

## DEFINITION

- Recently examined by a doctor (or NP/PA) and diagnosed with monkeypox OR monkeypox is suspected but has not yet seen a doctor for confirmation.
- *Use this protocol only if the patient has symptoms that match monkeypox.*

Monkeypox should be strongly **suspected if a person has symptoms** of monkeypox, such as an unexplained rash with fever, muscle aches, or swollen lymph nodes; AND any of the following **exposures in the past 21 days**:

- Skin-to-skin contact (e.g., hugging, kissing, massaging, having sex) with someone with monkeypox;
- Contact with materials (e.g., bed linens, clothing, sex toys) contaminated with monkeypox;
- Recent travel to a country where monkeypox is endemic (e.g., Central and West Africa);
- Not wearing a facemask during prolonged close contact (e.g., within 6 feet or 2 meters, for 3 hours or longer) with an unmasked person with monkeypox.

**Symptoms** of monkeypox include:

- Initial symptoms are chills, fatigue, **fever**, headache, muscle aches, back pain, and **swollen lymph nodes**. These symptoms last 1 to 5 days.
- About 1 to 4 days after the fever subsides a **rash** appears. The rash is often on the genitals (penis, testicles, labia, and vagina) or anus. However, it can be on other areas such as the face, feet, hands, chest, and mouth. Each monkeypox sore is about 0.5 cm to 1 cm wide. Each sore goes through several stages: small red spot (macule), small red bump (papule), small water blister (vesicle), small cloudy blister (pustule). Then, the sore crusts over and the scab falls off after about a week.
- Sometimes people get the rash first and afterwards other symptoms. Some people get just the rash.
- For most people, the symptoms of monkeypox last 2 to 4 weeks.

Notes:

- Nearly all of the current monkeypox cases occur in adult men. Most cases occur in men who have sex with men.
- Monkeypox should be suspected in men who have sex with men who also have typical symptoms of monkeypox.
- However, anyone who has been in close contact with someone who has monkeypox can get the illness.

**Updated:** August 2, 2022 (version 2)

## INITIAL ASSESSMENT QUESTIONS

1. SYMPTOM: "What's the main symptom you're concerned about?" (e.g., fever, rash)
2. ONSET: "When did the symptoms begin?" (e.g., hours, days)
3. RASH: "Do you have a rash?" If Yes, ask: "Describe the rash. What does it look like? Where is it located?" (e.g., spots, blisters; back, face, genital area)
4. FEVER: "Do you have a fever?" If Yes, ask: "What is it, how was it measured, and when did it start?"
5. PAIN: "Do you have any pain?" If Yes, ask: "How bad is the pain?" (e.g., Scale 1-10; mild,

moderate, or severe)

6. MONKEYPOX EXPOSURE: "Please describe how you were exposed to someone with monkeypox." (e.g., healthcare worker, live in same house, sex partner, work in same office)

7. MONKEYPOX DATE of EXPOSURE: "When did you have a monkeypox exposure?" (e.g., date, days ago)

8. MONKEYPOX VACCINE: "Have you ever received a vaccine for monkeypox?" (e.g., smallpox vaccine)

9. OTHER SYMPTOMS: "Are there any other symptoms?" (e.g., fatigue, muscle aches, swollen lymph nodes)

10. PREGNANCY: "Is there any chance you are pregnant?" "When was your last menstrual period?"

## TRIAGE ASSESSMENT QUESTIONS (TAQs)

### Call EMS 911 Now

SEVERE difficulty breathing (e.g., struggling for each breath, speaks in single words)

*R/O: respiratory failure, hypoxia*

*CA: 40, 12, 1*

Difficult to awaken or acting confused (e.g., disoriented, slurred speech)

*R/O: encephalitis, shock*

*CA: 40, 12, 1*

Sounds like a life-threatening emergency to the triager

*CA: 40, 12, 1*

### See More Appropriate Guideline

[1] MONKEYPOX EXPOSURE (e.g., skin-to-skin contact such as sex, recent travel to West or Central Africa) AND [2] NO symptoms

*Go to Guideline: Monkeypox - Exposure (Adult)*

Widespread rash and last exposure to monkeypox > 21 days ago

*Go to Guideline: Rash or Redness - Widespread (Adult)*

Localized rash and last exposure to monkeypox > 21 days ago

*Go to Guideline: Rash or Redness - Localized (Adult)*

Rash and no known exposure to monkeypox (Exception: Man who has sex with men and has typical monkeypox symptoms; continue triage.)

*Go to Guideline: Rash - Guideline Selection (Adult)*

Monkeypox vaccine reaction suspected (e.g., pain or redness at injection site; fatigue, fever) occurring 1 to 3 days after getting vaccine

*Go to Guideline: Immunization Reactions (Adult)*

### **Go to ED Now**

Difficulty breathing

*R/O: pneumonia*

CA: 41, 2, 1330, 13, 80, 1

### **Go to ED Now (or PCP triage)**

Fever > 103 F (39.4 C)

*R/O: serious bacterial infection*

CA: 42, 3, 1330, 13, 1003, 1006, 80, 1

Bright red skin or red streak

*R/O: bacterial skin infection (e.g., cellulitis, lymphangitis)*

CA: 42, 3, 1330, 13, 1003, 1006, 80, 1

Eye pain or blurred vision

*R/O: monkeypox infection of cornea*

CA: 42, 3, 1330, 13, 1003, 1006, 80, 1

[1] Drinking very little AND [2] dehydration suspected (e.g., no urine > 12 hours, very dry mouth, very lightheaded)

