



Emergency Preparedness and Response

# Prevention Strategies for Monkeypox, including Vaccinating People at Risk via Sexual Exposure, for U.S. Travelers Visiting Countries with Clade I Monkeypox Outbreaks



Distributed via the CDC Health Alert Network

September 23, 2024, 12:45 PM ET

CDCHAN-00516

## Summary

The Centers for Disease Control and Prevention (CDC) is issuing this Health Alert Network (HAN) Health Update to provide additional information about the ongoing [outbreak of clade I monkeypox virus \(MPXV\)](#), the virus that causes monkeypox, in Central and Eastern Africa. This report is an update to HAN [Health Advisory 501](#) issued in December 2023 and HAN [Health Update 513](#) in August 2024. MPXV transmission in countries where the virus is endemic is typically via exposure to infected wildlife with subsequent [person-to-person spread](#) via close contact (including intimate or sexual contact) with a person with monkeypox, or direct contact with their respiratory secretions (e.g., snot, mucus) or contaminated objects (e.g., bedding). During the global clade II outbreak, human-to-human transmission of monkeypox has been [predominantly spreading through sexual contact](#) [↗](#). During 2024, the Democratic Republic of the Congo (DRC) has reported >21,000 suspected clade I monkeypox cases, its largest annual number on record. Although the proportion of people impacted in DRC (population >99 million) is relatively low, cases are more widespread than in any previously reported DRC outbreak. Clade Ia monkeypox cases are impacting the western part of DRC (particularly the rural *Équateur* Province). No cases of clade Ia monkeypox have been reported outside Central African countries where clade Ia MPXV is endemic. Clade Ib monkeypox cases are impacting the eastern part of DRC and have been spread through regional travel. Early data indicate that a large proportion of clade Ib monkeypox cases among adults has been [associated with sexual contact](#) [↗](#), including via ongoing transmission believed to be occurring in some countries where the virus is not normally found. Travelers to DRC or other countries with sustained spread of clade I monkeypox should be made aware of activities associated with cases and should be vaccinated with two doses of JYNNEOS if they anticipate certain sexual exposures while traveling. Active monitoring for monkeypox continues to occur in the United States. Although the United States continues to be affected by

an ongoing [global outbreak of clade II monkeypox](#) that began in 2022, no domestic cases of clade I monkeypox have been identified in the United States at this time. Continue to follow CDC's [current vaccine guidance](#) to prevent clade II MPXV infection, which continues to circulate in the United States, and will also help protect against clade I MPXV.

## Background

MPXV has two distinct genetic clades: clade I (with subclades Ia and Ib) is [endemic to some countries in Central Africa](#), and clade II (with subclades IIa and IIb) is historically [endemic to some countries in West Africa](#). Since December 2023, CDC has recommended [travelers to DRC](#) practice enhanced precautions (Level 2 Travel Health Notice). This recommendation was expanded to include neighboring countries in August 2024. In 2023, DRC reported [>14,000](#) suspected clade I monkeypox cases. As of September 18, 2024, [>21,000](#) suspected clade I monkeypox cases have been identified in DRC, its largest annual number on record. This includes [>700](#) deaths in a population of [>99](#) million people.

In the current outbreaks in Central and Eastern Africa:

- Clade Ia monkeypox cases are impacting the western part of DRC (particularly [Équateur Province](#), which is comprised of mostly rural areas). Although most cases are not laboratory-confirmed, available data indicate that clade Ia MPXV is spreading through multiple modes of transmission: contact with infected dead or live wild animals, household contact often involving crowded households, or sexual contact. Outside of countries where MPXV is endemic in Central Africa (e.g., DRC, Republic of the Congo (ROC), and Central African Republic (CAR)), no cases of clade Ia monkeypox have been reported.
- Clade Ib monkeypox cases were recently identified in eastern DRC. Available data indicate that it is predominantly spreading through intimate or sexual contact between adults (e.g., kissing, oral-genital, oral-anal, vaginal, or anal sex). These contacts may occur via sex with a new partner during travel (e.g., sex in exchange for money, goods, drugs, or other trade). Clade Ib monkeypox cases have been identified in other countries among travelers exposed in countries with ongoing transmission. Some neighboring countries where MPXV is not endemic, including Burundi, Rwanda, and Uganda, have reported further spread (e.g., via household contact); however, fewer than 0.002% of people in these countries where MPXV is not endemic have been diagnosed with monkeypox, suggesting that current risk for new exposures is low. Travel-associated cases of clade Ib monkeypox also have been reported in Kenya, Sweden, and Thailand; ongoing transmission is not believed to have occurred in those countries at this time.

