

### **What is Root Canal Treatment (RCT)**

RCT or Endodontics is a speciality of dentistry that is concerned with the prevention, diagnosis and treatment of disease or injury to the dental pulp. The pulp, which some people call "the nerve," is the soft tissue inside the tooth that contains the nerves and blood vessels and is responsible for tooth formation. Root canal treatment is a safe and effective means of saving teeth that may otherwise be lost.

### **What causes the pulp to die or become diseased?**

When a pulp is injured, diseased, and unable to repair itself, it becomes inflamed and dies. The most frequent causes of pulp death are extensive decay, deep fillings, trauma such as a blow to a tooth, cracks in teeth, and gum disease. When a pulp is exposed to bacteria from decay or saliva that has leaked inside the tooth, infection can occur, and if left untreated, can cause infection to build up at the tip of the root, forming an abscess. Eventually the bone supporting the tooth will be destroyed, and pain and swelling will often accompany the infection. Without endodontic treatment, the tooth will eventually have to be removed.

### **What are the symptoms of a diseased pulp?**

Symptoms may range from brief to prolonged, mild to severe pain on exposure to hot or cold or on chewing or biting: or the condition may produce no symptoms at all. X-ray examination at this stage may or may not reveal an abnormality around the tip of the tooth. Sometimes the X-ray will show an abnormal area even when you may not have experienced any pain at all.

### **What is the success rate of root canal treatment?**

Endodontics is one of the few procedures in dentistry that has a predictable outcome if treatment is performed properly and to a high standard. Studies indicate that root canal treatment is usually 90% to 95% successful. Those that don't work may still be amenable to retreatment or sometimes we may have to do some surgical treatment to save the tooth, although no treatment's success can ever be guaranteed. It is important to appreciate that the chances of success also depend upon the specifics of each case and that without

good oral hygiene and a sound restoration following the endodontic treatment, there will be an increased chance of failure. We must also review the condition of the tooth at regular intervals after the treatment and we will advise you of the appropriate frequency.

### **Will the root canal treatment discolour my tooth?**

Discolouration seldom occurs but it can happen. However, we have many methods available now to treat the discoloration, whether it is crowns, veneers, or bleaching treatments. Some root filled teeth appear discoloured because they have been filled with tooth-coloured fillings that have picked up stains or with silver fillings that have darkened the tooth. In these cases, the fillings may be replaced, but often the placement of crowns ("caps") or veneers is necessary.

### **What are the alternatives to root canal treatment?**

The only alternative to root canal treatment is to extract the tooth, which often will lead to the movement of the surrounding teeth and subsequent loss of chewing efficiency. Extraction is certainly the quickest option in the short term, but long term may prove to be the costliest. Another option is to do nothing, but we will explain to you the pros and cons of this option.

### **Will the tooth need a crown or a cap following the treatment?**

If there is no previously existing crown, the necessity of a crown or cap depends upon how much tooth structure remains after the treatment. It also depends upon the type of the tooth and the amount of the chewing forces the tooth will be subject to. If there is not much tooth left, then the remaining amount is weak and much more likely to fracture. As a result, there may be a need to protect the remaining tooth by placing a crown.

### **What does root canal treatment involve?**

Where possible we try to do all the treatment in one visit, but more appointments may be necessary depending upon the tooth involved, the number of roots and the complexity of the case. During this appointment we will clean away the infected dental pulp. The inside of the

roots will also be cleaned and slightly enlarged and then finally sealed.

The following list gives more detail.

- Usually, we will numb the tooth with a local anaesthetic.
- The tooth is then isolated from the rest of the teeth with a small rubber sheet called "rubber dam". This protects your tooth from contamination from saliva and is a very important step in achieving an excellent result.
- An opening is made through the top of the tooth so that we can see inside the roots.
- The pulp is then cleaned with instruments we call files.
- During the procedure we will take several small X-rays to ensure that we know exactly how long your tooth is. We use special X-ray film to reduce the radiation. (60 dental X-rays is the equivalent of one Chest X-ray!)
- The insides of the roots are then cleaned, enlarged and shaped so that we can fill them easily.
- Sometimes we will place a disinfectant dressing inside the tooth with a temporary filling to prevent infection if we need to see you again.
- Finally, the canal is sealed to safeguard it against any more infection.
- The tooth is then ready for the usual filling or crown as necessary.

### **Will there be any discomfort after the treatment?**

In some cases, there may be some mild discomfort for a few days after the treatment, and the use of Paracetamol, Ibuprofen or Aspirin type medicines may be necessary. Frequently we will suggest that you take one of the above before the local anaesthetic wears off as this has been shown to be more effective. Sometimes, we may give you a prescription for something "a little stronger" just in case but in any case, pain afterwards does not affect the long term prognosis for the tooth.

We hope that this leaflet is a helpful way of explaining what root canal treatment is. If you do have any further questions, please don't hesitate to ask any member of our team for advice.