*Reason: may need IV hydration*

CA: 42, 3, 1330, 1003, 1006, 80, 1

Patient sounds very sick or weak to the triager

*Reason: Severe acute illness or serious complication suspected.*

CA: 42, 3, 1330, 13, 1003, 1006, 80, 1

### **See HCP (or PCP Triage) Within 4 Hours**

SEVERE pain (e.g., excruciating rectal area pain, unable to have a bowel movement)

*R/O: proctitis (inflammation of rectum)*

CA: 43, 3, 13, 1477, 1330, 1003, 1006, 89, 1

### **See PCP Within 24 Hours**

[1] MONKEYPOX EXPOSURE in past 21 days (e.g., direct skin contact such as sex, recent travel to West or Central Africa) AND [2] ANY SYMPTOMS of monkeypox (e.g., rash, fever, muscle aches, or swollen lymph nodes) AND [3] has NOT been seen by a doctor (or NP/PA) for this

*Reason: Suspected or probable monkeypox and not yet evaluated by doctor (or NP/PA).*

CA: 44, 3, 4, 13, 1003, 1006, 7, 9, 1

[1] At risk for monkeypox (men-who-have-sex-with-men) AND [2] possible exposure (e.g., multiple sex partners in past 21 days) AND [3] ANY SYMPTOMS of monkeypox (e.g., rash, fever, muscle aches, or swollen lymph nodes) AND [4] has NOT been seen by a doctor (or NP/PA) for this

*Reason: Suspected monkeypox and not yet evaluated by doctor (or NP/PA).*

CA: 44, 3, 4, 13, 1003, 1006, 7, 9, 1

Scab or sore is draining yellow pus

*R/O: superimposed impetigo*

CA: 44, 3, 4, 13, 126, 1091, 1003, 1006, 7, 9, 1

Scab or sore has become much larger in size than the others (size > dime or 15 mm)

*R/O: superimposed impetigo*

CA: 44, 3, 4, 13, 126, 1091, 1003, 1006, 7, 9, 1

Lymph node becomes large (> 1 inch or 2.5 cm) and tender

*R/O: bacterial lymphadenitis*

CA: 44, 3, 4, 13, 1003, 1006, 7, 9, 1

Fever returns after gone for over 24 hours

*R/O: bacterial superinfection*

CA: 44, 3, 4, 13, 1003, 1006, 7, 9, 1

### **Call PCP When Office is Open**

Pregnant or breastfeeding

*Reason: Follow-up for already diagnosed monkeypox. May be at higher risk of severe illness. Note: A phone or telemedicine encounter may be preferable.*

CA: 51, 14, 4, 1470, 1471, 1472, 1244, 1091, 15, 1481, 1482, 7, 9, 1

Weak immune system (e.g., HIV positive, cancer chemo, splenectomy, organ transplant, chronic steroids)

*Reason: Follow-up for already diagnosed monkeypox. May be at higher risk of severe illness. Note: A phone or telemedicine encounter may be preferable.*

CA: 51, 14, 4, 1470, 1471, 1472, 1003, 1006, 1244, 1091, 15, 7, 9, 1

Chronic skin condition (e.g., atopic dermatitis)

*Reason: Follow-up for already diagnosed monkeypox. May be more susceptible to skin superinfection. Note: A phone or telemedicine encounter may be preferable.*

CA: 51, 14, 4, 1470, 1471, 1472, 1003, 1006, 1244, 1127, 1126, 1091, 15, 7, 9, 1

More than 100 monkeypox spots

*Reason: Follow-up for already diagnosed monkeypox. R/O: severe monkeypox*

CA: 51, 14, 4, 1470, 1471, 1472, 1003, 1006, 1244, 1127, 1126, 1091, 15, 7, 9, 1

New spots are appearing after 14 days

*Reason: Follow-up for already diagnosed monkeypox. R/O: wrong diagnosis*

CA: 51, 14, 4, 1470, 1471, 1472, 1003, 1006, 1244, 1127, 1126, 1091, 15, 7, 9, 1

### **Home Care**

[1] Monkeypox diagnosed by doctor (or NP/PA) AND [2] no complications

CA: 48, 405, 11, 1470, 1471, 1003, 1006, 1244, 1127, 1126, 1485, 1091, 15, 10, 1475, 8, 1

## CARE ADVICE (CA)

1. **Care Advice** given per Monkeypox - Diagnosed or Suspected (Adult) guideline.
2. **Note to Triager - Call ED If Patient Has Known or Suspected Monkeypox:**
  - If the patient has known or suspected monkeypox, the **triager should try to call ahead** to the **emergency department** to facilitate the patient's arrival.
  - Get instructions on how to enter facility and prevent exposing others to monkeypox.
  - Follow local public health and call center guidelines.
3. **Note to Triager - Call Ahead If Patient Has Known or Suspected Monkeypox:**
  - If the patient has known or suspected monkeypox, the **triager should try to call ahead** to coordinate and facilitate the patient's arrival. Get instructions on how to enter facility and prevent exposing others to monkeypox.
  - Should the patient go to the office, a public health center, or the local emergency department?
  - Follow local public health and call center guidelines.
4. **Note to Triager - Patients at Higher Risk of Severe Illness:**
  - Currently there is no prescription medicine that has been proven to cure this infection or help a person get better sooner.
  - For **most healthy people** with monkeypox, prescription medicines are usually not needed. People can treat the symptoms at home using over-the-counter medicines for fever and pain.
  - However, there are some medicines (e.g., tecovirimat) that were developed for treating smallpox that may help treat monkeypox. Some patients with monkeypox are at **higher risk of severe illness** and should be considered for treatment after their doctor (or NP/PA) consults with the CDC or the local health department.  
**People at higher risk** include:
    - ... People who have a chronic skin condition (such as atopic dermatitis).
    - ... People who have a weak immune system (such as HIV positive, cancer chemo, splenectomy, organ transplant, chronic steroids).
    - ... Women who are pregnant or breastfeeding.
    - ... Infants and children less than 8 years old.