Clade I MPXV has historically been associated with a higher proportion of severe infections compared to clade II MPXV; however, recent data suggest that previous severity estimates may have been too high. For example, a study conducted in DRC showed that routine supportive care was associated with a [lower clade Ia monkeypox case fatality rate \(<2%\)](#) than previously referenced (3%–11%). Clade Ib monkeypox cases appear to be clinically milder than clade Ia monkeypox cases; in addition, clade Ib monkeypox cases in DRC have been associated with a [lower case fatality rate than clade Ia](#) monkeypox cases. No clade I monkeypox deaths have been reported from countries where MPXV is not endemic at this time.

In February 2023, the CDC Advisory Committee on Immunization Practices ([ACIP](#)) recommended a JYNNEOS vaccine series, with two doses administered 28 days apart, for people aged 18 years and older at risk of monkeypox during an monkeypox outbreak. This ACIP recommendation, which has been adopted by the CDC Director and is now official, leaves the determination of whether there is an monkeypox outbreak and the populations impacted to public health authorities. CDC has determined that [ongoing human-to-human transmission of clade I MPXV](#) in Central and East Africa is an outbreak and, in addition to general prevention strategies, recommends a JYNNEOS 2-dose vaccine series for persons at risk for monkeypox via sexual exposure during travel to a [country with ongoing human-to-human transmission](#).

## Recommendations for Clinicians and Public Health Practitioners

During travel health visits:

- Discuss monkeypox prevention and risk reduction strategies with all travelers to countries with ongoing human-to-human transmission of clade I MPXV. Currently, these countries include Burundi, CAR, DRC, ROC, Rwanda, and Uganda. Note that ongoing transmission is not necessarily occurring in every country reporting monkeypox cases. An [updated list of the countries](#) with ongoing spread of clade I MPXV is available on the CDC website.

- Discuss patients' [sexual history](#) and travel plans, including if patients anticipate any sexual activity during travel. Up to [one in three travelers](#) will have sex with a new partner while on a trip.
- Advise travelers that monkeypox exposure risk is associated with sexual contact.
- Remind patients that monkeypox is not spread through casual contact, such as one might have in public spaces like markets, offices, or classrooms.
- Counsel patients on [activities that may increase risk](#) for MPXV exposure and risk reduction strategies if they have plans to travel to a [country where ongoing human-to-human transmission](#) of clade I MPXV is occurring. Travelers to affected countries should:
  - Avoid close contact with people who are sick with [signs and symptoms](#) of monkeypox, including skin or genital lesions.
  - Avoid contact with contaminated materials used by people who are sick, such as clothing, bedding, toothbrushes, sex toys, or materials used in healthcare settings.
- Advise patients about the risk for monkeypox exposure through sexual contact (regardless of sexual orientation or gender identity) associated with clade I MPXV.
- Recommend vaccination with the 2-dose JYNNEOS vaccine series to any adult, regardless of gender identity or sexual orientation, if:
  - They are traveling to a country where clade I MPXV is spreading between people, AND
  - They anticipate experiencing any of the following:
    1. Sex with a new partner
    2. Sex at a commercial sex venue, like a sex club or bathhouse
    3. Sex in exchange for money, goods, drugs, or other trade
    4. Sex in association with a large public event, such as a rave, party, or festival
- Recommend starting, if possible, the monkeypox vaccine series at least 6 weeks before travel begins, since two doses should be given 28 days apart and it takes 14 more days for immunity to peak.
- Emphasize [risk reduction strategies](#) in conversation with patients who are not eligible for vaccination, or who do not present in time to receive the two recommended vaccine doses 28 days apart
- Advise patients that two vaccine doses are more effective than one dose.
  - Two doses of JYNNEOS can [prevent monkeypox and may reduce the severity](#) of symptoms in people with monkeypox.
  - A [multijurisdictional study](#) conducted in 2022–2023 in the United States identified significant JYNNEOS vaccine effectiveness against clade IIb monkeypox: 75% after one dose and 86% after two doses.
- Counsel patients who might be at risk exclusively from day-to-day household contact or patient care about risk reduction strategies other than vaccination.
- Continue to follow CDC's [current vaccine guidance](#) to prevent clade II MPXV infection, which continues to circulate in the United States, and will also help protect those individuals from clade I MPXV.

