

## Dental Abscess

A dental abscess can cause toothache and other symptoms. If you suspect that you have a dental abscess, see a dentist as soon as possible for treatment. Without treatment, the condition is likely to become worse, and you may lose the affected tooth. Complications are uncommon, but can be serious and even life-threatening.

### What is a dental abscess?

An abscess is a collection of pus. Pus is a thick fluid that usually contains white blood cells, dead tissue and bacteria (germs). The usual cause of an abscess is an infection with bacteria.

A dental abscess is a localised collection of pus in a tooth, or in nearby structures. They are classified into two main types:

#### Periapical abscess

This type of abscess starts in the dental pulp (centre of the tooth). This is the most common type. This type of abscess usually develops as a complication of tooth decay (caries). Dental decay is very common and erodes (damages and breaks down) the protective layers of the tooth (the enamel and dentine). The damage to the tooth allows bacteria to invade the pulp to cause an infection.

An infection in the pulp can progress to form an abscess. Sometimes a periapical abscess develops if the nerve to the tooth dies for any reason. For example, from injury. The dead tissue inside a tooth is more prone to infection.

#### Periodontal abscess

This type of abscess starts in the supporting structures of the teeth, such as the periodontium which is between the tooth and the gum. It most commonly develops as a complication of gum disease (periodontal disease), which is infection or inflammation of the tissues that surround the teeth. Gum disease often causes the gum to become slightly detached from the tooth. This causes pockets to form which may get filled with bacteria and progress to form an abscess. A periodontal abscess may also develop as a complication of injury to the gums or periodontium. A periodontal abscess is sometimes called a gum boil as the abscess causes a swelling to develop next to a tooth.

### What are the symptoms of a dental abscess?

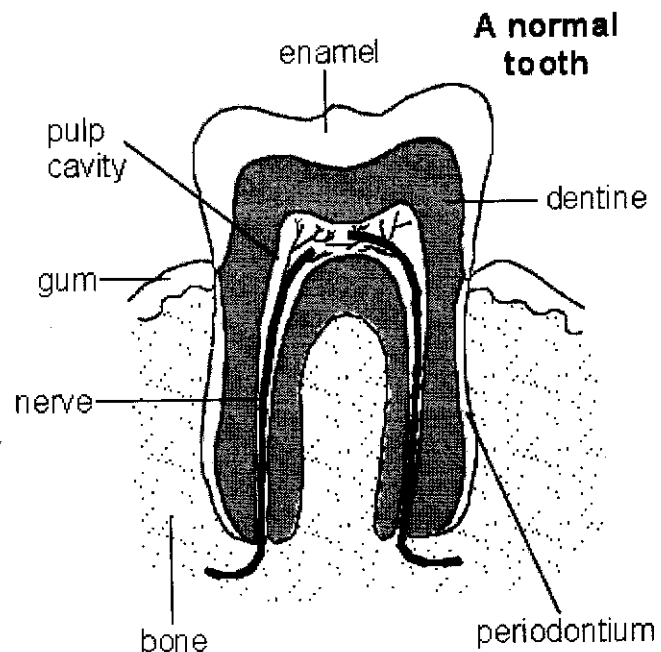
Symptoms typically include one or more of the following:

- Pain (toothache) which can quickly become worse. It can be severe and throbbing.
- Swelling of the gum which can be tender.
- Swelling of the face. The skin over an abscess may become red and inflamed.
- The affected tooth may become tender to touch, and may even become loose.
- High temperature (fever) and feeling generally unwell.
- In severe cases, there may be spasm of the jaw muscles.

### What is the treatment of a dental abscess?

#### Initial treatment

See a dentist as soon as possible. A dentist will normally drain the pus and this often gives great relief of symptoms. This is done either by lancing the abscess or by drilling a small hole in the tooth to let the pus



escape. Sometimes, if the infection is not contained, an antibiotic is prescribed for a few days after draining the pus to clear any remaining infection. However, in most cases an antibiotic is probably not needed once the pus is drained.

If there is a delay in seeing a dentist, a doctor or nurse may prescribe an antibiotic to help prevent the abscess from getting worse or spreading. However, an antibiotic will not clear the pus and cure the abscess. You still need to see a dentist soon. You may also need painkillers such as paracetamol or ibuprofen until the abscess is drained and treated. **Note:** paracetamol and ibuprofen can be taken together if pain relief with either alone is not enough. Some people require stronger painkillers prescribed by a doctor.

