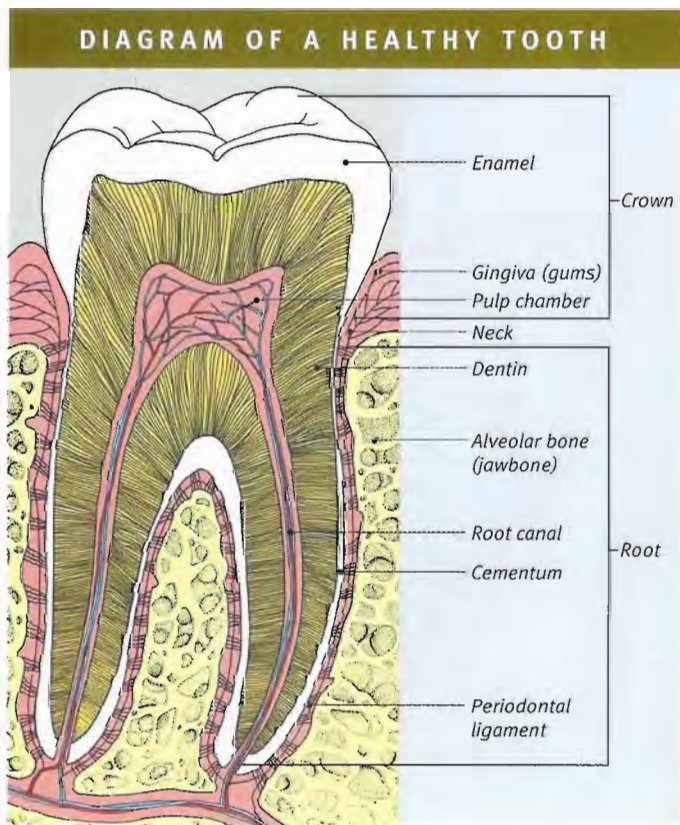


## What is root canal treatment?

Root canal treatment usually involves the removal of the tooth's pulp, a small thread-like tissue that was important for tooth development. Once removed, it is replaced with materials that seal off the root canal from its surrounding tissues. Years ago, diseased or injured teeth were often extracted. Today, even if the pulp in one of your teeth becomes injured or infected, the tooth often can be saved through root canal (endodontic) treatment. Endodontics is the branch of dentistry concerned with the prevention, diagnosis and treatment of diseases or injuries to the dental pulp.



## What is the dental pulp?

The pulp is soft tissue inside the tooth that contains blood vessels, nerves and connective tissue. It lies in a canal that runs through the center of the dentin—the hard tissue on the inside of the tooth that supports the outer layer of tooth enamel. The crown (the portion of the tooth visible above the gums) contains the pulp chamber. The pulp extends from this chamber down through the root canal to the tip of the root that lies in the bone of the jaws. Teeth have only one pulp chamber but may have more than one root and several root canals.

## What happens if the pulp gets injured?

When the pulp is diseased or injured and unable to repair itself, it loses its vitality. The most common causes of pulp death are a cracked tooth, a deep cavity, complications involving large dental restorations or traumatic injury to the tooth, all of which can allow bacteria and their products to enter into the pulp.

## Why does the pulp need to be removed?

If the injured or diseased pulp is not removed, the tissues surrounding the root of the tooth can become infected and an abscess can form, resulting in pain and swelling. Even if there is no pain, certain substances released by bacteria can damage the bone that anchors the tooth in the jaw. Without treatment, the tooth may have to be removed.

## Why couldn't you just remove the tooth?

There are many disadvantages to losing a natural tooth. When a tooth is removed and not replaced, the adjacent teeth may begin to shift from their normal position. This may cause the teeth to become crooked or crowded, which decreases biting and chewing efficiency. Crowded or crooked teeth may be more prone to gum disease because they are harder to keep clean than properly aligned teeth. A replacement tooth (an implant or bridge) is usually more expensive than endodontic treatment and can involve more extensive dental procedures on adjacent teeth. A natural tooth is normally better than an artificial tooth.