## Recommendations for Travelers

When traveling to a country with ongoing human-to-human clade I MPXV transmission:

- Learn more about which activities may [increase your risk of exposure](#) when you travel to a country where [clade I MPXV is spreading](#).
- No matter what your plans are when you visit, if you're traveling to a country that has an ongoing clade I MPXV outbreak, [protect yourself and others from monkeypox](#), including by:
  - Avoiding close contact with people who are sick with [signs and symptoms of monkeypox](#), including skin or genital lesions.
  - Avoiding contact with contaminated materials used by people who are sick, such as clothing, bedding, toothbrushes, sex toys, or materials used in healthcare settings.
- Talk to your provider about getting vaccinated with two doses of JYNNEOS if:
  - You are traveling to a country where clade I MPXV is spreading between people, AND

- You anticipate experiencing any of the following:
  1. Sex with a new partner
  2. Sex at a commercial sex venue, such as a sex club or bathhouse
  3. Sex in exchange for money, goods, drugs, or other trade
  4. Sex in association with a large public event, such as a rave, party, or festival
- Get your first monkeypox vaccine at least 6 weeks before traveling, if possible. After completing your first and second vaccine doses, which are given 4 weeks apart, it takes about 2 more weeks to get the best protection against monkeypox.
- Get two doses of JYNNEOS if you are [eligible to get monkeypox vaccine](#) because of the clade IIb outbreak that began in 2022 and you've never had monkeypox before.
- Know that getting two doses of JYNNEOS is expected to protect you from orthopoxviruses including both monkeypox clades. If you were already vaccinated with two doses, or if you previously recovered from monkeypox, you do not need any monkeypox vaccine doses now.
- Take steps to [protect yourself and others from monkeypox](#) even if you are fully vaccinated or have had monkeypox before.

## For More Information

### For Clinicians and Public Health Partners

- [Clade I Monkeypox Outbreak Originating in Central Africa | Monkeypox | CDC](#)
- [Ongoing Clade II Monkeypox Global Outbreak | Monkeypox | CDC](#)
- [Clinical Treatment of Monkeypox](#)
- [Information for Health Departments | Monkeypox | CDC](#)
- [Sex & Travel | CDC Yellow Book 2024](#)
- [Guide to Taking a Sexual History | CDC](#)
- [Monkeypox Briefing for Providers Who Care for Pediatric Populations | HHS](#)
- CDC Poxvirus and Rabies Branch: [poxvirus@cdc.gov](mailto:poxvirus@cdc.gov) or, for emergencies, CDC's 24/7 Emergency Operations Center (EOC): 770-488-7100
- Health Department Contacts: [After Hours/Epi-on-Call Contact Lists – Council of State and Territorial Epidemiologists \(cste.org\)](#) [↗](#)






### For the Public

- [Monkeypox in the United States and Around the World: Current Situation | Monkeypox | CDC](#)
- [About Monkeypox | Monkeypox | CDC](#)
- [Monkeypox Vaccination | Monkeypox | CDC](#)
- [Preventing | Monkeypox | CDC](#)
- [September 2024 Travel Health Notice: Clade I Monkeypox in Central and Eastern Africa](#)
- General inquiries: CDC-INFO (1-800-232-4636)