7. **Stay Home (Isolate) If You Have or Might Have Monkeypox:**
  - Stay at home (isolate) until all of the scabs have fallen off the monkeypox spots and the skin is healing. Stay in a separate area from other household members and pets. If able, use a separate bathroom from others. Only leave home as needed for emergencies and medical care.
  - Avoid any skin-to-skin contact. This includes:
    - ... Do not have sex (anal, oral, vaginal).
    - ... Do not cuddle, hug, or kiss.
    - ... Do not give or receive massages.
    - ... Do not share cups or eating utensils.
  - Avoid face-to-face contact. Wear a mask when within 6 feet (2 meters) of others.
  - Wash hands frequently with soap and water, or use alcohol sanitizer.
  - Clean and disinfect high touch surfaces daily (such as phones, remote controls, counters, tabletops, doorknobs).
  - Keep the rash covered. For example, with a bandage, long sleeves, or long pants.
  
8. **Call Back If:**
  - Difficulty breathing
  - Fever over 103 F (39.4 C)
  - New spots appear after 14 days
  - You become worse
  
9. **Call Back If:**
  - Difficulty breathing
  - Fever over 103 F (39.4 C)
  - You become worse
  
10. **Clean Your Hands:**
  - **Wash Your Hands:** Wash your hands often with soap and water for at least 20 seconds.
  - **Use Hand Sanitizer:** If soap and water are not available, use an alcohol-based hand sanitizer with at least 60% alcohol, covering all surfaces of your hands and rubbing them together until they feel dry.
  - Avoid touching your eyes, nose, and mouth with unwashed hands.
  
11. **Reassurance and Education - Monkeypox:**
  - It sounds like monkeypox without any complications.
  - For **most healthy people** with monkeypox, prescription medicines are usually not needed. People can treat the symptoms at home using over-the-counter medicines for fever and pain.
  - Follow any instructions that your doctor (or NP/PA) has given you.
  - *Here is some care advice and health information that should help.*
  
12. **Tell Ambulance Medics About Your Monkeypox Diagnosis:**
  - Tell the paramedic right away that you may have monkeypox.

13. **Tell Healthcare Personnel That You Might Have Monkeypox:**
  - When seeking medical care, tell the first healthcare worker you meet that you might have monkeypox.
  
14. **Alternate Disposition - Call Telemedicine Within 3 Days:**
  - Telemedicine may be your best choice for follow-up care for monkeypox.
  - You should call a telemedicine doctor (or NP/PA) now, if your own doctor is not available.
  
15. **Contact Lenses and Shaving:**
  - Do not use contact lenses. This can spread the infection to your eyes. Switch to glasses until your sores have healed.
  - Do not shave any areas with rash. This can spread the infection to new areas of skin.
  
40. **Call EMS 911 Now:**
  - Immediate medical attention is needed. You need to hang up and call 911 (or an ambulance).
  - *Triager Discretion:* I'll call you back in a few minutes to be sure you were able to reach them.
  
41. **Go to ED Now:**
  - You need to be seen in the Emergency Department.
  - Go to the ED at \_\_\_\_\_ Hospital.
  - Leave now. Drive carefully.
  
42. **Go to ED Now (or PCP Triage):**
  - **If No PCP (Primary Care Provider) Second-Level Triage:** You need to be seen within the next hour. Go to the ED/UCC at \_\_\_\_\_ Hospital. Leave as soon as you can.
  - **If PCP Second-Level Triage Required:** You may need to be seen. Your doctor (or NP/PA) will want to talk with you to decide what's best. I'll page the provider on-call now. If you haven't heard from the provider (or me) within 30 minutes, go directly to the ED/UCC at \_\_\_\_\_ Hospital.

43. **See HCP (or PCP Triage) Within 4 Hours:**
- **If Office Will Be Open:** You need to be seen within the next 3 or 4 hours. Call your doctor (or NP/PA) now or as soon as the office opens.
  - **If Office Will Be Closed and No PCP (Primary Care Provider) Second-Level Triage:** You need to be seen within the next 3 or 4 hours. A nearby Urgent Care Center (UCC) is often a good source of care. Another choice is to go to the ED. Go sooner if you become worse.
  - **If Office Will Be Closed and PCP Second-Level Triage Required:** You may need to be seen. Your doctor (or NP/PA) will want to talk with you to decide what's best. I'll page the on-call provider now. If you haven't heard from the provider (or me) within 30 minutes, call again. **Note:** If on-call provider can't be reached, send to UCC or ED.
- Note to Triager:**
- Use nurse judgment to select the most appropriate source of care.
  - Consider both the urgency of the patient's symptoms AND what resources may be needed to evaluate and manage the patient.
- Sources of Care:**
- **ED:** Patients who may need surgery or hospital admission need to be sent to an ED. So do most patients with serious symptoms or complex medical problems.
  - **UCC:** Some UCCs can manage patients who are stable and have less serious symptoms (e.g., minor illnesses and injuries). The triager must know the UCC capabilities before sending a patient there. If unsure, call ahead.
  - **OFFICE:** If patient sounds stable and not seriously ill, consult PCP (or follow your office policy) to see if patient can be seen NOW in office.
44. **See PCP Within 24 Hours:**
- **If Office Will Be Open:** You need to be examined within the next 24 hours. Call your doctor (or NP/PA) when the office opens and make an appointment.
  - **If Office Will Be Closed:** You need to be seen within the next 24 hours. A clinic or an urgent care center is often a good source of care if your doctor's office is closed or you can't get an appointment.
  - **If Patient Has No PCP:** Refer patient to a clinic or urgent care center. Also try to help caller find a PCP for future care.
- Note to Triager:**
- Use nurse judgment to select the most appropriate source of care.
  - Consider both the urgency of the patient's symptoms AND what resources may be needed to evaluate and manage the patient.
45. **See PCP Within 3 Days:**
- You need to be seen within 2 or 3 days.
  - **PCP Visit:** Call your doctor (or NP/PA) during regular office hours and make an appointment. A clinic or urgent care center are good places to go for care if your doctor's office is closed or you can't get an appointment. **Note:** If office will be open tomorrow, tell caller to call then, not in 3 days.
  - **If Patient Has No PCP:** A clinic or urgent care center are good places to go for care if you do not have a primary care provider. **Note:** Try to help caller find a PCP for future care (e.g., use a physician referral line). Having a PCP or "medical home" means better long-term care.



