onset	No or mild prodrome before rash onset
Location of First Lesion(s)	Oral mucosa/palate (enanthem); followed by examthem (rash) on face or forearm	Trunk (occasionally face)
Characteristics of Rash	Deep, firm, well-circumscribed pustules; may be confluent or umbilicated	Typically superficial vesicles
	Concentrated on face and distal extremities (centrifugal)	Concentrated on trunk and proximal extremities (+/- face, scalp)
	Lesions in same stage of evolution on any one part of the body	Rash appears in crops so lesions are in different stages of evolution (papules, vesicles, scabs) on any one part of the body
	Lesions on palms and soles (seen in >50% of cases)	Very uncommon for lesions to appear on palms and soles
	Lesions may itch at scabbing stage	Lesions generally intensely itchy
	Lesions evolve from papule · pustule in days	Lesions generally evolve from macules to papules to vesicles to scabs in <24 hours
Duration of Illness	Illness lasts 14-21 days	Illness lasts 4-7 days