CONDITION

Abscessed tooth

Learn how a tooth abscess develops, what symptoms it can cause, how dentists treat the infection, and when facial swelling needs urgent care.

WHAT IT IS
Pocket of pus around a tooth

BODY SYSTEM
Teeth and gums

MAIN SYMPTOMS
Tooth pain, gum swelling, pus drainage, facial swelling

WHAT CAUSES IT
Bacterial infection

HOW IT IS DIAGNOSED
Dental examination and X-rays

MAIN TREATMENT
Dental drainage and source treatment

CAN IT BE CURED?
Yes, dental treatment removes infection

IS IT AN EMERGENCY?
Sometimes, breathing or swallowing difficulty

LONG-TERM OUTLOOK
Good with treatment, but untreated infection can spread

Overview

An abscessed tooth is a pocket of pus caused by a bacterial infection in or around a tooth. Pus contains bacteria, damaged tissue, and infection-fighting cells.

A periapical abscess forms near the tip of a tooth's root. It often develops when bacteria reach the soft center of the tooth, called the pulp . The pulp contains nerves, blood vessels, and connective tissue.

A periodontal abscess forms in the gum and supporting tissues beside a tooth. It is often related to gum disease or a deep space between the tooth and gum.

A tooth abscess does not usually heal without dental treatment. Pain may decrease if the abscess drains or if the tooth's nerve dies, but the infection can remain active. Treatment

removes or drains the infection and addresses its source. Depending on the tooth, this may involve root canal treatment, gum treatment, or removal of the tooth.

Prompt dental care can help relieve pain, preserve the tooth when possible, and prevent infection from spreading into the jaw, face, or neck.

Symptoms

Pain from an abscessed tooth may be constant, throbbing, or sharp. It may become worse when biting or chewing. Hot and cold foods may also trigger pain, although a tooth with a dead nerve may no longer react to temperature.

Other possible symptoms include:

Symptoms vary. Some abscesses cause severe pain, while others produce mild pressure or intermittent drainage. A lack of pain does not rule out an infection.

Contact a dentist promptly if you have ongoing tooth pain, gum swelling, drainage, or pain when biting. Fever, spreading facial swelling, or difficulty opening the mouth requires urgent assessment the same day.

Call emergency services or go to an emergency department if swelling makes it difficult to breathe or swallow, affects the eye or vision, rapidly spreads into the face or neck, or is accompanied by confusion, faintness, or severe illness. These symptoms may mean the infection is affecting the airway or spreading beyond the tooth.

- Swelling or redness of the gum near a tooth
- A tender bump on the gum that may drain pus
- A bad taste or unpleasant smell in the mouth
- Tooth sensitivity or a feeling that the tooth is "too high" when biting
- Swelling of the cheek, jaw, or face
- Tender or enlarged lymph nodes under the jaw or in the neck
- Difficulty opening the mouth fully
- Fever or feeling generally unwell

Causes and risk factors

Most tooth abscesses begin when bacteria enter damaged tooth or gum tissue.

Tooth decay is a common pathway. Decay can gradually pass through the hard outer enamel and the layer beneath it, called dentin. Once bacteria reach the pulp, inflammation and infection can spread through the root into nearby bone.

A crack, chip, or other injury may also let bacteria enter the pulp. This can happen even when the outside of the tooth looks fairly normal. Previous dental work does not cause most abscesses, but a tooth with a large filling, crown, or past injury may have a damaged or weakened pulp.

Periodontal abscesses can develop when advanced gum disease creates deep pockets around a tooth. Bacteria and debris may become trapped in these spaces. A foreign object lodged under the gum can sometimes contribute.

Factors that can raise the likelihood of dental infection include:

These factors do not mean that a person has an abscess. A dental examination is needed to identify the cause of tooth pain or swelling.

- Untreated tooth decay
- Gum disease
- Cracked or injured teeth
- Dry mouth, which reduces the protective effects of saliva
- Infrequent brushing, cleaning between teeth, or dental care
- Frequent exposure to sugary foods or drinks
- Smoking or other tobacco use
- Health conditions or medicines that weaken immune defenses

Diagnosis

A dentist usually begins by asking where the pain is located, how long it has lasted, and what makes it better or worse. It is helpful to mention facial swelling, fever, recent dental treatment, injuries, medical conditions, allergies, and current medicines.

During the examination, the dentist may inspect the tooth and gums for decay, cracks, drainage, redness, or swelling. The tooth may be gently tapped or tested with pressure. Pain during these tests can help identify inflammation around the root.

