

Root Canal Therapy



We have determined the nerve in your tooth is irreversibly diseased and requires treatment in order to avoid future problems such as pain and abscess. Please read the following questions and answers to obtain critical information to assist in your decision making process.

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 and the opposing tooth to super-erupt. This means, 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, extract the tooth and replace it with an implant, a bridge or a partial denture, but usually the root canal therapy and 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, however, the infection is not very virulent and 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 to biting, to full-on throbbing pain. If your infection is fairly virulent, the pus will build up in pressure and eventually the pressurized pus releases by creating a hole through the bone and emerging under your jaw, under your cheek, or coming through the gum. This is known as an abscess. 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 centre of the tooth occupied by the nerve, disinfect it, and seal it up in a way that generally excludes the future colonization 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. In some cases we can do this in one procedure using a laser to sterilize the area and remove any infection. In other cases, we may recommend treatment over two stages, including a course of antibiotics to help 'clear up' that infection. If the area is already badly infected and abscessed, we may recommend taking oral antibiotics for 3-4 days before we attempt to remove the affected nerve. If we "treat" the tooth while it is badly infected, the infection may spread.

PLEASE NOTE that root canal therapy is the process of saving everything below the gum, but does not involve the actual re-building of everything (including the tooth) above the gum. This is a

separate issue with its own set of options. You will be quoted for the option you choose, so you can then calculate the total cost to bring this tooth back in to good condition. The root treated tooth requires special precautions. It is unusually brittle 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. Because of this, 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 ceramic ‘onlay’ if the appearance is not an issue. You can discuss this with your dentist.

How much is this all going to cost me?

Root canal therapy is a difficult, precise task requiring great expertise. Do not expect it to be inexpensive, however when root canal is compared to extraction and implant or bridge, it is certainly the more cost effective option.

Once the root canal is finished we can commence phase 2 which is rebuilding the tooth from the gum up. This is where you will be advised to consider a crown, but composite resin is a cheaper alternative – see brochure on “restoration options”.

What are the risk factors involved in root canal therapy?

It may not work completely – Sometimes there are small 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 so infected 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 person’s 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.

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, other than to leave it 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 radiograph, something could be done, but if it is free of symptoms, it is best just to leave it.

PLEASE NOTE there is a specialty of dentists, known as endodontists, that only perform or specialize in root canal therapy. Endodontists usually only do very difficult cases, with the vast majority of root canal therapy being done by your general dentist. 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.

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.

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.

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 radiograph 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 body's cells carry away the excess cement with time.

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 on 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. 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.

What to expect following your Root Canal Treatment

- The tooth may be sensitive for up to 10 days, so use basic pain relief such as panadol/nurofen if appropriate.
- If the tooth was acutely painful it may take a few days for the tissues around the tooth to settle. Try to chew away from the affected tooth for a few days.
- The temporary dressing or filling may feel little rough. This will improve when the crown/final restoration placed
- Local anesthetic can last for several hours, so you should avoid hot drinks and smoking for at least 12 hours.
- If the RCT is finish and you are not having a crown straightaway, you must remember that the tooth is significantly weaker than it was before the infection and treatment occurred. Be careful when you are chewing or biting on the tooth. It is at risk of 'cracked tooth syndrome' and should have a crown placed as soon as possible.
- If antibiotics have been prescribed, you must ensure that you take them according to directions until the packet is finished.
- If you have any concerns or questions regarding your root canal treatment, please call the practice on 3491 8131.