46. **See PCP Within 2 Weeks:**
- You need to be seen for this ongoing problem within the next 2 weeks.
  - **PCP Visit:** Call your doctor (or NP/PA) during regular office hours and make an appointment.
  - **If Patient Has No PCP:** A primary care clinic is where you need to be seen for chronic health problems. **Note:** Try to help caller find a PCP (e.g., use a physician referral line). Having a PCP or "medical home" means better long-term care.
47. **Home Care - Information or Advice Only Call.**
48. **Home Care:**
- You should be able to treat this at home.
49. **Call PCP Now:**
- You need to discuss this with your doctor (or NP/PA).
  - I'll page the on-call provider now. If you haven't heard from the provider (or me) within 30 minutes, call again.
50. **Call PCP Within 24 Hours:**
- You need to discuss this with your doctor (or NP/PA) within the next 24 hours.
  - **If Office Will Be Open:** Call the office when it opens tomorrow morning.
  - **If Office Will Be Closed:** I'll page the on-call provider now. **Exception:** from 9 pm to 9 am. Since this isn't urgent, we'll hold the page until morning.
51. **Call PCP When Office Is Open:**
- You need to discuss this with your doctor (or NP/PA) within the next few days.
  - Call the office when it is open.
52. **Go to L&D Now:**
- You need to be seen.
  - Go to the Labor and Delivery Unit or the Emergency Department at \_\_\_\_\_ Hospital.
  - Leave now. Drive carefully.
80. **Another Adult Should Drive:**
- It is better and safer if another adult drives instead of you.
89. **Call Back If:**
- You become worse
90. **Call Back If:**
- You have more questions

126. **Antibiotic Ointment - Infected Area:**
- Put a small amount of antibiotic ointment on the infected area 3 times per day.
  - You can get this over-the-counter (OTC) at a drugstore.
  - Use Bacitracin ointment (OTC in U.S.) or Polysporin ointment (OTC in Canada) or one that you already have.
  - Cover the area with a clean gauze or an adhesive bandage (such as a Band-Aid).
405. **Note to Triager - Answer the Question:**
- Answer the caller's question from information in triage guidelines, your clinical experience and knowledge, or a relevant reference / resource.
  - If you have access to the patient's medical record, you may wish to review the plan of care from the **most recent medical visit**.
  - If you are unsure, tell caller to call the doctor (or NP/PA) during office hours.
  - Document your response.
1003. **Pain and Fever Medicines:**
- For pain or fever relief, take either acetaminophen or ibuprofen.
  - They are over-the-counter (OTC) drugs that help treat both fever and pain. You can buy them at the drugstore.
  - Treat fevers above 101° F (38.3° C). The goal of fever therapy is to bring the fever down to a comfortable level. Remember that fever medicine usually lowers fever 2 degrees F (1 - 1 1/2 degrees C).
  - **Acetaminophen - Regular Strength Tylenol:** Take 650 mg (two 325 mg pills) by mouth every 4-6 hours as needed. Each Regular Strength Tylenol pill has 325 mg of acetaminophen. The most you should take each day is 3,250 mg (10 pills a day).
  - **Acetaminophen - Extra Strength Tylenol:** Take 1,000 mg (two 500 mg pills) every 8 hours as needed. Each Extra Strength Tylenol pill has 500 mg of acetaminophen. The most you should take each day is 3,000 mg (6 pills a day).
  - **Ibuprofen (e.g., Motrin, Advil):** Take 400 mg (two 200 mg pills) by mouth every 6 hours. The most you should take each day is 1,200 mg (six 200 mg pills), unless your doctor has told you to take more.
1006. **Pain and Fever Medicines - Extra Notes and Warnings:**
- Use the lowest amount of medicine that makes your pain or fever better.
  - Acetaminophen is thought to be safer than ibuprofen or naproxen in people over 65 years old. Acetaminophen is in many OTC and prescription medicines. It might be in more than one medicine that you are taking. You need to be careful and not take an overdose. An acetaminophen overdose can hurt the liver.
  - McNeil, the company that makes Tylenol, has different dosage instructions for Tylenol in Canada and the United States. In Canada, the maximum recommended dose per day is 4,000 mg or twelve Regular-Strength (325 mg) pills. In the United States, the maximum dose per day is ten Regular-Strength (325 mg) pills.
  - **Caution:** Do not take acetaminophen if you have liver disease.
  - **Caution:** Do not take ibuprofen if you have stomach problems, kidney disease, are pregnant, or have been told by your doctor to avoid this type of anti-inflammatory drug. Do not take ibuprofen for more than 7 days without consulting your doctor.
  - *Before taking any medicine, read all the instructions on the package.*

