



## Root Canal Treatment

Root canal treatment (“endodontic treatment”) may be required when the soft tissues inside the tooth (the ‘dental pulp’) become inflamed, infected, or necrotic.

A healthy dental pulp contains nerves, blood vessels, and other soft tissues. The pulp has several important roles:

- It helps the tooth form and develop.
- It hydrates and nourishes the tooth once it has formed.
- Its nerves can detect pain.
- It grows new dentine inside the tooth, especially if the tooth is beginning to decay.

The space inside the tooth that these soft tissues occupy is called the ‘pulp chamber’ (located within the tooth’s visible crown) and the ‘root canals’ (long canals inside the roots leading from the pulp chamber to the root tips).

### Why might a tooth need root canal treatment?

**The pulp of a healthy tooth can become inflamed. This usually occurs in response to:**

- bacterial infection from tooth decay
- acute trauma, such as a sports injury
- chronic trauma from bruxism
- exposed dentine.

**Inflammation is reversible if**

- the irritant (for example, tooth decay) is removed while the pulp is still healthy enough to recover
- the pulp’s blood supply is not damaged by the trauma.

**Sometimes, the pulp is unable to recover. Common symptoms of a dead or dying nerve include:**

- pain to hot or cold (or both)
- pain to pressure or biting
- deep ache of the jaw around the tooth
- redness, swelling, and possible infection drainage from the soft tissue around the location of the root tip.

## If the dental pulp can't recover, what treatment options are available?

There are only two treatment options available if the pulp cannot recover:

1. Remove the tooth ("**tooth extraction**").
2. Save the tooth by removing the inflamed and infected pulp from the tooth's pulp chamber and root canals ("**root canal treatment**").

## What happens during treatment?

Root canal treatment can be thought of as having a 'deeper filling' placed within the tooth.

- First, the infected pulp tissue is removed from inside the tooth. This is generally done with the tooth numbed by a local anesthetic.
- Next, the root canals are shaped, cleaned, and disinfected. The dentist will take several dental x-rays during treatment to check progress.
- An antibacterial paste is placed inside the roots and sealed with a temporary filling to allow healing.
- Once the tooth is comfortable and infection-free, the root canals and pulp chamber are sealed (filled) with a rubberlike material.

Root canal treatment may take several appointments to complete. If a case is particularly challenging, our dentists will refer the patient to a local dental specialist (called an Endodontist).

## What happens after root canal treatment?

Often, a root-filled tooth requires a full-coverage restoration, usually a dental crown, to protect it from further damage. When root canal therapy is successful, the tooth can continue functioning for many years.

## Important to know

- During root canal treatment, our dentists use a rubber dam to isolate the tooth from the rest of the mouth. This prevents mouth bacteria from entering the root canal space and stops the unpleasant-tasting disinfectants from being swallowed by the patient.
- Tooth decay, gum disease, and fracture can still affect a root-filled tooth. Therefore, it must be kept plaque-free and monitored with dental x-rays on a schedule recommended by the dentist.
- This page contains general information about root canal therapy. It cannot replace individualised advice from your dental practitioner. Please consult your dentist for specific recommendations about your oral health and necessary treatments.