

Ministry of Health

# Fact Sheet: Monkeypox - Reference guide comparing monkeypox, chickenpox, and hand-foot-and-mouth disease

| **Category** | **Monkeypox** | **Chickenpox**  | **Hand-Foot-and-Mouth Disease** |
| --- | --- | --- | --- |
| **Virus** | *Monkeypox virus*[[1]](#endnote-1) | *Varicella zoster virus* (VZV)[[2]](#endnote-2) | *Enteroviruses* (e.g. Coxsackievirus A16, Enterovirus 71)[[3]](#endnote-3) |
| **Incubation period** | 5-21 days1 | 10-21 days, but can be up to 28 days in breakthrough[[4]](#footnote-1) infections2 | 3-7 days3 |
| **Fever** | May occur[[5]](#footnote-2), most commonly 1-3 days before rash onset1,[[6]](#endnote-4) | ***Unvaccinated:*** Mild if present, 1-2 days before rash2***Breakthrough***: Less common2 | 1-2 days before oral vesicles[[7]](#endnote-5) |
| **Lymphadenopathy** | May occur1 | Less common1 | Less common3 |
| **Rash appearance**  | Appears at the site of inoculationb, then may appear on other parts of the body, including1:* oral mucosa,
* genital area,
* conjunctiva,
* palms of the hands, and
* soles of the feet
 | Usually appears on the chest, back, and face then spreads to other parts of the body[[8]](#endnote-6)Rarely, lesions may appear on palms of the hands and soles of the feet in immunocompromised individuals[[9]](#endnote-7) | Usually, vesicles appear in or on the mouth, then may appear on other parts of the body, including3* palms of the hands,
* soles of the feet,
* knees,
* elbows,
* buttocks, or
* genital area
 |
| **Rash progression** | Slowly progresses through macules, papules, vesicles, pustules, and crusting/scab. May have central umbilication4,[[10]](#endnote-8)Lesions may develop simultaneously and evolve togetherb on any given part of the body (i.e., monomorphic)8 | ***Unvaccinated:*** Pleomorphic rash; Rapidly progresses through macules, papules, vesicles, and crusting/scab2***Breakthrough***: Usually, maculo-papular lesions that do not progress to vesicles2Lesions occur in “crops” with old and new lesions present at the same time2 | Macules, sometimes with vesicles[[11]](#endnote-9)Vesicles may break open and progress to crusting/scab9 |
| **Rash duration**  | 14-28 days1 | ***Unvaccinated***: 4-7 days6***Breakthrough:*** Shorter duration of illness compared to unvaccinated6 | 7-10 days3 |
| **Testing information** | [Monkeypox Virus | Public Health Ontario](https://www.publichealthontario.ca/en/Laboratory-Services/Test-Information-Index/Monkeypox-Virus)(in children also test for [Enterovirus | Public Health Ontario](https://www.publichealthontario.ca/en/Laboratory-Services/Test-Information-Index/Enterovirus)) | [Varicella – Serology | Public Health Ontario](https://www.publichealthontario.ca/en/Laboratory-Services/Test-Information-Index/Varicella-Serology)[Varicella Zoster Virus Detection | Public Health Ontario](https://www.publichealthontario.ca/en/Laboratory-Services/Test-Information-Index/Varicella-Zoster-Virus-Detection) | [Enterovirus | Public Health Ontario](https://www.publichealthontario.ca/en/Laboratory-Services/Test-Information-Index/Enterovirus) |

For more information, visit [Monkeypox Virus (gov.on.ca)](https://www.health.gov.on.ca/en/pro/programs/emb/monkeypox.aspx)[[12]](#endnote-10)