1091. **Don't Scratch:**
- Try not to scratch.
  - Scratching makes the itching worse (the 'Itch-Scratch' cycle).
  - Cut your fingernails short. Wash hands frequently with an antibacterial soap. This will help prevent a bacterial skin infection.
1126. **Antihistamine Medicines - Extra Notes and Warnings:**
- Antihistamine medicines can be used to treat allergic reactions, allergies, hay fever, hives, and itching.
  - Diphenhydramine (Benadryl) is a **first generation antihistamine** medicine. It can make you more sleepy than the newer second generation antihistamine medicines. The adult dose of Benadryl is 25 to 50 mg by mouth. You can take it up to 4 times a day.
  - **Second generation antihistamines** such as cetirizine, fexofenadine, and loratadine, have fewer side effects than first generation antihistamines. They tend to make you less sleepy.
  - **Caution:** Antihistamine medicines can make you sleepy. Do not drink alcohol, drive, or operate dangerous machines while taking this drug. It can also worsen dry eyes by decreasing natural tearing.
  - *Before taking any medicine, read all the instructions on the package.*
1127. **Antihistamine Medicines for Severe Itching:**
- For severe itching, you can take either cetirizine, fexofenadine, or loratadine.
  - They are over-the-counter (OTC) antihistamine medicines. You can buy them at a drugstore or grocery store.
  - **Cetirizine (Reactine, Zyrtec):** The adult dose is 10 mg. You take it once a day. Cetirizine is available in the United States as Zyrtec and in Canada as Reactine.
  - **Fexofenadine (Allegra):** In the United States, the adult dose is one 24-hour tablet (180 mg) once a day. In Canada, the adult dose is one 24-hour tablet (120 mg) once a day. Or, you can take one 12-hour (60 mg) tablet 2 times a day.
  - **Loratadine (Alavert, Claritin):** The adult dose is 10 mg. You take it once a day. Loratadine is available in the United States as Alavert and Claritin; it is available in Canada as Claritin.
1244. **Reducing the Itch - Oatmeal (Aveeno) Bath:**
- Sprinkle contents of one packet of Aveeno under running faucet with comfortably warm water.
  - Bathe for 15 to 20 minutes, 1 to 2 times daily.
  - Pat dry using towel - do not rub.
  - *Caution:* This can make the tub slippery.
1330. **Wear a Mask - Cover Your Mouth and Nose:**
- Wear a mask that fits snugly over your mouth and nose.
  - If you do not have a mask, then cover your mouth and nose with a disposable tissue (e.g., Kleenex, toilet paper, paper towel) or wash cloth.

1440. **Fever Medicine for Chickenpox - Acetaminophen:**
- For fevers above 101° F (38.3° C), you can take acetaminophen (e.g., Tylenol).
  - It is an over-the-counter (OTC) pain drug. You can buy it at the drugstore.
  - Generally, it is best to avoid medication use during pregnancy. However, acetaminophen is considered to be safe during pregnancy.
  - **Acetaminophen - Regular Strength Tylenol:** Take 650 mg (two 325 mg pills) by mouth every 4 to 6 hours as needed. Each Regular Strength Tylenol pill has 325 mg of acetaminophen. The most you should take each day is 3,250 mg (10 pills a day).
  - **Acetaminophen - Extra Strength Tylenol:** Take 1,000 mg (two 500 mg pills) every 8 hours as needed. Each Extra Strength Tylenol pill has 500 mg of acetaminophen. The most you should take each day is 3,000 mg (6 pills a day).
1441. **Fever Medicine for Chickenpox - Extra Notes and Warnings:**
- Acetaminophen is in many OTC and prescription medicines. It might be in more than one medicine that you are taking. You need to be careful and not take an overdose. An acetaminophen overdose can hurt the liver.
  - McNeil, the company that makes Tylenol, has different dosage instructions for Tylenol in Canada and the United States. In Canada, the maximum recommended dose per day is 4,000 mg or twelve Regular-Strength (325 mg) pills. In the United States, the maximum dose per day is ten Regular-Strength (325 mg) pills.
  - **Caution:** Do not take acetaminophen if you have liver disease.
  - *Before taking any medicine, read all the instructions on the package.*
1470. **Monkeypox:**
- Monkeypox is a rare disease caused by the monkeypox virus.
  - Monkeypox can be spread from person-to-person by direct skin contact. For example, spread can occur during intimate contact and sex.
  - Nearly all of the current monkeypox cases occur in adult men. Most cases occur in men who have sex with men.
1471. **Monkeypox - Symptoms:**
- Initial symptoms are chills, fatigue, **fever**, headache, muscle aches, back pain, and **swollen lymph nodes**. These symptoms last 1 to 5 days.
  - About 1 to 4 days after the fever subsides a **rash** appears. The rash is often on the genitals (penis, testicles, labia, and vagina) or anus. However, it can be on other areas such as the face, feet, hands, chest, and mouth. Each monkeypox sore is about 0.5 cm to 1 cm wide. Each sore goes through several stages: small red spot (macule), small red bump (papule), small water blister (vesicle), small cloudy blister (pustule). Then, the sore crusts over and the scab falls off after about a week.
  - Sometimes people get the rash first and afterwards other symptoms. Some people get just the rash.
  - For most people, the symptoms of monkeypox last 2 to 4 weeks.

