

# Apical surgery

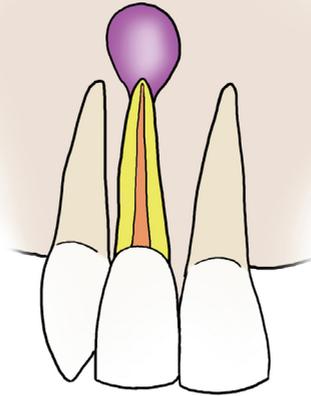
Information for patients



## What is apical surgery?

Apical Surgery is a minor surgical procedure carried out to treat a tooth which has persistent infection. This may arise when root canal treatment has not been completely successful. The infection is often found around the tip of the root of the tooth, within the jaw bone.

It is usually carried out under local anaesthesia (i.e. after being numbed up) with the patient awake. You can go home immediately after the procedure and many patients do not need to take any time off work after the procedure.



A tooth with persistent infection at the root apex

## What causes infection at the tip of the root?

Infection at the tip of the root (also known as the root apex) usually arises from within an infected root canal (the thin canal within the root, where the nerve and blood vessels are). Usually root canal treatment (a root filling) is sufficient to eliminate this infection but apical surgery may be necessary in the following situations:

- When root canal treatment has been unsuccessful and repeating the root filling is not possible or may not work.
- When the root filling has been repeated but has been unsuccessful.
- When there are bits of root filling material, which have been pushed through the root apex and cannot be retrieved.
- When a biopsy of the infected area is required.

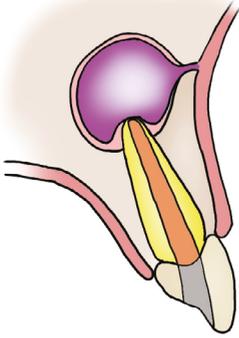
## What does the procedure involve?

In many ways, your experience will be similar to a routine dental appointment. The teeth and gums are numbed up in the same way as most other dental procedures.

An incision is made around the tooth and the gum is gently peeled back. The dentist would then normally be able to see the part of the jaw bone where the infection is situated. All infected tissue would then be removed.

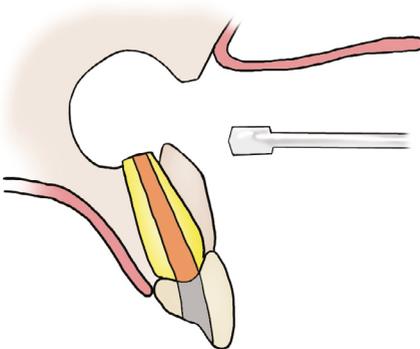
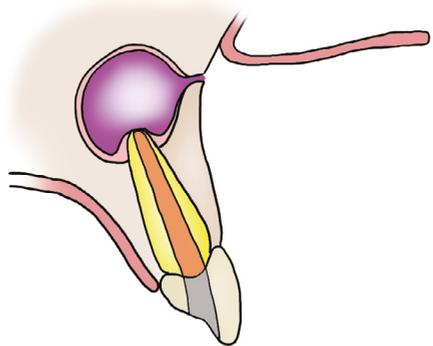
Using a drill, the tip of the root will then be carefully removed and a special filling would then be placed over the freshly cut root to seal it. Placing this filling reduces the risk of the infection returning.

The gum is then stitched back into place.

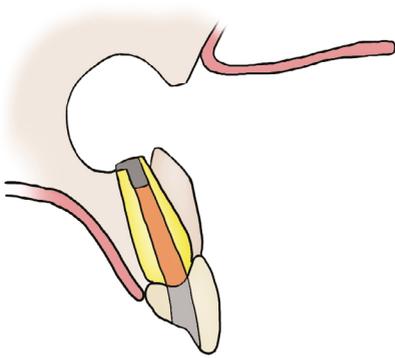


1. A root filled tooth with infection at the tip of the root.

2. The gum is gently peeled back to expose the thin bone covering the infection.

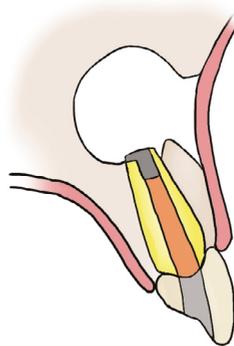


3. The infection is removed and the infected tip of the root is carefully removed using a drill



4. A special filling material is used to seal the root tip.

5. The gum is put back into position and stitches are placed.



## What are the risks?

As with every procedure, apical surgery is not without its risks. Some of the common complications are:

- **Discomfort and swelling** - This is usually minor and routine painkillers are sufficient. Some people who bruise easily may have some bruising inside the mouth and occasionally outside the mouth.

- **Infection** - Though every precaution is taken to avoid infection following surgery, a small proportion of cases get infected and require antibiotics (antibiotics are not routinely required).
- **Gum shrinkage** - As the gum is peeled and stitched back, there may be some gum shrinkage around the tooth, which may expose the margin of a cap. This may be unsightly and the cap may need to be replaced.
- **Failure of treatment** - Like any procedure, apical surgery can fail and the tooth may need to be extracted.

Most patients manage the post operative period very well and frequently do not need to take any time off work. However, this can be variable and it is advisable not to schedule any important events for at least a few days after surgery.

## How successful is it?

Apical surgery is often carried out when other options to save the tooth have been exhausted. Therefore, the success rate varies significantly on the condition of the tooth and previous treatment(s) that have been carried out.

On average, the success rate can be between 75% and 85%.

## Are there any other options?

The most common alternative is repeating the root canal treatment (root filling) and this is usually offered prior to considering apical surgery.

Extraction of the tooth and replacement with either a denture, bridge or dental implant may be considered.





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Produced by: Medical Illustration Services • MID code: 20220725\_005/EP

LN002353  
Publication date  
07/2022  
Review date  
07/2024