CONDITION

Mumps

Mumps is a contagious viral infection that can cause painful swelling of the salivary glands near the jaw.

WHAT IT IS
Contagious viral infection affecting the salivary glands

BODY SYSTEM
Salivary glands, reproductive organs, and nervous system

MAIN SYMPTOMS
Swollen cheeks, jaw pain, fever, headache

WHAT CAUSES IT
Mumps virus infection

HOW IT IS DIAGNOSED
Buccal-swab PCR, sometimes blood antibody testing

MAIN TREATMENT
Rest, fluids, pain relief, and isolation

CAN IT BE CURED?
Yes - infection usually clears on its own

IS IT AN EMERGENCY?
Sometimes - severe headache with stiff neck

LONG-TERM OUTLOOK
Most people recover fully within two weeks

Overview

Mumps is a contagious infection caused by the mumps virus. It is best known for causing swelling of the parotid glands. These are salivary glands located below and in front of each ear.

When these glands swell, the cheeks may look puffy and the jaw may feel painful or tender. Swelling can affect one or both sides of the face.

Mumps spreads through saliva and respiratory droplets. These can be released when someone coughs, sneezes, talks, or shares cups and utensils. People can pass on the virus before they know they are ill.

Vaccination has made mumps much less common in countries with established immunisation programmes. However, outbreaks still happen, including among vaccinated people.

Vaccination lowers the chance of infection and usually reduces the risk of serious complications.

Most people recover without lasting problems. Mumps matters because it can occasionally affect the testicles, ovaries, pancreas, brain, or the tissues surrounding the brain.

Symptoms

Symptoms usually begin about two to three weeks after contact with the virus. Some people have mild symptoms or no noticeable symptoms.

Early symptoms can resemble other viral infections. They may include:

The characteristic facial swelling may develop after the early symptoms. It often becomes most noticeable over the next few days. The swollen area can feel firm and tender.

Not everyone with mumps develops swollen salivary glands. Mumps can therefore be difficult to recognise from symptoms alone.

Swelling around the jaw has several other possible causes. These include blocked salivary ducts, bacterial infections, dental problems, and other viruses. Symptoms cannot confirm mumps without appropriate testing.

- Fever, headache, tiredness, and reduced appetite
- Muscle aches or a general unwell feeling
- Pain around the ear, cheek, or jaw
- Pain when chewing, swallowing, or eating sour foods
- Swelling below one or both ears

Causes and risk factors

Mumps is caused by the mumps virus. The virus enters through the nose or mouth and can spread to the salivary glands and other parts of the body.

It spreads mainly through close contact with saliva or respiratory droplets. Infection can occur through face-to-face contact, kissing, or sharing drinks, cutlery, or other objects contaminated with saliva.

A person with mumps is generally considered most infectious from a few days before salivary-gland swelling begins until five days after it starts. This means someone may spread the virus before the typical swollen cheeks appear.

The risk is higher if you:

Mumps can occur after vaccination because protection is not complete and may decrease over time. Breakthrough infections are often milder, but transmission and complications are still possible.

- Have not received mumps-containing vaccination
- Have received fewer recommended doses
- Live, study, work, or socialise in close-contact settings
- Have close contact with someone who has mumps
- Are part of a community experiencing an outbreak

Diagnosis

A healthcare professional will ask about your symptoms, vaccination history, recent travel, and possible contact with mumps. They may examine the swelling around your ears and jaw.

A laboratory test is usually needed to confirm the infection. The preferred test is generally a polymerase chain reaction, or PCR, test. PCR looks for the virus's genetic material in a sample collected from inside the cheek near a salivary duct. This is called a buccal swab.

The sample is most useful when collected soon after swelling begins. In some situations, a throat swab, urine sample, or blood test may also be used.

Blood tests look for antibodies made by the immune system. However, antibody results can be difficult to interpret, especially in people who have been vaccinated. A negative antibody test does not always rule out mumps.

Suspected and confirmed mumps cases may need to be reported to public health authorities. Reporting helps identify contacts and control outbreaks. If you think you have mumps, telephone the clinic before attending so staff can reduce exposure to other people.

Treatment and management

There is no routine antiviral treatment that removes the mumps virus. Antibiotics like amoxicillin or doxycycline do not work because mumps is caused by a virus, not bacteria.

Treatment focuses on comfort and preventing dehydration while the immune system clears the infection. This may include:

Follow the medicine label and ask a pharmacist or healthcare professional if you are unsure

what is safe for you. Aspirin should not be given to children or teenagers with a viral infection because of the risk of Reye syndrome, a rare but serious condition affecting the brain and liver.

To reduce transmission, stay away from school, work, social gatherings, and close contact with others for five days after salivary-gland swelling begins. Follow any additional instructions from your local public health service. Avoid sharing cups, utensils, towels, or toothbrushes.

Wash your hands regularly and cover coughs and sneezes. If possible, avoid close contact with babies, pregnant people, and anyone with a weakened immune system while you may be infectious.

Complications may need hospital assessment or specialist care. For example, severe dehydration may require fluids through a vein, while symptoms involving the brain or its surrounding tissues need urgent evaluation.

- Rest and regular fluids
- Paracetamol, also called acetaminophen, or another suitable pain reliever
- A cool or warm compress over swollen glands
- Soft foods if chewing is painful
- Avoiding sour foods and drinks if they worsen salivary-gland pain

Complications

Most people recover without complications. Complications are more likely after puberty, although they can occur at any age.

