why do I need a root canal treatment?

Root canal treatment (root canal filling) is needed when the pulp, commonly called “the nerve” is either inflamed, dead or infected, or is at risk of becoming so in the future. The pulp extends along small channels which are situated in the centre of the root(s) of teeth (“the root canals”). The reason for the pulp being damaged maybe any of the following:

• Dental or “tooth” decay  (fig. A)
• Large or deep filling
• Leakage under an old crown or filling
• Trauma (from a fall, accident or sports injury)
• Cracks or fracture in the teeth

Where a damaged or dead pulp is not removed, it will often become infected and may result in a dental abscess. Root treatment may not be as successful when there is long standing or severe infection such as a dental abscess.

A successful root canal treatment may extend the functional life of a badly damaged tooth when very often the only real alternative is extraction of the tooth.
what is involved?

The treatment is carried out under local anaesthetic, just like a filling, and is generally painless. The objective is to remove the pulp tissue and any infection from the root canals in the centre of the tooth. These canals are then filled with a combination of a rubber-like material called ‘gutta-percha’ and a sealer cement to provide a good root filling and prevent bacterial infection. During the procedure the dentist uses fine metal instruments (files) along with a disinfectant material to clean out the root canals. (fig.B) A sheet of latex or ‘rubber dam’ is placed over the tooth and is held in place with a clip which prevents bacteria and debris from your mouth going into the root canals. It also stops water from the drill or bits of filling from falling into the back of your mouth. The rubber dam provides the best possible environment for both your comfort and safety, and the success of the treatment. Once the root canal is cleaned and the root filling completed, the tooth must then be restored to complete the seal from oral bacteria. (fig.C)

how long will it take?

This depends on a number of factors including, which tooth is being treated and whether or not infection is present. An upper front tooth has only one canal, whereas a molar or back tooth has three or four canals of more complex shape and size. An infected tooth will possibly require more than one visit for adequate cleaning and disinfection. Where the treatment is carried out over several visits, a temporary filling is placed as a seal between visits.
Some discomfort and tenderness is possible for the following few days, especially if there was pain before the treatment commenced. This can be managed with mild painkillers of your choice such as those you might use for a headache. Any persistent or severe symptoms should be reported to your dentist.

will it be painful after a visit?

what else do I need to know?

While there is a high success rate with root canal treatment, there may be some difficulties that complicate the procedure and compromise its success.

- Fractured instruments.
- Long standing or recurrent infection.
- Perforation - a dental instrument can go through the thin wall of the tooth
- It may not be possible to find all the root canals and remove the pulp tissue
- Some medical conditions e.g. poorly controlled diabetes

These situations can generally be dealt with and your dentist will explain what is required for the best result. This may necessitate referral to a dentist with additional training in root canal treatment.
and then?

Once the pulp has been removed, the tooth will no longer be sensitive to hot or cold, although some patients may experience mildly altered sensation.

The tooth can, however, decay and needs the same care as your other teeth. After the root canal has been treated, the remaining structure has to be sealed and protected, this is vital for the continued success of the tooth. In the case of a back tooth, the tooth may not be strong enough to withstand normal chewing function and should be covered with a crown or onlay. A front tooth can normally be restored with a white filling and dark teeth may respond to whitening to restore a healthy smile.

This leaflet is only a guide to your better understanding of root canal treatment and does not replace discussion with your dentist. Please feel free to discuss any aspect of root canal treatment with your dentist at any time during your care.

This information is provided by:

[Image of tooth with labels: Crown, Crown substructure, Root filled canals, Abscess healed]