1472. **Monkeypox - How It Is Spread:**

- Monkeypox can be spread from person-to-person. Most spread appears to occur from **direct contact** with infected sores, scab, and body fluids. In North America, most spread occurs by direct skin contact **during sex** (anal, oral, vaginal).
- Monkeypox can also be spread by respiratory droplets between people with close face-to-face encounters. It can also be spread by touching objects that have infectious body fluids on them (e.g., bedding, towels).
- People can also get monkeypox from infected animals (in Central and West Africa).
- *Incubation period:* Symptoms usually start between 1 to 2 weeks after exposure. Range is from 4 to 21 days.
- *Contagious period:* A person can spread monkeypox to others from when the first rash appears until the rash has crusted over and the scabs fall off (usually 7 to 14 days).

1473. **Monkeypox - Diagnosis:**

- A doctor (or NP/PA) can suspect the diagnosis of monkeypox based on a person's symptoms and confirm the diagnosis with testing.
- Two main types of tests are available for diagnosing monkeypox:
  - ... A healthcare worker can take a **swab of a monkeypox lesion** and send it to a laboratory for virus testing (e.g., monkeypox DNA PCR test). Virus testing can be performed by LabCorp (<https://www.labcorp.com/infectious-disease/monkeypox>) and an expanding number of other laboratories (Aegis, Mayo Clinic Laboratories, Quest Diagnostics, and Sonic Healthcare).
  - ... A blood test that shows **anti-orthopoxvirus IgM antibody** during the period of 4 to 56 days after rash onset.

1474. **Monkeypox - Treatment:**

- Currently there is no prescription medicine that has been proven to cure this infection or help a person get better sooner.
- For **most healthy people** with monkeypox, prescription medicines are usually not needed. People can treat the symptoms at home using over-the-counter medicines for fever and pain.
- However, there are some medicines (e.g., tecovirimat) that were developed for treating smallpox that may help treat monkeypox. Patients with monkeypox who are at **higher risk of severe illness** should be considered for treatment after their doctor (or NP/PA) consults with the CDC or the local health department.

1475. **How Can You Protect Others If You Have Monkeypox?**
- Stay at home (isolate) until all of the scabs have fallen off the monkeypox spots and the skin is healing. Stay in a separate area from other household members and pets. If able, use a separate bathroom from others. Only leave home as needed for emergencies and medical care.
  - Avoid any skin-to-skin contact. This includes:
    - ... Do not have sex (anal, oral, vaginal).
    - ... Do not cuddle, hug, or kiss.
    - ... Do not give or receive massages.
    - ... Do not share bedding, cups, eating utensils, or towels.
  - Avoid face-to-face contact. Wear a mask when within 6 feet (2 meters) of others.
  - Wash hands frequently with soap and water, or use hand sanitizer.
  - Clean and disinfect high touch surfaces daily (such as phones, remote controls, counters, tabletops, doorknobs).
  - Keep the rash covered. For example, with a bandage, gloves, long sleeves, or long pants.
1476. **How Can You Protect Yourself From Getting Monkeypox?**
- Avoid contact with materials (e.g., bed linens, clothing, sex toys) contaminated with monkeypox.
  - Avoid skin-to-skin contact with people who have monkeypox or have a rash that might be monkeypox. This includes:
    - ... Do not have sex (anal, oral, vaginal).
    - ... Do not cuddle, hug, or kiss.
    - ... Do not give or receive massages.
    - ... Do not share bedding, cups, eating utensils, or towels.
  - Wash your hands with soap and water. If soap and water are not available use a hand sanitizer.
  - Wear a well-fitted mask if you need to come in close contact with or care for someone suspected of having monkeypox.
1477. **Keep Rash Covered:**
- Keep the rash covered. For example, with a bandage, long sleeves, or long pants.
  - Wash hands with soap and water, or use hand sanitizer.
1481. **Pain and Fever Medicine During Pregnancy - Acetaminophen:**
- For pain or for fevers above 101° F (38.3° C), you can take acetaminophen (e.g., Tylenol).
  - It is an over-the-counter (OTC) drug. You can buy it at the drugstore.
  - Generally, it is best to avoid medication use during pregnancy. However, acetaminophen is considered to be safe during pregnancy.
  - **Acetaminophen - Regular Strength Tylenol:** Take 650 mg (two 325 mg pills) by mouth every 4 to 6 hours as needed. Each Regular Strength Tylenol pill has 325 mg of acetaminophen. The most you should take each day is 3,250 mg (10 pills a day).
  - **Acetaminophen - Extra Strength Tylenol:** Take 1,000 mg (two 500 mg pills) every 8 hours as needed. Each Extra Strength Tylenol pill has 500 mg of acetaminophen. The most you should take each day is 3,000 mg (6 pills a day).

1482. **Pain and Fever Medicine During Pregnancy - Extra Notes and Warnings:**
- Acetaminophen is in many OTC and prescription medicines. It might be in more than one medicine that you are taking. You need to be careful and not take an overdose. An acetaminophen overdose can hurt the liver.
  - McNeil, the company that makes Tylenol, has different dosage instructions for Tylenol in Canada and the United States. In Canada, the maximum recommended dose per day is 4,000 mg or twelve Regular-Strength (325 mg) pills. In the United States, the maximum dose per day is ten Regular-Strength (325 mg) pills.
  - **Caution:** Do not take acetaminophen if you have liver disease.
  - **Caution - Aspirin:** Do not take aspirin if you are pregnant, unless directed by your doctor (or NP/PA).
  - **Caution - NSAIDs:** Do not take ibuprofen (e.g., Advil, Motrin) or naproxen (e.g., Aleve) if you are pregnant.
  - *Before taking any medicine, read all the instructions on the package.*
1485. **Mouth Pain:**
- For mouth and throat sores, eat a **soft diet**.
  - For severe mouth sores, use 1 tsp (5 ml) of liquid **antacid** (e.g., Mylanta) as a mouth wash four times a day after meals.
1486. **Painful Urination:**
- **Females:** For painful vulva sores, apply petroleum jelly. For more severe pain, apply 2.5% lidocaine (e.g., over-the-counter Bactine antiseptic-anesthetic).
  - **Males:** Also use for painful sore on tip of the penis.
  - *Before using any medicine, read all the instructions on the package.*