Temperature or electrical tests may be used to check whether the pulp is still responding. Gum measurements can show whether there is a deep periodontal pocket beside the tooth.

Dental X-rays can reveal decay, bone loss, or changes near the root. However, an early

infection may not always be obvious on an X-ray. If swelling appears to have spread into deeper areas of the face or neck, medical imaging such as a CT scan may be needed in an urgent-care or hospital setting.

Several problems can resemble a dental abscess, including a cracked tooth, inflamed pulp without an abscess, sinus disease, jaw-joint pain, or nerve-related facial pain. The examination helps determine which tooth or tissue is responsible.

Treatment and management

The main goal is to remove the source of infection and allow any trapped pus to drain. Pain control and protection of nearby tissues are also important.

For an abscess that began inside a tooth, treatment may include root canal treatment . During this procedure, a dentist or endodontist removes infected pulp, cleans and shapes the channels inside the roots, and seals them. The tooth may later need a crown or another restoration to protect it.

If the tooth cannot be restored, extraction may be recommended. Removing the tooth also removes the infected source, although the area may still require drainage and follow-up care.

An abscess may be opened and drained through the tooth, the gum, or a small incision. A periodontal abscess may also require cleaning beneath the gum and treatment of the underlying gum disease.

Antibiotics like amoxicillin or doxycycline are not needed for every tooth abscess. Dental treatment and drainage are usually the key steps for a localized infection. Antibiotics may be used when infection is spreading, when fever or other whole-body symptoms are present, or when a person's medical condition changes the risk. A dentist or physician should make that decision based on the examination.

Antibiotics alone do not repair decay, clean an infected root canal, or remove a severely damaged tooth. Symptoms may return if the dental source is not treated. If antibiotics are prescribed, take them exactly as directed and contact the prescriber about significant side effects or signs of an allergic reaction.

Over-the-counter pain relievers may help while waiting for care and during recovery. A dentist, physician, or pharmacist can help determine whether a product is appropriate based on age, pregnancy, allergies, kidney or liver disease, stomach ulcers, bleeding risk, and other medicines. Do not place aspirin or crushed medicine directly against the tooth or gum because it can injure the tissue.

Until the dental visit, it may help to eat softer foods, chew on the other side, and gently rinse

with warm salt water. Continue careful brushing unless a dental professional advises otherwise. Avoid trying to puncture or squeeze the swelling at home.

Complications

Without effective treatment, an abscess may damage the bone and tissues that support the tooth. The tooth can become loose or may no longer be repairable.

Infection can spread through nearby soft tissues, causing cellulitis , which is a broader infection of the skin and tissues beneath it. It may extend into the cheek, jaw, floor of the mouth, or neck. Upper-tooth infections can sometimes involve the sinus or tissues near the eye.

Rarely, a dental infection can spread into deep spaces in the neck, the jawbone, or the bloodstream. These complications can interfere with breathing or cause sepsis, a dangerous whole-body response to infection.

Risk cannot be judged by pain intensity alone. A draining abscess or a tooth with a dead nerve may hurt less even though infection remains. Increasing swelling, fever, worsening difficulty opening the mouth, or feeling increasingly unwell should be assessed urgently.

Follow up

Follow-up depends on the treatment performed. After drainage, root canal treatment, or extraction, some soreness and local swelling can occur. The dental team should explain what recovery is expected and when the tooth needs to be rechecked or restored.

Contact the treating dentist if pain or swelling is worsening rather than improving, drainage continues, a temporary filling comes out, or prescribed medicine causes troublesome effects. If antibiotics were prescribed, report symptoms that fail to improve as expected.

A root-canal-treated tooth may need a permanent filling or crown. Delaying the final restoration can leave the tooth vulnerable to leakage or fracture. Periodontal abscesses may require ongoing gum care and more frequent cleaning.

Routine prevention focuses on reducing decay and gum disease. Brush with fluoride toothpaste, clean between the teeth, limit frequent sugary snacks and drinks, and attend dental visits at intervals recommended for your oral health needs. A dentist can also assess dry mouth, worn fillings, cracked teeth, and other problems before they lead to a new infection.

Routine follow-up is appropriate when symptoms are improving and there are no signs of spreading infection. Seek same-day dental or medical care for new fever, increasing facial

swelling, worsening pain, or reduced ability to open the mouth. Breathing or swallowing difficulty, swelling near the eye, or rapidly spreading neck or facial swelling requires emergency care.

Sources

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