## How long will the restored tooth last?

A tooth with a root canal filling can provide years of service similar to adjacent teeth that have not been treated. Teeth with root canal fillings can, however, become decayed, develop fracture lines or become periodontally involved, just like any other tooth. Oral hygiene and regular dental exams will help you keep and maintain healthy teeth, whether they are endodontically treated or not.

## What material will be used for the crown?

Crowns are made from a number of materials. Gold alloys or nonprecious alloys, porcelain or ceramic, acrylic or composite resin or combinations of these materials may be used. The type of material used for the crown will depend on a number of factors including where the tooth is located in your mouth, the color of the tooth and the amount of natural tooth remaining. Speak with your dentist about which option is suited to your situation.

## What does treatment involve?

Treatment involves one or more visits. There are several steps in the process of endodontic treatment that your general dentist or endodontist (a dentist who specializes in root canal treatment) will perform to save your tooth:

*First, local anesthesia is usually given so that you will be more comfortable during treatment. After placing a rubber dam to isolate the tooth, an opening is made through the crown of the tooth into the pulp chamber.*

*The pulp or its remnants are then removed carefully from both the pulp chamber and root canal(s). Each root canal is cleaned and shaped to allow it to be filled.*

*Medication may be placed in the pulp chamber and root canal(s) to help eliminate bacteria.*

*A temporary filling will be placed in the crown opening to prevent saliva from getting into the chamber and root canals. You might also be given antibiotics if infection is present and has spread beyond the end of the root(s). If your dentist has prescribed medication, use it only as directed. If you have any difficulties with the medication, call your dentist.*

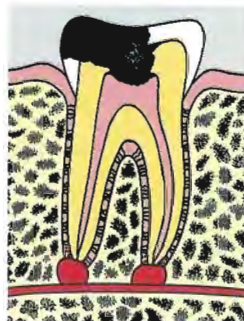
*During the next stage of treatment, after placement of a rubber dam, the temporary filling is removed. The root canal(s) are filled with a biocompatible material, usually gutta-percha, and then sealed.*

*In the final step, the tooth may be restored by a crown or a filling. A crown may be made of porcelain or metal alloy, and the filling may be made of any of the many materials used in today's practice of dentistry. The purpose is to strengthen the tooth and improve its appearance. If an endodontist performs the root canal treatment, he or she will usually recommend that you return to your general dentist for the final restoration.*

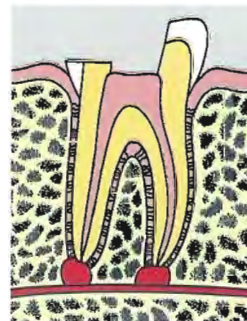
It is very important to follow your dentist's directions regarding the scheduling of your dental appointments so that your root canal treatment will be successful.

## ROOT CANAL TREATMENT *at a glance*

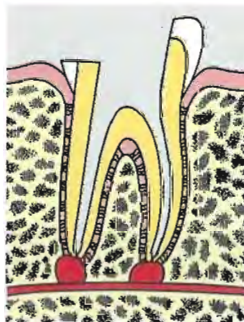
TOOTH DECAY CAN CAUSE AN ABSCESS (INFECTED) TOOTH.



THE DECAY IS REMOVED AND AN OPENING IS MADE THROUGH THE CROWN OF THE TOOTH INTO THE PULP CHAMBER.



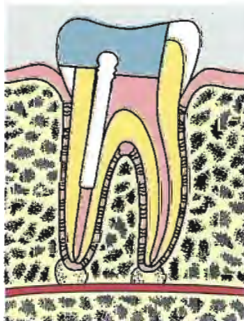
THE PULP IS REMOVED, AND THE ROOT CANALS ARE CLEANED AND SHAPED.



THE ROOT CANALS AND PULP CHAMBERS ARE FILLED.



A METAL OR PLASTIC ROD OR POST MAY BE PLACED IN THE ROOT CANAL TO SUPPORT THE RESTORATION (CROWN).



THE CROWN OF THE TOOTH IS THEN RESTORED.