## FIRST AID



N/A

## BACKGROUND INFORMATION

### Key Points

- Monkeypox is a rare disease caused by the monkeypox virus.
- Monkeypox can be spread from person-to-person by direct skin contact. For example, spread can occur during intimate contact and sex.
- Nearly all of current monkeypox cases occur in adult men. Most cases occur in men who have sex with men.
- Fever and rash occur in nearly all people who get monkeypox.
- An outbreak of monkeypox began in May, 2022. In July, 2022 the World Health Organization (WHO) declared monkeypox a global health emergency.

### Symptoms

Monkeypox usually starts off with **initial symptoms** lasting 1 to 5 days:

- Back pain
- Chills
- Fatigue

- **Fever**
- Headache
- **Muscle aches**
- Respiratory symptoms (e.g., cough, nose stuffiness, sore throat)
- **Swollen lymph nodes**

About 1 to 4 days after the fever subsides a **rash** appears. The rash is often on the genitals (penis, testicles, labia, and vagina) or rectal area. However, it can be on other areas such as the face, feet, hands, chest, and mouth. Each monkeypox sore is about 0.5 cm to 1 cm (about 1/4 inch) wide. Each monkeypox sore goes through the following stages:

- Small red spot (macule)
- Small red bump (papule)
- Small water blister (vesicle)
- Small cloudy blister (pustule)
- Then the sore crusts over and the scab falls off after about a week.

A person can have just a few or several hundred monkeypox sores. Sometimes people get the rash first and afterwards other symptoms. Some people get just the rash.

Fever and rash occur in nearly all people who get monkeypox.

For most people the symptoms of monkeypox last 2 to 4 weeks.

## Causes

Monkeypox is caused by the monkeypox virus.

## How It Is Spread (Transmission)

Monkeypox can be spread from person-to-person. Most spread appears to occur from **direct contact** with infected sores, scab, and body fluids. In North America, most spread occurs by direct skin contact during **sex** (anal, oral, vaginal). Monkeypox can also be spread by respiratory droplets between people with close face-to-face encounters. It can also be spread by touching objects that have infectious body fluids on them (e.g., bedding, towels).

- *Incubation period:* Symptoms usually start between 1 to 2 weeks after exposure. Range is from 4 to 21 days.
- *Contagious period:* A person can spread monkeypox from the time symptoms start until all the monkeypox sores have crusted over and fallen off (usually 7 to 14 days).

## Risk Factors

The main risk factor is known exposure to monkeypox. Other risk factors are:

- Men who have sex with men
- Recent travel to Central and West Africa

## Complications

Nearly all adults (99%) who get monkeypox will survive. People can sometimes develop scars or pockmarks from the monkeypox sores.

Rare complications include:



- Bacterial skin infections such as an abscess, cellulitis, pyomyositis, and lymphangitis
- Cervical lymphadenopathy
- Dehydration
- Encephalitis
- Ocular lesions
- Pneumonia
- Sepsis and septic shock

## Diagnosis

A doctor (or NP/PA) can suspect the diagnosis of monkeypox based on a person's symptoms and confirm the diagnosis with testing.

Two types of tests are available for diagnosing monkeypox.

- A healthcare worker can take a **swab of a monkeypox lesion** and send it to a laboratory for virus testing (e.g., monkeypox DNA PCR test). Virus testing can be performed by LabCorp (<https://www.labcorp.com/infectious-disease/monkeypox>) and an expanding number of other laboratories (Aegis, Mayo Clinic Laboratories, Quest Diagnostics, and Sonic Healthcare).
- A blood test that shows **anti-orthopoxvirus IgM antibody** during the period of 4 to 56 days after rash onset.

## Treatment

Currently there is no prescription medicine that has been proven to cure this infection or help a person get better sooner.

For **most healthy people** with monkeypox, prescription medicines are usually not needed. People can treat the symptoms at home using over-the-counter medicines for fever and pain.

However, there are some medicines (e.g., tecovirimat) that were developed for treating smallpox that may help treat monkeypox. Patients with monkeypox who are at **higher risk of severe illness** should be considered for treatment after their doctor (or NP/PA) consults with the CDC or the local health department. People at higher risk include:

- People who have a chronic skin condition (e.g., atopic dermatitis).
- People who have a weak immune system (e.g., HIV positive, cancer chemo, splenectomy, organ transplant, chronic steroids).
- Women who are pregnant or breastfeeding.

## Prevention

How can a person protect themselves from getting monkeypox?

- Avoid contact with materials (e.g., bed linens, clothing, sex toys) that might be contaminated with monkeypox.
- Avoid skin-to-skin contact with people who have monkeypox or have a rash that might be monkeypox. This includes:
  - ... Do not have sex (anal, mouth, vaginal).
  - ... Do not cuddle, hug, or kiss.
  - ... Do not give or receive massages.
  - ... Do not share bedding, cups, eating utensils, or towels.

- Wash your hands with soap and water. If soap and water are not available use a hand sanitizer.
- Wear a well-fitted mask if you need to come in close contact with or care for someone suspected of having monkeypox.

How can a person with monkeypox protect others from getting monkeypox?

