

WHAT HAPPENS IF MY ROOT CANAL CANNOT BE TREATED SUCCESSFULLY?

In the case of teeth with several roots, sometimes one root can be removed and the tooth can still function quite successfully with the remaining two roots. If the tooth has a straight forward problem, sometimes it can be corrected simply by re-treating the tooth. This is usually done by an endodontist. If the tooth has a complicated problem, or where an infection exists at the end of the tooth and it cannot be accessed through the top of the tooth, a simple surgical procedure called an apicectomy, can be performed whereby the infected end of the tooth can be sealed or removed by making a hole through the bone and gum to get direct access to it.

This sounds threatening, but is generally not a painful or difficult procedure.

PLEASE NOTE there is a class of dentists, known as endodontists, that only perform or specialise in root canal therapy. You have the option of going to an endodontist to have your root canal therapy done, if you wish. Endodontists usually only do very difficult cases, with the vast majority of root canal therapy being done by general practitioners. If a problem develops in the course of your root canal therapy which indicates your root canal system is difficult, eg; due to severe curvatures or internal calcifications, you may be referred to an endodontist for completion of the case once the determination of difficulty is made. Although this may cost you more, it is best to see the endodontist if difficulties arise.

Finally, some teeth cannot be saved and in these cases extraction is required. Following extraction the hole can be filled by placement of an implant, a bridge or a partial denture.

This document has been produced for the international dental profession.
The English (US) dictionary has been used as the basis for the text.



© 2011 Erskine Dental. All Rights Reserved. V08/12

REORDER INFO:

Australia Int'l ph + 61 2 6568 3773 Int'l fax + 61 2 6568 3774

US ph 1877 227 0855 fax 1877 227 0105

THE COMPLETE SERIES:

Bruxism & Clenching • Cracked Tooth Syndrome • What Are Inlays and Onlays?
• Instructions Regarding Your Temporary Crown, Bridge or Inlay Preparation • What Are Partial Dentures? • What Type of Filling Should I Have? • Care of Veneers - Porcelain and Composite Resin • Reconstructing Severely Worn Teeth • Information Regarding Root Canal Therapy and Associated Risks • Information Regarding Oral Surgery • Instructions Following Gingivectomy • Fissure Sealants and Preventive Resin Restorations • Interdental Brushes

Information Regarding Root Canal Therapy and Associated Risks

We have determined the nerve in your tooth is irreversibly diseased and requires treatment in order to avoid future problems. Please read the following questions and answers to obtain critical information which will assist you make the appropriate decision in regard to your treatment.

WHAT ARE MY OPTIONS AND WHAT ARE YOUR COMMENTS ON EACH OPTION?

1) Extract the tooth - This would leave you with a gap, which would cause the adjacent teeth to gradually tilt into it. In addition, it would cause the tooth in the opposite jaw to start the automatic process of growing out of the gum until it finds something to bite against. These processes cause a weakening of the contact point pressure around many of the other teeth which lead to food fibres, especially meat, getting jammed between the teeth, fueling the bacteria and causing severe decay and/or gum disease. Extracting teeth without replacing them generally causes the slow development of a disastrous long term situation resulting in more extractions, more fillings, more expense and more difficulty in correcting the problems that develop as a result. These problems are explained below. Most people also consider missing teeth in the smile area to be very unattractive. You could, if you wish, have the tooth extracted and replace it with an implant, a bridge or a partial denture, but usually the root canal therapy followed by the placement of a crown works out to be the best value for money in terms of restoring the mouth to its original function.

2) Do nothing - If you do nothing, the infection in the nerve will usually spread down to the base of the nerve where it infects the bone inside your jaw bone. The pus created can build up pressure causing extreme pain. Sometimes, if the infection is not very virulent the small amounts of pus created are absorbed by the body. You may not notice this type of infection, except on occasions when your immune system is weakened. On these occasions the bacteria get the upper hand and you can get symptoms ranging from slight tenderness on biting, to full-on throbbing pain. If your infection is fairly virulent, the pus will build up pressure and eventually the pressurised pus releases by creating a hole through the bone and emerging under your jaw, under your cheek, or coming through the gum. If it goes into your facial tissues, severe swelling can result. Clearly, this is not a recommended option.

