



# PHYSICIAN FACT SHEET

## MUMPS

Maricopa County Department of Public Health

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### Clinical Description

Mumps is a systemic viral disease caused by a paramyxovirus. The classic symptom of mumps is parotitis (acute onset of unilateral or bilateral swelling of salivary gland(s), usually parotid gland, less commonly sublingual and/or submaxillary glands). Swelling is self-limited, lasting at least 2 days, but may persist longer than 10 days. Prodromal symptoms may precede parotitis by several days (low-grade fever lasting 3-4 days, myalgia, anorexia, malaise, headache). Mumps may present with nonspecific or primary respiratory symptoms or may be a subclinical infection. Mumps should be suspected in persons with 2 or more days of parotitis (or other salivary gland swelling) regardless of immunization status in the absence of other causes.

Prior to routine immunization against mumps, mumps was a common illness among infants, children and young adults. Since the introduction of routine Measles, Mumps, Rubella (MMR) vaccination in the U.S., mumps has been declining with occasional outbreaks among immunized populations as well as un-immunized. Mumps vaccination is not 100% effective in preventing mumps. About 80% of persons who have received one dose and 90% who have received two doses are protected. Severe complications of mumps are rare and can include encephalitis, oophoritis, deafness and pancreatitis. Some complications are known to occur more frequently among adults than among children (orchitis ~30-40%, mastitis ~30%, aseptic meningitis ~10%).

### Incubation Period

12-25 days; usually 16-18 days

### Transmission/ Infection control

Mumps virus is spread by contact with respiratory tract secretions and saliva, requires droplet precautions.

### Contagious Period

Several days before through 5 days after onset of parotitis

### Diagnosis

Mumps is not the only cause of parotitis. Other causes are parainfluenza virus, Epstein-Barr Virus, influenza A, Coxsackie A virus, echovirus, lymphocytic choriomeningitis virus, HIV, along with non-infectious causes (drugs, alcoholism, diabetes, bulimia, tumors, obstruction of the salivary duct, etc.).

**Mumps virus is the only known cause of epidemic parotitis.**

Mumps diagnosis should be confirmed by isolation of mumps virus or detection of mumps virus nucleic acid in specimens from buccal swabs, throat washings, saliva, or spinal fluid. Serum specimens for mumps antibodies should also be collected. Contact Maricopa County Department of Public Health (MCDPH) for assistance with viral testing at the Arizona State Public Health Laboratory (ASPHL).

### Mumps Viral Culture or PCR

Collect a buccal swab as soon as possible (ideally, within 3 days of parotitis and not more than 9 days after onset of parotitis). Gently massage the salivary gland area for 30 seconds prior to obtaining swab (Dacron) from buccal/parotid duct, and place swab in viral transport media (i.e., Hank's Solution) and refrigerate (do not freeze). Contact MCDPH to arrange for testing at ASPHL.

Collect urine specimen: 5-10 mls from clean catch urine, store in a screw top sterile container, preferably a 15 ml centrifuge tube. Refrigerate specimen

## Serologic Testing

Collect serum specimen for mumps IgM Ab testing 3-7 days after onset of parotitis. Confirming mumps diagnosis by serological methods is challenging in a highly immunized population, as Mumps IgM antibody response may be absent or short-lived. As with any lab test, there can be false positive results. Mumps IgG antibody alone is not diagnostic.

## Treatment

Supportive care. Isolate at home through day 5 of parotitis to prevent spread to others. Encourage strict hand and cough hygiene throughout contagious period.

## Prophylaxis

Neither vaccine nor immune globulin have been demonstrated to be effective in preventing illness after exposure. Immunization with MMR vaccine prior to exposure as recommended by the Advisory Committee on Immunization Practices (ACIP): at ages 12-15 months and 4-6 years and all persons without evidence of immunity. In certain outbreak situations, Public Health Officials may recommend a 3<sup>rd</sup> dose of MMR to targeted populations.

Healthcare personnel without evidence of immunity should be excluded from the 12th day after the first unprotected exposure to mumps through the 25th day after the last exposure.

Healthcare personnel who had been previously vaccinated for mumps, but received only one dose of mumps vaccine may continue working following an unprotected exposure to mumps. Such personnel should receive a second dose as soon as possible, but no sooner than 28 days after the first dose. They should be educated about symptoms of mumps, including nonspecific presentations, and should notify occupational health if they develop these symptoms.

A diagnosis of mumps should be considered in exposed healthcare personnel who develop non-specific respiratory infection symptoms during the incubation period after unprotected exposures to mumps, even in the absence of parotitis.

## Reports Required

Telephone reports of cases and suspect cases are required within 1 working day after a case or suspect case is diagnosed, treated, or detected.

Contact: Office of Communicable Disease Epidemiology at Maricopa County Department of Public Health– 602-506-6767 during normal business hours or 602-747-7111 for afterhours, weekends and holidays

## Practitioner Resources

<http://www.cdc.gov/mmwr/preview/mmwrhtml/rr6204a1.htm>

<http://www.cdc.gov/mumps/prev-control-settings/>

<http://www.cdc.gov/mumps/lab/index.html>

<http://www.cdc.gov/vaccines/hcp/acip-recs/index.html>