Further treatment may include the following:

#### **For a periapical abscess**

The treatment for this type of abscess is normally root canal treatment. This treatment aims to save and restore the damaged or dead inner part of a tooth (the pulp). Briefly - a dentist will drill into the dead tooth and allow pus to escape through the tooth, and then remove the dead pulpal tissue. A root filling is then placed into the tooth to fill the space and prevent further infection. (**Note:** even if pain has gone with an initial emergency drainage of the pus, you are still likely to need root canal treatment. This is because the infection and abscess will almost certainly return unless the dead pulp tissue is dealt with.)

If the infection persists despite root canal treatment, the dentist may have to extract (remove) the tooth.

#### **For a periodontal abscess**

Once the pus is drained, a dentist may clean the pocket where the abscess had formed. Following this a dentist may smooth out the root surfaces of the tooth to encourage the gum to close back on to the tooth, and for any pocket to disappear. This helps to prevent a recurrence of infection. If you develop repeated periodontal abscesses you may be referred to an oral surgeon who may carry out a procedure to reshape the gum tissue.

#### **What is the outlook (prognosis)?**

If treated, the outlook is good. The pus can usually be drained and the tooth can be saved if it is not badly broken down. If left untreated, the abscess may burst on to the skin of the face, or into the mouth. This may leave a sinus tract (a channel) between a persistent focus of infection and the skin or mouth, which can discharge pus from time to time. Other complications are uncommon. However, they can be serious, even fatal in rare situations. They include:

- Osteomyelitis - an infection of the nearby bone.
- Sinusitis - spread of infection to the nearby sinus in the face bone.
- A dental cyst (fluid-filled cavity) which may develop.
- Cavernous sinus thrombosis - an infection and clotting of a blood vessel in the brain. This is very serious.
- A serious, potentially life-threatening infection of the floor of the mouth. This could spread to the face, brain or neck (symptoms of serious infection are listed below).

So, the take home message is - if you have a dental abscess then you should get it treated. This is not only to relieve pain, but to prevent possible serious complications. Symptoms that may indicate that a complication is developing, and where you should seek medical help urgently, are:

- If you feel very unwell with a high temperature.
- Having difficulty opening your mouth, swallowing or breathing.
- Having swelling of the floor of your mouth, face or jaw.
- Being in severe pain despite taking painkillers at maximum dose.
- Having a spreading infection of your face.

Complications are more likely to develop in people with diabetes, and those with a poorly functioning immune system. For example, people with HIV/AIDS, people taking chemotherapy, people who have had their spleen removed, people taking steroids and people with sickle cell anaemia (not sickle cell trait).

#### **Can a dental abscess be prevented?**

Most dental abscesses are preventable as most are a complication of tooth decay or gum disease - both of which can be prevented by good oral hygiene. Briefly, this means regular tooth brushing and flossing. Other things that may help include: mouthwashes, tongue cleaning, and eating a healthy diet, which includes limiting sugary drinks and foods. If you smoke, stopping smoking will improve oral hygiene. Have a dental check-up at least once a year. A separate leaflet called 'Oral Hygiene' gives more details.

### How do I get to see a dentist?

If you suspect that you have a dental abscess, you should see a dentist as soon as possible. To access emergency dental care:

- See your own dentist if you are registered with one; or
- Go to the Accident and Emergency department of a dental hospital (if available); or
- Go to the local Dental Access Centre (if available); or
- If none of the above is available, go to your nearest general hospital Accident and Emergency department or your GP; for severe/urgent problems, they may refer you to a hospital oral surgeon.
- If you are not sure where your local services are, then telephone NHS Direct for advice on 0845 4647. (For Scotland (NHS 24) is 08454 242424.)

### Dental fees

Some people are automatically exempt from paying NHS dental charges. Also, some people on a low income can make a claim for help with all or part of the costs. See separate leaflet called 'Help With Dental Charges' for details.

### Further help and information

#### British Dental Health Foundation

Helpline: 0845 063 1188 Web: [www.dentalhealth.org.uk](http://www.dentalhealth.org.uk)

A national charity that provides free, impartial advice on all aspects of oral health.

### References

- Dental abscess, Clinical Knowledge Summaries (January 2008)
- Jane M Gould et al; Dental abscess, Medscape. Feb 2010

Disclaimer: This article is for information only and should not be used for the diagnosis or treatment of medical conditions. EMIS has used all reasonable care in compiling the information but make no warranty as to its accuracy. Consult a doctor or other health care professional for diagnosis and treatment of medical conditions. For details see our conditions.  
© EMIS 2011 Reviewed: 14 Apr 2011 DocID: 4830 Version: 39  
For the planned review period see the Data Creation and Quality Control Process.