Mpox Vaccine

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Vaccine Name	Dosage	Number of Doses	Route of Administration
JYNNEOS™	0.5 mL	2 doses (given 4 weeks apart)	Subcutaneous*
JYNNEOS™	0.1 mL	2 doses (given 4 weeks apart)	Intradermal
ACAM2000**	1 drop	1 dose	Scarification

* preferred route

** According to the ACIP, ACAM2000 may be considered to prevent mpox only in select persons if the Jynneos vaccine is not available due to more contraindications and adverse reactions associated with ACAM2000 compared to the nonreplicating Jynneos vaccine. ACAM2000 has not been used in the ongoing clade II mpox outbreak that started in 2022

Indication/Patient Population:

JYNNEOS™ is a vaccine that protects against mpox (formerly known as monkeypox) and smallpox. The Centers for Disease Control and Prevention (CDC) recommends for the following patients to be vaccinated against mpox:

- Those who had a known or suspected exposure to someone with mpox
- Those who had a sex partner in the last 2 weeks who was confirmed to have mpox
- Those who are gay, bisexual, or other man who has sex with men (MSM) or a person who has sex with gay, bisexual, or other MSM who in the past 6 months has a
    - New diagnosis of a sexually transmitted disease
    - More than one sex partner
- Those who have had sex at a commercial sex venue OR sex related to a large commercial event or in a geographic area where mpox virus transmission is occurring in the last 6 months
- Those who have a sex partner with any of the risks listed above or anticipate experiencing any of the scenarios listed above
- Those who have HIV or other causes of immune suppression or have had recent or anticipate future risk of mpox exposure from any of the scenarios listed above
- You are traveling to a country with mpox outbreak and anticipate any of the follow activities during travel:
    - Sex with a new partner
    - Sex at a commercial venue
    - Sex in in exchange for money, goods, drugs, or other trade
    - Sex in association with a large public event
- Those who work with orthopoxviruses in a laboratory or who are part of an orthopoxvirus and health care facility

Dosage and Schedule:

JYNNEOS™, which is made using weakened live vaccinia virus, is approved by the U.S. Food and Drug Administration (FDA) to be given subcutaneously to adults who are 18 years-old or older. Each patient should be given two doses of 0.5 mL separated by four weeks.

In August 2022, the FDA also issued an Emergency Use Authorization (EUA) for JYNNEOS™ to be given subcutaneously to patients less than 18 years of age who are at high risk of developing mpox. Each of these patients should be given the same dose of 0.5 mL separated by four weeks. An EUA was also issued for JYNNEOS™ to be given intradermally to patients who are 18 years-old or older in order to extend vaccine supply during the outbreak. Patients receiving the intradermal dose should be given two doses of 0.1 mL separated by four weeks.

Routes of administration are interchangeable, if necessary. For example, if the first dose is given as 0.5 mL subcutaneously, the second dose may be given as either 0.5 mL subcutaneously or 0.1 mL intradermally.

Warnings and Precautions:

Patients should NOT receive the JYNNEOS™ vaccine if they have had a severe allergic reaction, such as anaphylaxis, to a previous dose of the JYNNEOS™ vaccine.

Patients should be cautious about receiving the vaccine if they have had an allergic reaction to any vaccine in the past. This is not a contraindication to receiving the JYNNEOS™ vaccine, but patients with this medical history may require extra observation or monitoring following vaccination.

Patients should talk to their provider before receiving the vaccine if they have any of the following allergies:

- Chicken or egg protein
- Ciprofloxacin
- Gentamicin

Adverse Reactions:

Patients receiving the JYNNEOS™ vaccine may experience the following local/injection site reactions:

- Redness
- Pain
- Itching
- Swelling
- Skin Discoloration

Patients receiving the JYNNEOS™ vaccine may experience the following systemic reactions:

- Syncope
- Fever
- Headache
- Chills
- Fatigue
- Muscle Pain
- Nausea

Storage:

Vaccines must be store frozen (-13 to 5 degrees Fahrenheit) and in the original package to protect from light. Once thawed, the vaccine is stable for 4 weeks when stored in the refrigerator (36 to 46 degrees Fahrenheit). Vials that are punctured may be stored for up to 8 hours in the refrigerator.

How Long to Work:

According to the CDC, patients may begin to experience an immune response after the first dose of JYNNEOS™. However, patients are most protected from mpox approximately two weeks after the second dose. Boosters are not recommended for the public, but for people at continued occupational exposure, boosters may be given at either 2 or 10 years.

Availability and Cost:
JYNNEOS™ may only be available at the health department in most areas. In larger cities, it may be offered at public health clinics or hospitals.

JYNNEOS™ is FDA approved and now covered by insurance. Providers must give the vaccine regardless of whether patients are able to pay the vaccine administration fee.

References:

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3. Package insert – JYNNEOS [Internet]. *U.S. Food and Drug Administration.* 2023 Mar [cited 2025 Mar 13]. Available from: https://www.fda.gov/media/131078/download
4. Smallpox and Mpox Vaccine (Live/Attenuated). *Lexi-Drugs*. UpToDate Lexidrug. UpToDate Inc. https://online.lexi.com. Accessed March 13, 2025
5. Fact sheet for recipients and caregivers about Jynneos [Internet]. *U.S. Food and Drug Administration.* 2022 Aug 9 [cited 2023 Mar 16]. Available from: https://www.fda.gov/media/160773/download

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