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# Mpox Vaccines

## Frequently Asked Questions

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### 1. How are smallpox and mpox vaccines related?

Smallpox, a contagious disease that was caused by the variola virus, was eradicated worldwide in 1980. Mpox, also a contagious disease, is caused by the monkeypox virus. Both the variola and monkeypox viruses are related and belong to the family of orthopoxviruses.

The eradication of smallpox was due to mass vaccination programmes. The immunity offered by vaccination against smallpox also provided cross-protection against mpox due to the relatedness of the two viruses.

### 2. Which vaccines are available?

There are currently three vaccines available to vaccinate against mpox: ACAM2000®, MVA-BN (Imvanex®/JYNNEOS®) and LC16m8 (LC16 KMB) vaccines.

The live-attenuated smallpox vaccination ACAM2000® also protects against mpox. It is produced by Emergent BioSolutions. The administration of ACAM2000® demands specialized training and resources. ACAM2000® is not recommended for those who have a severe immunodeficiency, are pregnant or nursing, have a heart condition or have risk factors for a heart condition, have active eczema, or are younger than 12 months old. LC16m8 (LC16 KMB) is a live-attenuated vaccinia virus developed for smallpox. LC16m8 administration demands specialized training and resources. It can be safely given to children aged one year and above and immunocompetent non-pregnant/non-breastfeeding adults. LC16m8 is manufactured by KM Biologics Co. MVA-BN (Imvanex®/JYNNEOS®) contains a virus (a vaccinia Ankara strain) that has been modified and therefore cannot replicate in the human body. Bavarian Nordic is the manufacturer of Imvanex®/JYNNEOS®. For those 18 years of age and older, it is administered as two doses, at least 28 days apart. The World Health Organization recommends that, in cases of limited vaccine supply during outbreaks, one full dose may be administered. The safety and efficacy of Imvanex® has been established by the National Control Laboratory, and based on a favourable safety and tolerability profile as well as ease of administration, this vaccine has been chosen for use in South Africa.

### **3. How do the vaccines work?**

The vaccines use a modified or weakened vaccinia virus that is similar to mpox to mimic a natural infection and stimulate the immune system to produce antibodies and other cells that provide immunity against the mpox infection.

### **4. Should vaccination be administered before or after exposure to mpox?**

Vaccination can be administered either before or after a person is exposed to the virus. Pre-exposure vaccination is recommended for individuals at high risk for mpox infection.

### **5. Who can get vaccinated in South Africa?**

South Africa's vaccination strategy is that of targeted outbreak response using a delayed dose approach (2<sup>nd</sup> dose of MVN-BN will be given once more stock is available). This includes targeted pre-exposure vaccination and post-exposure vaccination for certain high-risk groups. The vaccination programme will target the most affected provinces including Gauteng, KwaZulu-Natal and Western Cape. The vaccination strategy aims to protect individuals at risk as well as preventing severe complications amongst individuals that become infected.

Pre-exposure vaccination: high-risk populations at highest risk of exposure in districts with reported cases. Those considered at the highest risk are people with a recent history of multiple sex partners, those participating in group sex, health workers in frontline patient care of mpox cases, travelers going to areas where there is an ongoing mpox outbreak, as well as laboratory workers performing mpox testing. If indicated, vaccination will also be offered to pregnant women and children >2 years.

Post-Exposure Prophylaxis (PEP): can be considered for individuals who have been in close contact with confirmed cases.

A screening tool will be utilized to assess eligibility for vaccination, and an informed consent will be completed prior to vaccination

### **6. Where is mpox vaccination taking place in South Africa?**

The provinces with reported cases have vaccination sites at various locations. These provinces are Gauteng, KwaZulu-Natal, and the Western Cape. The vaccinations are provided at no cost as part of a targeted response to the outbreak.

### **7. What are the side effects of the mpox vaccine?**

The most common side effects include injection-site pain, swelling, redness and itchiness. These side-effects usually resolve on their own within a week. Other side effects include fever, headache, tiredness, nausea, chills, and muscle aches, with symptomatic management such as rehydration, use of analgesics and bed-rest usually being sufficient for treating these side effects.

## 8. More information on mpox

- National Department of Health: <https://www.health.gov.za/outbreaks-mpox/>
- South African Government. Media Statements- Health rolls out mpox vaccination as new cases are detected: <https://www.gov.za/news/media-statements/health-rolls-out-mpox-vaccination-new-cases-are-detected-16-jul-2025>
- National Institute for Communicable Diseases: <https://www.nicd.ac.za/diseases-a-z-index/mpox-2/>
- NICD Hotline (for health professionals only): 0800 212 552