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ROOT FILLINGS

WHY DO I NEED A ROOT FILLING?

A tooth is a complex structure and has several components to it. There is the part we see above the gums, the crown of the tooth, and this is usually what we identify as the tooth. Connected to the crown are the roots of the tooth that sit in the jaw bone, under the gum.

Within the crown and the roots there are a series of interconnecting canals and chambers that contain the nerve and blood vessels that supply the tooth. These are known as the root canals and the pulp chamber.

If a tooth is cracked, decayed or is traumatised, bacteria enter the root canals and pulp chamber. There will then be a localised inflammatory reaction in the tooth and surrounding bone and gum. This area of inflammation will grow over time, sometimes quickly, sometimes slowly. The process may mean that you have symptoms, and the symptoms may come and go, or you may have no symptoms. The tooth may also change colour.

The area of inflammation lies around a localised infection. When left, the inflammation may cause bone loss, may turn into a cyst, and can also cause sepsis.

If you wish to remove the infection, and keep the tooth, a root filling will be required. The alternative is to leave the tooth in place (not recommended) or to have the tooth removed and either leave a gap or replace the tooth.

Other reasons for needing a root filling include where a previous root filling has failed, or electively where the roots are required to anchor a crown or a bridge.

HOW DOES A ROOT FILLING WORK?

The aim of a root filling is to disinfect the roots and pulp chamber of the tooth and to fill the hole or holes that are left so preventing bacteria from occupying the space. The process may take a single appointment or several appointments.

DO ROOT FILLINGS ALWAYS WORK?

In some cases, the roots may be curved and complex. Redoing failed root fillings can be more difficult, particularly where the previous root filling is wide or has caused steps and ledges within the tooth or a blockage in the roots, perhaps due to a piece of instrument that separated during the procedure. In these cases, the chances of success are reduced.

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It may be that there are complex root canal systems with aspects that cannot be disinfected, micro cracks in the root, or other factors that determine the root canal treatment is not possible or will ultimately not be successful.

DURING THE TREATMENT:

- It is possible for a small piece of metal to be left in the tooth. This may be of no significance, or may require further treatment to remove the piece, or it may mean the tooth cannot be restored and must be removed.
- A root or roots may crack, especially if there is already a fracture or hairline crack present. This may require further treatment or may mean the tooth cannot be restored and must be removed.
- The internal part of the root may be damaged or perforated such that a root filling cannot be placed, and the tooth will need to be removed.
- Further problems may come to light, meaning the tooth cannot be restored and must be removed.

In some cases, a root filling may not work, requiring further treatment, which may include a minor surgical procedure (surgical endodontic treatment) under local anaesthetic or further root canal treatment.

WHAT HAPPENS WHEN THE ROOT FILLING IS COMPLETED?

After treatment, the tooth or teeth may be sensitive or painful for days, weeks, or months, even though treatment has been successful.

In some cases, there is a possibility that treatment may initially be deemed successful, however, after days, weeks, months or years, the tooth requires further treatment or is considered non-restorable and needs to be removed.

Root filled teeth tend to change colour over time and may become quite grey or dark. You may be able to have the tooth whitened when this happens.

All root filled teeth will need a core/body of filling after the root filling has been completed.

All root filled posterior teeth (premolars and molars) will need to be restored with a crown within 18 months of completion of the root filling. In some cases, a crown will be required immediately or shortly after the completion of the root filling.

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HOW MUCH DOES IT COST?

The fee is usually from £1050 for an incisor tooth, £1250 for a tooth, and from £1450 for a molar tooth, however the cost varies depending on the complexity of the case. This does not include other ancillary costs, such as x-rays and CT scans.

Factors that may influence the difficulty of the root filling include:

- teeth where there are additional roots
- long, curved, or very fine roots
- difficult to access to one or more roots
- the presence of a draining abscess (where additional appointments may be required)
- redoing a previous root filling

IS THE PROCEDURE PAINFUL?

Usually the procedure is not painful as the tooth will have been numbed prior to treatment starting.

Sometimes, if the tooth is very inflamed, the tooth cannot be numbed well, in which case the procedure will be stopped, a dressing placed, and another appointment will be required to continue the process.

If you are very nervous, you can have sedation. You will be awake and alert during the procedure. There are three types - Oral, a tablet, Inhalation, a gas (nitrous oxide), or IV, a medicine put directly into a vein. Someone will need to bring you to the appointment, and pick you up, take you home and spend the rest of the day with you. You will not be able to drive, operate machinery or make legal decisions.

HOW LONG DO ROOT FILLINGS LAST?

This is not possible to answer. In terms of the infection, the root filling may be effective for many months, or several decades. In terms of the tooth itself, root filled teeth are quite brittle and may fracture, rendering the tooth unreparable, or necessitating further treatment including a new root canal treatment.

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WHAT IS THE PROCEDURE?

Usually the appointments will be as follows:

- **Assessment,** including tests and x-rays. A CT scan will be taken this provides a 3D image of the tooth and roots, and the number and position of the roots can be determined. A report will then be sent out, with costings.
- **Procedure phase.** Sometimes the treatment is completed in a single visit, sometimes 2 visits, and sometimes, but rarely, many visits are required. The appointments tend to range from 1 hour minimum to 2 hours. After local anaesthetic has been placed, a dental dam is positioned over the tooth, isolating the tooth and keeping it clean, and protecting your mouth and airway. The tooth may need to be investigated first (to see if it is restorable), before access is gained to the pulp chamber and root canals. Crowns and fillings may need to be fully removed. Any tooth decay must be removed at this stage. Specialist tools and a microscope are used to identify, disinfect, prepare and fill the root canals. Several x-rays may be required. If, for whatever reason, the root filling cannot be completed, an antiseptic agent will be placed in the tooth, and the tooth sealed over with a temporary filling. A return visit is likely to be between one and three weeks later.
- **Review phase.** Though a review may not be required immediately after the root filling, it is common to review the root filling after about 18 months, and periodically thereafter. X-rays will be required.