## References

1. Brooks JT, Reynolds MG, Torrone E, et al. How the Orthodox Features of Orthopoxviruses Led to an Unorthodox Monkeypox Outbreak: What We've Learned, and What We Still Need to Understand. *The Journal of Infectious Diseases* 2024;229(Supplement 2):S121–S131. <https://doi.org/10.1093/infdis/jiad465> [↗](#)
2. World Health Organization. Multi-country outbreak of monkeypox, External situation report #36. September 14, 2024. <https://www.who.int/publications/m/item/multi-country-outbreak-of-monkeypox-external-situation-report-36-14->

[september-2024](#) 

3. Vakaniaki EH, Kacita C, Kinganda-Lusamaki E, et al. Sustained human outbreak of a new MPXV clade I lineage in eastern Democratic Republic of the Congo. *Nature Medicine*. 2024 Jun 13; online ahead of print. <https://doi.org/10.1038/s41591-024-03130-3> 
4. Rao, AK. "Use of JYNNEOS During Monkeypox Outbreaks: Clinical Guidance." ACIP presentation. Atlanta, GA, June 23, 2023. <https://www.cdc.gov/acip/downloads/slides-2023-06-21-23/03-monkeypox-Rao-508.pdf> 
5. Rao, AK. "Evidence to Recommendations Framework: Vaccination with JYNNEOS During monkeypox Outbreaks." ACIP presentation. Atlanta, GA, February 22, 2023. <https://www.cdc.gov/acip/downloads/slides-2023-02-22-24/Monkeypox-07-Rao-508.pdf> 
6. Murthy N, Wodi AP, McNally VV, et al. Advisory Committee on Immunization Practices Recommended Immunization Schedule for Adults Aged 19 Years or Older — United States, 2024. *MMWR Morb Mortal Wkly Rep* 2024;73:11–15. <https://doi.org/10.15585/mmwr.mm7301a3> 
7. Guagliardo SAJ, Kracalik I, Carter RJ, et al. Monkeypox Virus Infections After 2 Preexposure Doses of JYNNEOS Vaccine — United States, May 2022–May 2024. *MMWR Morb Mortal Wkly Rep* 2024; 73:460–466. <https://doi.org/10.15585/mmwr.mm7320a3>
8. McQuiston JH, Luce R, Kazadi DM, et al. U.S. Preparedness and Response to Increasing Clade I monkeypox Cases in the Democratic Republic of the Congo — United States, 2024. *MMWR Morb Mortal Wkly Rep* 2024; 73:435–440. <https://doi.org/10.15585/mmwr.mm7319a3> 
9. Taylor M, Park I. "Sex & Travel." In *CDC Yellow Book: Health Information for International Travel*. Oxford University Press: 2024; section 9 (12). <https://wwwnc.cdc.gov/travel/yellowbook/2024/work-and-other-reasons/sex-and-travel>

*The Centers for Disease Control and Prevention (CDC) protects people’s health and safety by preventing and controlling diseases and injuries; enhances health decisions by providing credible information on critical health issues; and promotes healthy living through strong partnerships with local, national and international organizations.*

## DEPARTMENT OF HEALTH AND HUMAN SERVICES

### HAN Message Types

- **Health Alert:** Conveys the highest level of importance about a public health incident.
- **Health Advisory:** Provides important information about a public health incident.
- **Health Update:** Provides updated information about a public health incident.

###

This message was distributed to state and local health officers, state and local epidemiologists, state and local laboratory directors, public information officers, HAN coordinators, and clinician organizations.

###

[Top of Page](#)

### Additional Resources

- [HAN Archive By Year](#)
- [HAN Types](#)
- [Sign Up for HAN Email Updates](#)
- [HAN Jurisdictions](#)

 Was this page helpful?

Yes    Partly    No