3) Root canal therapy and associated restoration - Although the nerve is dead or dying, the tooth is not. We can clean out the small space in the center of the tooth occupied by the nerve, disinfect it and seal it up in a way that generally excludes the future colonisation of this space by bacteria. This is called root canal therapy and it effectively saves the tooth. The tooth still has a blood supply coming from the bone and gum and it does not need this internal blood supply from the nerve for its successful functioning.

PLEASE NOTE: The root treated tooth requires special precautions. It will become unusually brittle after the root canal therapy and if the top of the tooth is left exposed to the splitting forces caused by chewing, it can and will split right up the inside of the tooth destroying any chance to save it. Due to the likelihood of this occurring, it is absolutely essential that you get a restoration that provides "cusp protection" when restoring a chewing tooth. This is nearly always a crown made to look like a tooth, but you can have a gold 'onlay' if the appearance is not an issue.

You can discuss this with your dentist. The root canal therapy is the process of saving the basic tooth structure and everything below the gum, but the cost does not involve the actual re-building of everything above the gum. This is a separate issue with its own set of options. You will be quoted for the option you choose, over and above the cost of the root canal, so you can then calculate the total cost to bring this tooth back to a functional condition

HOW MUCH WILL ALL OF THIS COST ME?

Root canal therapy is a difficult, precise task requiring great expertise. Do not expect it to be inexpensive. The cost of the root canal therapy only, assuming the standard number of canals for this treatment will be:

Tooth \$.....

Additional canals \$.....

Once the root canal is finished we can commence phase 2 which is rebuilding the tooth from the gum up. Costs are as follows:

Post and core \$.....

Crown or Onlay \$.....

Filling \$.....
(only necessary in special cases)

ARE THERE RISK FACTORS INVOLVED IN ROOT CANAL THERAPY?

1) Yes - It may not be completely successful - Sometimes there are tiny tributary canals coming off from the main central nerve canal that cannot be effectively cleaned out. This can leave tiny spaces where the bacteria can remain and although they don't have a blood supply, the tissue fluid that percolates into these miniature caves is enough to give these bacteria a life. The skirmishes that occur with the body's defensive cells at the entrances to these caves can cause the creation of small amounts of pus. The body usually cleans up these dead white blood cells as fast as they are created and so there is no net effect in terms of pressure or pain. These small areas of infection are often visible on the x-ray as a darkened spot around the end or the side of the tooth.

Teeth such as this can last a lifetime without causing any severe symptoms, but occasionally and sometimes even after 20 years, these small dormant infections can be activated for unknown reasons and cause severe pain. Usually, a persons immune system is strong enough to keep these tiny pockets of bacteria under control and pain free, but you may notice an occasional sensitivity when biting on these teeth, especially at times when you are under stress or when your immune system is otherwise weakened. Patients often comment that these teeth feel 'different' even though there is no pain or problem. Generally speaking, root canal therapy (RCT) is considered to be about 95% effective, so the odds are very good that your tooth can be saved and free of major symptoms.

2) Instruments can fracture - The very fine metallic files that are used to clean out the canals can break unexpectedly and leave the tip of the file jammed solidly in the root canal. Sometimes an endodontic specialist can remove these tips, but often it is impossible. A root canal so affected is usually sealed fairly well by the actual metal rather than the cement (which is the customary sealing method), so that it is often unnecessary to do anything about the fractured instrument and we can just wait and see how the tooth responds over the next few years. If it hurts to bite on, or looks to be a problem on the x-ray, something could be done, but if it is free of symptoms, it is best just to leave it.

3) Disinfecting agents can cause irritation to the tissues underneath the tooth - This can cause pain and tingling sensations for several weeks and even months, in some cases. This is a fairly rare complication.

4) Hidden canals - Sometimes there are extra canals that are not readily visible and not even visible when you are looking for them. These extra canals can cause pockets for bacteria to hide in and cause the same problems as mentioned above.

5) Under filling or over filling of the root canal - Under filling can leave a small portion of the main root canal system available for bacteria to re-establish and if you are unlucky, can lead to a dark area on the x-ray or tenderness to biting. If this happens, the root canal can be re-instrumented and filled the extra few millimeters to eliminate this problem. Over filling occurs where the cement is squished through the end of the tooth. This is almost impossible to avoid in some situations, but does not cause a problem in the vast majority of cases. Generally, the bodys cells carry away the excess cement with time.

CONTINUED OVER