Possible complications include:

Severe testicular pain is not always caused by mumps. It can also be a sign of testicular torsion, in which the testicle twists and loses its blood supply. This requires urgent assessment.

- Orchitis: Painful inflammation of one or both testicles. It can cause swelling and, occasionally, shrinkage of the affected testicle. Permanent infertility is uncommon.
- Oophoritis: Inflammation of an ovary, which can cause lower abdominal or pelvic pain.
- Mastitis: Inflammation of breast tissue.
- Pancreatitis: Inflammation of the pancreas, causing upper abdominal pain, nausea, or vomiting.
- Meningitis: Inflammation of the tissues around the brain and spinal cord. Symptoms can include severe headache, stiff neck, vomiting, or sensitivity to light.

- Encephalitis: Inflammation of the brain, which can cause confusion, seizures, unusual behaviour, or reduced alertness.
- Hearing loss: Temporary hearing changes can occur. Permanent hearing loss is rare.

Prevention

Mumps cannot always be prevented, but vaccination provides the best protection. Mumps vaccination is usually given as part of the combined measles, mumps, and rubella vaccine, known as MMR.

Two doses provide better protection than one. The exact vaccination schedule differs by country and age. If your records are incomplete, a healthcare or vaccination service can advise whether you need another dose.

During an outbreak, public health authorities may recommend an additional MMR dose for certain people at increased risk. The vaccine prevents future infection but does not treat an infection that has already started.

Vaccinated people can still develop mumps, but they are less likely to become infected and may have a lower risk of complications.

Other ways to reduce spread include staying home while infectious, washing your hands, covering coughs and sneezes, improving ventilation, and not sharing items that may carry saliva.

Living with it and what to expect

Facial swelling and pain usually improve gradually over several days. Most people recover fully within about two weeks, although tiredness may last longer.

Drink regularly even if swallowing is uncomfortable. Small amounts taken often may be easier than large drinks. Soft, mild foods can help if chewing or acidic foods increase the pain.

Remain away from work, school, and close social contact for the recommended isolation period. Before returning, you should also feel well enough to manage your usual activities. Local public health advice may differ during an outbreak.

A routine follow-up is not always needed after an uncomplicated recovery. Arrange follow-up if swelling is not improving, symptoms return, fever continues, or tiredness interferes with daily life. Persistent hearing changes, testicular symptoms, or symptoms following meningitis or encephalitis may require longer-term monitoring.

Most people do not have lasting effects. When complications occur, recovery may take longer, and the outcome depends on which organs were affected.

When to get medical help

Contact a healthcare service promptly if you think you or your child may have mumps. Call before attending in person. This allows the service to arrange testing and limit exposure to other patients.

Seek urgent same-day medical advice for:

Get emergency help for:

These symptoms do not necessarily mean mumps has caused a serious complication, but they need immediate assessment.

- Sudden, severe, or increasing testicular pain or swelling
- Severe abdominal or pelvic pain
- Repeated vomiting or difficulty keeping fluids down
- Signs of dehydration, such as very little urine or increasing drowsiness
- New hearing loss or a major change in hearing
- Symptoms that are worsening rather than improving
- A severe headache with a stiff neck or strong light sensitivity
- Confusion, unusual behaviour, or difficulty waking
- A seizure
- Difficulty breathing
- Blue, grey, or unusually pale lips or skin

Common questions

How long is mumps contagious?

Mumps is generally most contagious from a few days before gland swelling begins until five days after it starts. Stay away from work, school, and close contact during that period, and follow local public health advice.

Can I get mumps if I had the MMR vaccine?

Yes. MMR vaccination greatly reduces the risk but does not prevent every infection. Protection may also decrease over time. Vaccinated people who develop mumps often have milder illness and fewer complications.

Can adults get mumps?

Yes. Mumps can affect people of any age. Adults and teenagers may be more likely than young children to develop complications such as testicular, ovarian, pancreatic, or nervous-system inflammation.

Can mumps cause infertility?

Mumps-related orchitis can affect sperm production and may cause an affected testicle to shrink. Permanent infertility is uncommon, even when orchitis occurs. Ovarian inflammation has not been clearly shown to cause infertility.

Can I get mumps more than once?

A previous infection usually produces long-lasting immunity, so another infection is unusual. However, symptoms that look like mumps can be caused by other infections or salivary-gland conditions, so repeat swelling should be assessed.

How can I tell mumps from a swollen lymph node?

Mumps usually causes swelling in front of and below the ear, often making the jawline less visible. Swollen lymph nodes tend to feel like separate lumps in the neck. Appearance alone cannot confirm the cause, so testing may be needed.

Sources

- Centers for Disease Control and Prevention: About Mumps
- Centers for Disease Control and Prevention: Clinical Overview of Mumps
- Centers for Disease Control and Prevention: Laboratory Testing for Mumps
- Centers for Disease Control and Prevention: Mumps Vaccination
- UK Health Security Agency: Mumps-Symptoms, Diagnosis and Management
- World Health Organization: Mumps Virus Vaccines-WHO Position Paper
- Rubin S, Eckhaus M, Rennick LJ, Bamford CGG, Duprex WP. Molecular biology, pathogenesis and pathology of mumps virus. Journal of Pathology. 2015;235(2):242-252