- Stay at home (isolate) until all of the scabs have fallen off the monkeypox spots and the skin is healing. Stay in a separate area from other household members and pets.
- Avoid any skin-to-skin contact. This includes:
  - ... Do not have sex (anal, oral, vaginal).
  - ... Do not cuddle, hug, or kiss.
  - ... Do not give or receive massages.
  - ... Do not share bedding, clothes, cups, eating utensils, or towels.
- Avoid face-to-face contact. Wear a mask when within 6 feet (2 meters) of others.
- Wash hands frequently with soap and water, or use a hand sanitizer.
- Clean and disinfect high touch surfaces daily (such as phones, remote controls, counters, tabletops, doorknobs).
- Keep the rash covered. For example, with a bandage, gloves, long sleeves, or long pants.

Information on cleaning clothes and disinfecting the home is available at <https://www.cdc.gov/poxvirus/monkeypox/specific-settings/home-disinfection.html>.

The smallpox vaccine confers about 85% immunity against monkeypox. Monkeypox infection in those vaccinated against smallpox may result in milder infection. Routine smallpox vaccination ended in 1972 and those vaccinated typically have a post vaccine scar on upper arm.

### Prevention - Post-Exposure

There are two smallpox vaccines that can also be used for **post-exposure (after an exposure)** prevention of monkeypox.

- **ACAM2000 Vaccine (U.S.):** This is a live vaccine. It has more serious side effects than the MVA vaccine.
- **MVA Vaccine (IMVAMUNE in Canada, JYNNEOS in U.S.):** It is **preferred** over the ACAM2000. The most common side effects are itching, pain, redness, and swelling at the injection site. People may also have minor reactions such a feeling tired, headache, a mild fever, and muscle aches. Severe reactions (e.g., allergic reaction, anaphylaxis) are rare.

Vaccination works better the sooner it is given. Ideally, it should be given within 4 days of exposure. Vaccination can be considered for up to **14 days after an exposure** according to the CDC. Vaccination may be indicated in people with intermediate to high-risk exposures, such as:

- Skin-to-skin contact (e.g., hugging, kissing, massaging, having sex) with someone with monkeypox;
- Contact with materials (e.g., bed linens, clothing, sex toys) contaminated with monkeypox;
- Or, not wearing an N-95 mask while being in a patient's room (or within 6 feet or 2 meters) during any procedure that may have created an aerosol of the monkeypox secretions.

For those that cannot receive the vaccine, vaccinia immune globulin may be an alternative treatment for post-exposure prevention.

### FAQs

*What other infections have similar symptoms as monkeypox?*

The two viral infections that most closely resemble monkeypox are:

- Chickenpox (varicella zoster)
- Smallpox

There are many other infections that should be considered in the differential diagnosis, including: bacterial skin infections, chancroid, dengue fever, herpes simplex, molluscum contagiosum, scabies, and others.

*Where on the body does the monkeypox rash occur?*

The rash tends to be centrifugal, starting on the face and moving out towards the palms and soles of the hands and feet. It can also involve the oral mucous membranes, conjunctiva, cornea, or genitalia.

*How do the symptoms of chickenpox and monkeypox compare?*

In people who have chickenpox...

- The fever usually begins at the same time as the rash.
- A rash on palms and soles is rare.
- The rash is more concentrated on the trunk.
- There are usually different stages of rash (e.g., red bumps, cloudy blisters, crusts) all present at the same time.
- Chickenpox typically occurs after exposure to a child with chickenpox.

In people who have monkeypox...

- Fever and other symptoms usually begin before the rash.
- Lymph node swelling is common.
- The rash is typically the same size and at the same stage on different areas of the body.
- Monkeypox typically occurs after exposure during intimate direct contact (e.g., kissing, hugging) or sex with an adult (usually male) who has monkeypox.

### **Internet Resources**

- *Canada.CA*: Monkeypox Outbreak Update. Available at <https://www.canada.ca/en/public-health/services/diseases/monkeypox.html>.
- *Johns Hopkins - Center for Health Security*: Monkeypox. Available at <https://www.centerforhealthsecurity.org/our-work/publications/monkeypox>.
- *U.S. Centers for Disease Control and Prevention (CDC)*: Monkeypox. Available at <https://www.cdc.gov/poxvirus/monkeypox/index.html>.
- *U.S. Centers for Disease Control and Prevention (CDC)*: Monkeypox and Global Case Count. Available at <https://www.cdc.gov/poxvirus/monkeypox/response/2022/index.html>.
- *U.S. Centers for Disease Control and Prevention (CDC)*: Monkeypox and Safer Sex. PDF handout. Available at <https://www.cdc.gov/poxvirus/monkeypox/pdf/MonkeyPox-SaferSex-InfoSheet-508.pdf>.
- *World Health Organization (WHO)*: Clinical Management and Infection Prevention and Control for Monkeypox. Interim Guidance June 2022. Available at <https://www.who.int/publications/i/item/WHO-MPX-Clinical-and-IPC-2022.1>.

### **Expert Reviewers**

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## SEARCH WORDS

BUMPS  
BUMPY RASH  
CHICKENPOX  
GENERALIZED RASH  
ITCHING  
ITCHY  
ITCHY RASH  
LARGE RASH  
MONKEY  
MONKEY POX  
MONKEYPOX  
NONSPECIFIC VIRAL EXANTHEM  
PAPULAR RASH  
RAISED PINK BUMPS  
RAISED RASH

RASH  
RASH - WIDESPREAD  
RASH WIDESPREAD  
RASHES  
RED RASH  
SKIN  
SMALL POX  
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SPOTS  
VIRAL EXANTHEM  
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WIDESPREAD RASH  
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