

Monkeypox

Reference guide comparing monkeypox, chickenpox, and hand-foot-and-mouth disease

Category	Monkeypox	Chickenpox	Hand-Foot-and-Mouth
			Disease
Virus	Monkeypox virus¹	Varicella zoster virus (VZV) ²	Enteroviruses (e.g. Coxsackievirus A16, Enterovirus 71) ³
Incubation period	5-21 days ¹	10-21 days, but can be up to 28 days in breakthrough infections ²	3-7 days ³
Fever	May occur [†] , most commonly 1-3 days before rash onset ^{1,4}	Unvaccinated: Mild if present, 1-2 days before rash ² Breakthrough: Less common ²	1-2 days before oral vesicles ⁵
Lymphadenopathy	May occur ¹	Less common ¹	Less common ³

^{*} Breakthrough varicella is an infection that occurs in a varicella vaccinated person more than 42 days after varicella vaccination.

[†] 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}



Health Protection and Surveillance Policy and Programs Branch Office of the Chief Medical Officer of Health, Public Health Ministry of Health

FACT SHEET

Category	Monkeypox	Chickenpox	Hand-Foot-and-Mouth
			Disease
Rash appearance	Appears at the site of inoculation ¹ , then may appear on other parts of the body, including ¹ : -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 ⁶ Rarely, lesions may appear on palms of the hands and soles of the feet in immunocompromised individuals ⁷	Usually, vesicles appear in or on the mouth, then may appear on other parts of the body, including ³ : -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 umbilication ^{4,8} Lesions may develop simultaneously and evolve together ¹ 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, maculopapular lesions that do not progress to vesicles² Lesions occur in "crops" with old and new lesions present at the same time² 	Macules, sometimes with vesicles ⁹ Vesicles may break open and progress to crusting/scab ⁹



Health Protection and Surveillance Policy and Programs Branch Office of the Chief Medical Officer of Health, Public Health Ministry of Health

FACT SHEET

Category	Monkeypox	Chickenpox	Hand-Foot-and-Mouth
			Disease
Rash duration	14-28 days¹	Unvaccinated : 4-7 days ⁶	7-10 days ³
		Breakthrough: Shorter duration of illness compared to unvaccinated ⁶	
Testing information	Monkeypox Virus Public Health Ontario	Varicella – Serology Public Health Ontario	Enterovirus Public Health Ontario
	(in children also test for Enterovirus Public Health Ontario)	Varicella Zoster Virus Detection Public Health Ontario	

For more information, visit Monkeypox Virus (gov.on.ca)

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
- 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
- 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



Health Protection and Surveillance Policy and Programs Branch Office of the Chief Medical Officer of Health, Public Health Ministry of Health

FACT SHEET

- 4. 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
- 5. 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
- 6. 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
- 7. 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
- 8. 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
- 9. 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
- 10. 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