

Smallpox Vaccination Site Care For Law Enforcement, Firefighters and Emergency Medical Service (EMS) Providers

Vaccination Site Appearance

Smallpox vaccine is made from vaccinia virus, and unlike most other vaccines, it is administered by lightly puncturing the skin with a bifurcated (two-pronged) needle. If the vaccination is successful, a red and itchy bump develops at the site of vaccination in 3 or 4 days. In the first week, the bump becomes a blister, fills with pus, and begins to drain. During the second week, the blister begins to dry up and a scab forms. The scab falls off in the third week, leaving a small scar. Progression from blister to scar may be quicker for those who have previously been immunized against smallpox.

Site Care

There will be vaccinia virus at the site of your vaccination until the scab falls off on its own, between 2 and 3 weeks after vaccination. During this time, vaccinia can be spread to other parts of the body or to other individuals through contact. To avoid the spread of virus you should keep the vaccination site clean and dry and carefully follow the instructions below:

- ❑ **When working**, cover the vaccination site loosely with gauze, using first aid adhesive tape as needed to keep it in place. Then cover the gauze with a semipermeable (or semiocclusive) bandage ensuring a tight seal around the vaccination site. Change the semipermeable bandage at least every 3-5 days in order to prevent build-up of fluids and irritation of the vaccination site. Also, wear a shirt that covers the vaccination site as an additional barrier.
- ❑ **When not at work**, wear only a gauze dressing secured by first aid adhesive tape over the vaccination site. Change the gauze dressing frequently (every 1-3 days). As an added precaution wear a shirt that covers the vaccination site.
- ❑ **Wash hands with soap and warm water** or with alcohol-based hand rubs (at least 60% alcohol) after direct contact with the vaccine, the vaccination site, or anything that might be contaminated with live virus, including bandages, clothing, towels, or sheets that came in contact with the vaccination site.
- ❑ **Keep the vaccination site dry.** Cover site with a waterproof bandage when bathing. Change back to the gauze dressing after bathing (if not at work). Change bandage and/or gauze if it is wet or not intact.
- ❑ **Put the contaminated dressings and bandages in a sealed plastic bag and throw them away** in the trash.
- ❑ Keep a separate laundry hamper for clothing, towels, bedding, or other items that may have come in direct contact with the vaccination site or drainage from the site.
- ❑ Wash clothing or any other material that comes in contact with the vaccination site using hot water with detergent and/or bleach. Wash hands thoroughly after sorting unwashed laundry.
- ❑ When the scab falls off, throw it away in a sealed plastic bag and wash your hands afterwards.

Special Considerations For Law Enforcement, Firefighters, and EMS Providers

- ❑ Many law enforcement, fire and EMS activities, including putting on and removing personal protective clothing and equipment, carrying heavy objects, and leaning against walls while using hose lines at a fire, may lead to injury of the vaccination site. Activities such as these, that may subject the vaccination site to undue pressure, rubbing, or lengthy exposure to water, should be avoided as much as possible until the vaccination site scab separates on its own to avoid bursting pustules or causing tissue breakdown or secondary infection.
- ❑ Firefighters are often involved in strenuous work in wet environments. If the area around the vaccination site becomes wet from the environment or from perspiration, any clothing, and non-intact bandage or dressing must be removed as soon as possible and replaced with clean clothing and dressings. If the bandage or dressing covering the vaccination site becomes loose or damaged at any time, it should be replaced.
- ❑ Items used by vaccinated persons (e.g. linens, towels, and clothing) should not be shared with others and should be laundered in hot water with detergent and/or bleach before use by another person.
- ❑ Any non-emergency activities, such as training, that may complicate vaccine site care and cleanliness, should be postponed until after the vaccine site scab separates and falls off.
- ❑ Vaccination site injuries should be reported, immediately evaluated, and if necessary, treated by medical personnel.
- ❑ In some departments, firefighters share bunker (turn-out) gear. Because it is generally worn over other garments, risk of spreading vaccinia through shared bunker gear is unlikely, especially if the vaccination site is covered with appropriate bandages and dressings. However, when removing bunker gear, if firefighters notice infectious materials leaking through dressings, bandages and undergarments, the gear should be promptly cleaned according to department protocol.
- ❑ Departments may choose to limit voluntary recreational activities (e.g. sports activities) where there is close contact of vaccinated individuals with other participants.
- ❑ Vaccinated individuals can cook and clean normally as long as they wash their hands after contact with the vaccination site or any potentially infectious materials, such as bandages or dressings.