

# MUMPS

Mumps is a contagious disease that is caused by a paramyxovirus. It typically presents as swelling of the parotid (parotitis) or other salivary gland(s).

## DISEASE COURSE

- The incubation period is typically 16–18 days after exposure to the virus (range 12–25 days). Patients are considered infectious 2 days before to 5 days after parotitis onset.
- Mumps can occur in fully vaccinated persons, but vaccinated persons are at much lower risk for mumps disease and complications.
- Congregate settings with intense and frequent close contact such as college campuses, close-knit communities, or correctional/detention facilities are at an increased risk for mumps outbreaks.

## SYMPTOMS

**Prodromal:** Low-grade fever which may last 3–4 days, myalgia, anorexia, malaise, or headache may occur several days before parotitis onset.

**Parotitis:** Mumps usually involves pain, tenderness, and swelling in one or both parotid glands. Because of the swelling of the parotid, the angle of the jawbone is no longer visible and often the jawbone cannot be felt.

- Parotitis may be unilateral or bilateral. One parotid may swell before the other, and in 25% of patients only one side swells.
- Sublingual and submandibular glands under the floor of the mouth also may swell but this occurs less frequently than parotitis.
- On average, parotitis lasts 5 days, with most cases resolving after 10 days. Most people with mumps recover completely within two weeks.

Mumps infection may also present only with nonspecific or primarily respiratory symptoms, or may be asymptomatic.

## COMPLICATIONS

**Most common complications:** Orchitis (primarily in post-pubertal males), oophoritis and mastitis (adolescent and adult females), meningitis, pancreatitis, and hearing loss.

**Other severe complications can include:** Encephalitis, nephritis, myocarditis and other sequelae, including paralysis, seizures, cranial nerve palsies, hydrocephalus, and death, although exceedingly rare.

Complications can occur in the absence of parotitis. Vaccinated persons are less likely to present with severe symptoms or complications.

## WHAT TO DO IF YOU HAVE A SUSPECTED CASE

1. Instruct patients to self-isolate until 5 days after onset of parotitis or other salivary gland swelling. Patients without parotitis should self-isolate for 5 days after onset of their first symptom.
2. In a healthcare facility, isolate the patient and follow standard and droplet precautions for 5 days post-parotitis onset for inpatients.
3. Only healthcare personnel with presumptive evidence of immunity\* should attend to suspected mumps patients.
4. Report this suspected case to your local and/or state health department.
5. Collect a buccal specimen for RT-PCR testing; if it has been >3 days since parotitis onset, also collect serum for IgM testing. Collect buccal and urine specimens for RT-PCR and a serum specimen for IgM for suspected patients with mumps complications. However, a negative laboratory test does not rule out mumps. See lab resources.
6. Negative laboratory results among vaccinated persons do not necessarily rule out the diagnosis of mumps, particularly if there is an outbreak of parotitis. For sporadic cases that have negative laboratory results for mumps, consider testing for other etiologies which can also cause parotitis.

Characteristic swelling in the jaw of a young adult and child with mumps



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## RESOURCES

Mumps clinical testing flowcharts for providers: <https://www.cdc.gov/mumps/php/public-health-strategy/mumps-testing-aid/>

Mumps for healthcare providers: <https://www.cdc.gov/mumps/hcp/clinical-overview/>

Laboratory Testing for Mumps Infection: <https://www.cdc.gov/mumps/php/laboratories/>

Surveillance manual chapter on mumps: <https://www.cdc.gov/surv-manual/php/table-of-contents/chapter-9-mumps>

Strategies for the control and investigation of mumps outbreaks: <https://www.cdc.gov/mumps/php/public-strategy/>

\* Presumptive evidence of immunity for healthcare personnel (one of the following): documentation of two doses of mumps virus-containing vaccine, laboratory evidence of immunity (positive IgG), laboratory confirmation of disease, or birth before 1957. Consider vaccinating healthcare workers born before 1957 who do not have other evidence of immunity to mumps. Self-reported doses and a history of vaccination provided by a parent or other caregiver should not be accepted.

## VACCINE RECOMMENDATIONS

Two doses of MMR vaccine are about 86% effective at preventing mumps. Visit: <https://www.cdc.gov/mumps/hcp/vaccine-considerations/>



**Centers for Disease  
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