

The Technique of Coronectomy

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This leaflet aims to enhance your understanding of the forthcoming treatment and addresses many common questions. If you have any additional questions or need further clarification, please do not hesitate to ask.

Issues with wisdom teeth

The wisdom tooth (or third molar) is usually the last tooth to erupt into the mouth anytime after about 16 years of age. Frequently, there is not enough room to accommodate wisdom teeth, and as such, they do not come into the mouth normally. When this happens, the wisdom teeth are said to be "impacted." Wisdom teeth are usually either impacted forwards into the tooth in front or backwards into the jawbone. An impacted wisdom tooth can cause repeated attacks of infection in the gum surrounding the tooth, causing pain and swelling.

Why do I need treatment?

If left untreated, an impacted wisdom tooth will continue to cause repeated attacks of infection and pain. Food packing can occur, which causes decay in either the wisdom tooth or the tooth in front. Cysts can form around the wisdom tooth if it does not come into the mouth properly. A cyst occurs when fluid fills the sac that normally surrounds a developing wisdom tooth.

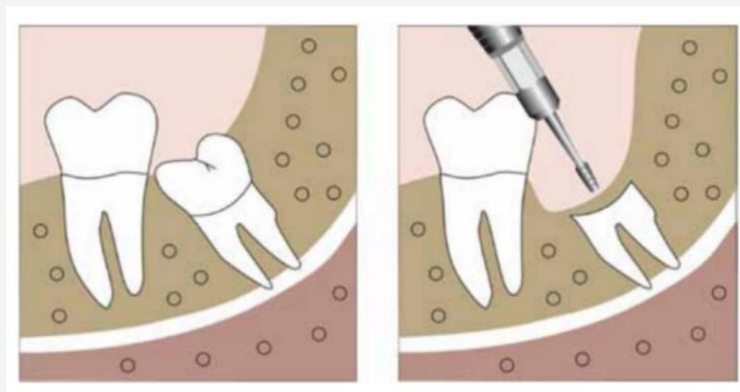
What are the treatment options?

The options are:

- **No surgical treatment:** The tooth can be monitored by your dentist if it has not been causing significant pain or repeated infection.
- **Complete removal:** Removing the tooth, including the roots.
- **Partial removal / Coronectomy:** Removing the crown of the wisdom tooth while leaving the roots behind to minimize the risk of nerve damage.

What is a Coronectomy?

In the coronectomy technique, the crown of the wisdom tooth is removed (decoronation), leaving the tooth roots behind to minimize the risk of nerve damage.



Coronectomy technique (Ahmed et al, 2011)

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Why have I been offered a coronectomy as my treatment of choice?

Lower wisdom teeth can lie close to the nerve inside the jawbone, which supplies feeling but not movement to the lower lip and chin. This nerve can be seen on a normal X-ray radiograph, but sometimes a special cross-sectional scan called a cone beam CT is also taken to give a 3D picture of the relationship of the nerve to the tooth roots.

If the roots of your lower wisdom tooth are judged to be particularly close to the adjacent sensory nerves, you may be offered a coronectomy instead of complete removal of the whole tooth. Intentionally leaving the roots behind reduces the risk of bruising or stretching of the nerve. This can significantly reduce the risk of permanent numbness or tingling in the lip, chin, cheek, gums, and tongue that can happen after wisdom tooth removal. There are only certain situations where this procedure is recommended. If the tooth is decayed or has a nerve that has died, the roots will not be healthy and cannot be left behind.

What does treatment involve?

Because the wisdom tooth has not fully erupted into the mouth, it is often necessary to make a small cut in the gum, which is then pushed back out of the way. Bone around the tooth is gently drilled away. The crown of the tooth is removed with the drill, and the remaining root surface is smoothed down. The gum is then put back into position and stitched into place. The procedure usually takes 30-40 minutes.

What are the potential complications with coronectomy?

- **Root removal:** It is possible that the wisdom tooth roots will have to be removed at the time of surgery if they are mobile.
- **Infection:** The roots may become infected in the future and need removing. If this happens, they usually rise upwards, away from the nerve, reducing the risk of numbness.
- **Migration or delayed healing:** Studies suggest that migration of the retained root or delayed healing happens in about 15% of cases, resulting in a need for further surgery.

What are the possible problems with having operations on wisdom teeth?

- **Swelling:** This is the most common side effect and usually lasts for up to 14 days. The amount of swelling varies from patient to patient. Applying an ice pack during the first 24 hours post-operatively may help. Do not apply the ice pack directly to your skin; wrap it in a towel first.
- **Restricted mouth opening:** This is a consequence of swelling and often settles once the swelling disappears. During this time, you may have to modify your diet, eating soft foods. Keep your mouth as clean as possible to reduce the risk of infection using regular mouthwashes.
- **Bleeding:** Although there may be a little bleeding at the time of the procedure, this usually stops very quickly and is unlikely to be a problem if the wound is stitched. Should the area bleed again when you get home, this can usually be stopped by applying pressure over the area for at least 10 minutes with a rolled-up damp handkerchief or swab. If the bleeding does not stop, please contact the department.
- **Infection:** Infection can be minimized by adopting scrupulous oral hygiene during the recovery phase. This usually encompasses normal tooth brushing with additional mouthwashes as advised, plus the avoidance of smoking.
- **Nerve Injury:** Two nerves lie in close proximity to impacted wisdom teeth. The lingual nerve provides sensation to your tongue, while the inferior alveolar nerve gives sensation

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to the lower lip and skin overlying the chin. These nerves may be bruised during tooth removal. A coronectomy technique reduces the chances of numbness to the lip and chin. If the nerves are bruised, you may experience numbness or pins and needles in the tongue, lower lip, skin over the chin, or any combination of these. Most of the time, it is temporary, although it can take up to 18 months to recover. On occasions, it may not fully recover, and patients may be left with patches of numbness.

What type of anaesthetic is used?

Several options are available:

- **Local anaesthetic:** This is an injection into the gum surrounding the wisdom tooth, similar to what you may have had at your dentist for a filling. The local anaesthetic takes a couple of minutes to numb the area and means that you will feel no pain during the procedure.
- **Local anaesthetic and intravenous sedation:** You can be given an injection into your arm in addition to a local anaesthetic injection into the gum. This makes you feel relaxed and less aware of the procedure. You are awake, but patients frequently have little or no memory of the operation.
- **General anaesthetic:** It is possible to have a coronectomy under a “day case” general anaesthetic, meaning you will be put to sleep completely but will be able to go home on the same day as surgery.

Do I need to take any time off work?

It may be necessary to take a few days off work and avoid strenuous exercise during this time. You will not be able to drive for 24 hours after intravenous sedation and for 48 hours after a general anaesthetic.

Will I need another appointment?

Further appointments are not always necessary but will be arranged if required.

What do I do next?

You will either be given a date for the procedure when you attend the clinic, or the Admissions Officer will send you a letter asking you to phone and agree on a date and time that is convenient for the operation. You will be sent further information on what you need to do and where to go on arrival. You will be able to discuss any questions that you may have with the doctors in the oral and maxillofacial unit. After the operation, you will be given another information leaflet with advice on what to do and how to care for your mouth.

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