## References

1. . Ontario Agency for Health Protection and Promotion (Public health Ontario). Multi-jurisdictional monkeypox outbreak 2022 – what we know so far [Internet]. Toronto, ON: Queen’s Printer for Ontario; 2022. [updated May 23, 2022; cited June 16, 2022]. Available from: <https://www.publichealthontario.ca/-/media/Documents/M/2022/wwksf-multi-jurisdictional-monkeypox-outbreak-2022.pdf?sc_lang=en> [↑](#endnote-ref-1)
2. . Ministry of Health. OPHS - Infectious Disease Protocol; Appendix 1: Case definitions and disease-specific information disease: Varicella (Chickenpox) [Internet]. Toronto, ON: Queen's Printer for Ontario; 2022 [updated April 2022; cited June 6, 2022]. Available from: <https://www.health.gov.on.ca/en/pro/programs/publichealth/oph_standards/docs/chickenpox_chapter.pdf> [↑](#endnote-ref-2)
3. . Government of Canada. Hand, foot, and mouth disease (Enterovirus 71, EV 71) [Internet]. Ottawa, ON: Her Majesty the Queen in Right of Canada; 2019 [updated March 19, 2019; cited June 6, 2022]. Available from: <https://www.canada.ca/en/public-health/services/diseases/hand-foot-mouth-disease.html> [↑](#endnote-ref-3)
4. Breakthrough varicella is an infection that occurs in a varicella vaccinated person more than 42 days after varicella vaccination. [↑](#footnote-ref-1)
5. Atypical presentations of monkeypox include initial signs of a genital or peri-anal rash prior to or without prodromal symptoms which may not spread to other parts of the body, and having lesions at different stages of development.4,10 [↑](#footnote-ref-2)
6. . Centers for Disease Control and Prevention. Morbidity and mortality weekly report (MMWR): Monkeypox outbreak – Nine states, May 2022 [Internet]. 2022 [updated June 3 2022; cited June 16, 2022]. Available from: [https://www.cdc.gov/mmwr/volumes/71/wr/mm7123e1.htm#:~:text=CDC%20urges%20health%20care%20providers,specific%20risk%20factors%20for%20monkeypox](https://www.cdc.gov/mmwr/volumes/71/wr/mm7123e1.htm%23%3A~%3Atext%3DCDC%20urges%20health%20care%20providers%2Cspecific%20risk%20factors%20for%20monkeypox) [↑](#endnote-ref-4)
7. . MyHealth.Alberta.ca. Hand-foot-and-mouth disease [Internet]. Edmonton, AB: Alberta Government and Alberta Health Services; 2021 [updated July 1, 2021; cited June 6, 2022]. Available from: <https://myhealth.alberta.ca/Health/Pages/conditions.aspx?hwid=ty6230> [↑](#endnote-ref-5)
8. . Centers for Disease Control and Prevention. Varicella (chickenpox): fact sheet [Internet]. Atlanta, GA: Centers for Disease Control and Prevention; 2021 [updated August 2, 2021; cited June 6, 2022]. Available from: <https://www.cdc.gov/chickenpox/downloads/Varicella-diagnosis-fact-sheet-508.pdf> [↑](#endnote-ref-6)
9. . Centers for Disease Control and Prevention. Chickenpox (varicella): for healthcare providers [Internet]. Atlanta, GA: Centers for Disease Control and Prevention; 2021 [updated April 28, 2021; cited June 6, 2022]. Available from: [https://www.cdc.gov/chickenpox/hcp/index.html](https://www.cdc.gov/chickenpox/hcp/index.html%20%20)  [↑](#endnote-ref-7)
10. . Centers for Disease Control and Prevention. Monkeypox: clinical recognition [Internet]. Atlanta, GA: Centers for Disease Control and Prevention; 2022 [updated May 23, 2022; cited June 6, 2022]. Available from: <https://www.cdc.gov/poxvirus/monkeypox/clinicians/clinical-recognition.html> [↑](#endnote-ref-8)
11. . Centers for Disease Control and Prevention. Hand, foot, and mouth disease (HFMD): symptoms and diagnosis of hand, foot, and mouth disease [Internet]. Atlanta, GA: Centers for Disease Control and Prevention; 2021 [updated February 2, 2021; cited June 6, 2022]. Available from: <https://www.cdc.gov/hand-foot-mouth/about/signs-symptoms.html> [↑](#endnote-ref-9)
12. . World Health Organization. Multi-country Monkeypox Outbreak in Non-Endemic Countries [Internet]. 2022 [updated May 21, 2022; cited June 16, 2022]. Available from: <https://www.who.int/emergencies/disease-outbreak-news/item/2022-DON385> [↑](#endnote-ref-10)