

1. What is an Endodontist?

An endodontist is a dentist who specialises in treating endodontic problems (endo-within, don'tic-tooth). In general, this mostly involves root canal treatment. The sole purpose of Endodontists is to perform root canal treatments with the aim of improving the chances of saving your natural teeth.

Although all dentists have received training in endodontic procedures, Endodontists' extensive training and clinical experience, depth of scientific knowledge and their ability to use specialist equipment such as endodontic microscopes and micro-instruments, allows them to access the fine and curved root canals within the tooth, that can be very difficult to reach, disinfect, and to carry out the treatment to the highest standards.

There are approximately 230 specialist endodontists on the Dental Register in the UK.

2. Why is root canal treatment necessary?

Root canal treatment is required when the nerve (pulp) inside a tooth becomes inflamed and dies. The cause of this inflammation or the dead nerve is primarily the microbes in the decayed tooth, cracks or leaking fillings or crowns.

When the inflamed nerve dies, the space it inhabits (the root canal) rapidly becomes infected with bacteria. This may cause pain and swelling in the supporting tissues (abscess) or the tooth may remain symptom-free.

This typically occurs when:

- a) A tooth has suffered trauma, has a deep decay or a large restoration. The injured pulp tissue can die causing the root canal to become infected.
- b) When a root-treated tooth gets infected again.
- c) Sometimes, in order to restore a tooth, it is necessary to perform root canal treatment.

In severe cases a root canal infection could spread to the surrounding bone. If root canal treatment is not performed the tooth may have to be removed.

3. What is the reason for the disease of the dental pulp?

Tooth decay, cracking, a large filling, trauma or even tooth wear can sometimes cause irreversible damage to the dental pulp.

4. What is the purpose of root canal treatment?

The purpose of root canal treatment is to remove the inflamed tissue or bacteria inside the root canal and to seal the canals to reduce the risk of re-infection, allowing the surrounding tissues to heal.

5. What is involved in root canal treatment?

The purpose of root canal treatment is to remove the inflamed nerve and bacteria inside the root canal and thus allow the surrounding tissues to heal.

Treatment is usually done under local anaesthetic administered into the gum adjacent to the tooth that is being treated. The tooth under treatment is then isolated with a rubber sheet in order to firstly prevent the tooth from being contaminated with saliva (which contains bacteria), and secondly to improve the patient's safety and comfort.

An opening is prepared on the biting surface of the tooth to allow identification of the root canals of the tooth. Special, flexible and disposable nickel-titanium files are then used to enlarge the root canals, in order to create space for disinfectant solutions to be inserted into the canals.

Once the root canals have been disinfected, they are filled with a rubber like material, which coupled with a good seal of the crown of the tooth could prevent re-infection of the disinfected root canals.

6. How long would the treatment take?

The treatment is time-consuming because of its complexity but can readily be done using modern local anaesthetic techniques with little or no discomfort. Its duration depends on the complexity of the root canal system. A routine root canal treatment could take between 1.5 - 2 hours and involve 1-2 sessions. A retreatment can take more and might involve 2 - 4 sessions.

7. What happens after root canal treatment?

After root canal treatment of the premolars and molars, a crown is usually required to protect the tooth from fracture. Sometimes the existing crown can be retained and the opening simply filled with a filling material. You will be referred back to your referring dentist for these procedures.

8. Will it hurt?

The treatment is painless. It is normal for patients to experience some soreness after treatment as the supporting tissues of the tooth may be a little bruised. This discomfort is usually resolved with over the counter painkillers.

9. Is it likely to succeed?

The root canal system is complex, particularly in molars. A specialist (endodontist) will use their training, specialist equipment (such as a dental microscope) and vast experience, to enhance the levels of success.

Controlled clinical studies have shown success rates of around 90-95% for first time root treatments carried out by specialists. These success rates reduced to about 85% if the tooth has already been root canal treated.

10. What happens after?

After root canal treatment of the premolars and molars, a crown is usually required to protect the tooth from fracture. Sometimes the existing crown can be retained and the opening simply filled. You will be referred back to your own dentist for these procedures.

11. How long will the tooth last?

Although it is impossible to guarantee the success of any medical or dental procedure, root canal treatment has a very high success rate and provided the tooth is subsequently restored, it should last for many years.

The factors influencing the success of root canal treatment include how infected the tooth is, how long the infection has been present and if the tooth has previously been root treated.