



# Cracked Teeth



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*Your Guide  
to  
Cracked Teeth*

## Your Guide to Cracked Teeth

With their more sophisticated procedures, dentists are helping people keep their teeth longer. Because people are living longer and more stressful lives, they are exposing their teeth to many more years of crack-inducing habits, such as clenching, grinding, and chewing on hard objects. These habits make our teeth more susceptible to cracks.

You're probably reading this booklet because your dentist or endodontist has told you that you may have a cracked tooth. Cracked teeth show a variety of symptoms, including erratic pain when chewing, possibly with release of biting pressure, or pain when your tooth is exposed to temperature extremes. In many cases, the pain may come and go, and dentists may have difficulty locating which tooth is causing the discomfort.

## Why have I been referred to an endodontist?

All dentists are trained in the diagnosis and treatment of cracked teeth in dental school. Some cracked teeth, however, can be especially difficult to diagnose, and treatment may involve root canal treatment. That's why you have been referred to an endodontist.

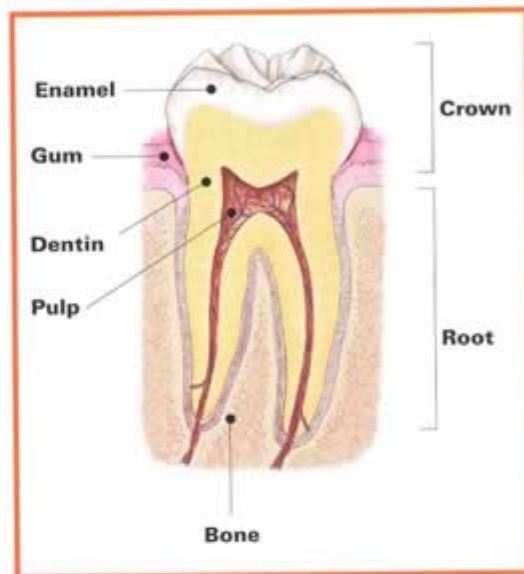
Endodontists are dentists with at least two additional years of education that include the diagnosis and treatment of unusual dental pain. Cracked tooth pain often comes from damage to the inner soft tissue of the tooth, the pulp. Endodontic treatment, also known as root canal treatment, can relieve that pain.

Early diagnosis is extremely important. Like cracks in a windshield, cracks in teeth often start small and progress slowly. The sooner a crack is detected and treated, the better the chance of saving your tooth. The endodontist's special training and experience can be valuable when a cracked tooth is suspected.

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## Why does a cracked tooth hurt?

To understand why a cracked tooth hurts, it helps to know something about the anatomy of the tooth. Inside the tooth, under the white enamel and a hard layer called the dentin, is the inner soft tissue called the pulp. The pulp contains blood vessels, nerves, and connective tissue.



When the outer hard tissues of the tooth are cracked, chewing can cause movement of the pieces, and the pulp can become irritated. When biting pressure is released, the crack can close quickly, resulting in a momentary, sharp pain. Irritation of the dental pulp can be repeated many times by chewing. Eventually, the pulp will become damaged to the point that it can no longer heal itself. The tooth will not only hurt when chewing but may also become sensitive to temperature extremes. In time, a cracked tooth may begin to hurt all by itself. Extensive cracks can lead to infection of the pulp tissue, which can spread to the bone and gum tissue surrounding the tooth.

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## Types of cracks

There are many different types of cracked teeth. The treatment and outcome for your tooth depends on the type, location, and severity of the crack.

### Craze lines

Craze lines are tiny cracks that affect only the outer enamel. These cracks are extremely common in adult teeth. Craze lines are very shallow, cause no pain, and are of no concern beyond appearances.

### Fractured cusp

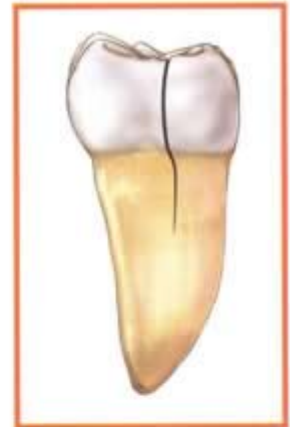
When a cusp (the pointed part of the chewing surface) becomes weakened, a fracture sometimes results. The weakened cusp may break off by itself or may have to be removed by the dentist. When this happens, the pain will usually be relieved. A fractured cusp rarely damages the pulp, so root canal treatment is seldom needed. The tooth will usually be restored by your dentist with a full crown.



### Cracked tooth

This crack extends from the chewing surface of the tooth vertically towards the root. Sometimes the crack may extend below the gum line, and in severe instances, into the root. A cracked tooth is *not* completely separated into two distinct segments. Because of the position of the crack, damage to the pulp is common. Root canal treatment is frequently needed to treat the injured pulp. Your dentist will then restore your tooth with a full crown to bind and protect the cracked tooth.

Early diagnosis is important. Even with high magnification and special lighting, it is sometimes difficult to determine the extent of a crack. A cracked tooth that is not treated will progressively worsen, eventually resulting in the loss of the tooth. Early diagnosis and treatment are essential in saving these teeth.



### Split tooth

A split tooth is often the result of the long term progression of a cracked tooth. The split tooth is identified by a crack with distinct segments that can be separated. A split tooth can never be saved intact. The position and extent of the crack, however, will determine whether any portion of the tooth can be saved. In rare instances, endodontic treatment and a crown or other restoration by your dentist may be used to save a portion of the tooth.



## Types of cracks (continued)

### Vertical root fracture

Vertical root fractures are cracks that begin in the root of the tooth and extend toward the chewing surface. They often show minimal signs and symptoms and may therefore go unnoticed for

some time. Vertical root fractures are often discovered when the surrounding bone and gum become infected. Treatment usually involves extraction of the tooth. However, endodontic surgery is sometimes appropriate if a portion of the tooth can be saved by removal of the fractured root.



## Will my tooth completely heal?

Unlike a broken bone, the fracture in a cracked tooth will never heal. In spite of treatment, some cracks may continue to progress and separate, resulting in loss of the tooth. Placement of a crown on a cracked tooth provides maximum protection but does not guarantee success in all cases.

The treatment you receive for your cracked tooth is important because it will relieve pain and reduce the likelihood that the crack will worsen. Once treated, most cracked teeth continue to function and provide years of comfortable chewing. Talk to your dentist and/or endodontist about your particular diagnosis and treatment recommendations. They will advise you on how to keep your natural teeth and achieve optimum dental health.

## For more information

If you would like more information about treatment of cracked teeth, your endodontist will be happy to talk with you. You may also write to the American Association of Endodontists or visit the AAE web site at <http://www.aae.org>.