

Root Canal Treatment step by step Patient information

Why do I need Root Canal Treatment?

Root canal treatment may be needed when the pulp (nerve) inside the root (or roots) of your tooth becomes infected. Treatment aims retain a tooth, which has infection and the surrounding bone, which has inflammation. This allows your own body to heal the area and avoid extraction. Sometimes, root canal treatment may need to be redone because of ongoing infection. It does not prevent future decay or gum disease.

What happens during Root Canal Treatment?

Root canal treatment is complex and it is likely you have been referred because your condition is outside of the scope of practice of a regular dentist or it may be a second attempt. Such treatment in the hospital setting will involve multiple appointments (usually between 2-5) with each appointment lasting between 1 – 3 hours.

The first treatment appointment usually involves tooth restorability assessment, which involves removal of existing old fillings, crowns or bridgework. This aims to assess if your remaining tooth structure has a suitable foundation to have a new filling, crown or be part of a bridge work prior to root canal treatment. The tooth and surrounding area is often made numb to prevent discomfort (this means you will need an injection at the beginning of each session).

All root canal treatment is carried out with a protective cover placed over the tooth – called a rubber dam, this acts as a barrier from the fine instruments and antiseptics used during the procedure and provides safety and a comfortable working area.

Accessibility to some back teeth for root canal treatment can be incredibly difficult, as it requires any patient to have adequate mouth opening. This is to facilitate the placement of instruments such as the clamp, rubber dam, endodontic files and dental mirror, to be able to visualize the entrance of the root canal system under microscope. Limited mouth opening can compromise the satisfactory completion of root canal treatment. This means that you will need to keep your mouth wide open for the duration of the treatment sessions. If your muscles get tired we may place an additional rubber mouth prop to help you keep your mouth open comfortably.

Treatment is usually carried out over multiple sessions due to the complexity of treatment. In between each treatment visit, a medication will be placed inside the tooth along with a temporary filling or temporary crown. You will remain under the care of your own dentist throughout your root canal treatment.

Once root canal treatment is completed, your tooth will be restored with a more permanent material. This can be used as a foundation for your dentist to place the

final restoration, which will often be a crown. Upon treatment completion we will write to your dentist for him/her to place a new long term restoration if required.

Treatment success

Root canal treatment normally has a high success rate but this does differ depending on your tooth. It is important to discuss this with the Dentist treating you before treatment commences. Despite our best efforts results cannot be guaranteed and sometimes the tooth does not respond to treatment and therefore may need to be extracted.

Treatment risks

We take our utmost care in carrying out this very specialized procedure. However we are also obliged to make you aware of some unforeseen complications during root canal treatment that may present.

These include:

- Reactions to anaesthetics or chemicals.
- Dental instrument breakage within the root canal. If a broken instrument is already present we may not be able to remove it.
- Damage to the tooth or root during treatment that means the tooth cannot be saved. If this is the case, we will inform you and your dentist to schedule extraction of the tooth.
- Blocked root canals that cannot be further treated, compromising the overall outcome of the treatment.
- Fracture or chipping of the existing tooth/ porcelain work on crowns and bridges that may require further dentistry.
- Sodium hypochlorite accident resulting in swelling and bruising immediately at the time of the incident. In this case you will receive care in the emergency clinic and follow up until symptoms settle.
- If your tooth is part of a bridge, this may need to be removed for the root canal treatment or any bridge may become loose. A new bridge would need to be provided by your dentist.
- Jaw joint ache or disturbances in your bite.
- Post-operative discomfort (usually treated with over-the-counter painkillers and anti-inflammatories, such as paracetamol and ibuprofen). If pain persists or swelling starts to increase in size, you will need to see your dentist or the emergency service if he/she is not available. This event is called a "flare-up" and it can happen in 4% to 20% of cases. This indicates that your body is not able to deal with the size of the infection and the tooth will need to be cleaned further.
- In case of fever or feeling unwell, difficulty in breathing, call 999 or go to A&E (medical emergency).
- Incomplete healing or post-operative infection. In this case the tooth may need to be extracted. Further treatment options may include root canal retreatment or periapical surgery. The dentist would discuss this with you, depends on the assessment of the individual case.
- Tooth discolouration following treatment.
- Temporary or permanent numbness (on extremely rare occasions).

What are the alternatives to root canal treatment?

The alternatives to root canal treatment should be discussed with you prior to the beginning of treatment. These include:

- a) No treatment at all and monitoring the tooth (in case of absence of symptoms). This can be done by your dentist on an annual basis, comparing any x-rays taken during consultation appointments.
- b) Periapical surgery (Apicectomy – applicable for specific cases when crown and bridgework is clinically satisfactory)
- c) Extraction (with or without tooth replacement. The replacement options will have to be discussed directly with your dentist).

Types of questions you may want to ask ...

- Is my tooth restorable after root canal treatment?
- How will I know if the treatment has worked?
- How long should I wait before having the tooth restored by my own dentist?

What happens after treatment?

After root canal treatment has been completed, you will be referred back to your own dentist, who will need to provide the final restoration (usually a crown). The chance of failure may increase if this timely advice is not followed. The cost of any such aftercare should be discussed directly with your own dentist.

Where can I find more information about the treatment?

The American Association of Endodontology has a section for patients and you can find information with regards the root canal treatment steps.

<https://www.aae.org/patients/>

Some general information about root canal can be also found in the NHS choices:

<http://www.nhs.uk/Conditions/Root-canal-treatment/Pages/Introduction.aspx>

Post operative discomfort is not uncommon after the lengthy sessions. If pain symptoms are not resolved with normal pain killers or there is a swelling larger than before the session, you will need to see your dentist. He/she will clean the canals again and replace the medication.

If your dentist is not available use the NHS helpline to schedule an appointment in an emergency clinic. In case of fever, feeling unwell, difficulty in breathing call 999 or go to A&E (medical emergency).

Emergency Numbers

Cardiff	02920 444500	Rhondda Cynon Taf	01443 680166
Gwent	01633 488389	Abertawe	08456 011186