

Third molars: decision points for the referring clinician

Nerve risk on the OPG, coronectomy and our results, pericoronitis, dry socket and antibiotics.

FROM

Dr Tom Jaunay, FRACDS (OMS)

SITES

Sydney CBD • Hurstville • Miranda



Each quarter we take one common referral theme, summarise the evidence and set out the practical decision points for general dentists and orthodontists. This issue covers lower third molars, still our largest referral group.

AT A GLANCE

- **Three OPG red flags** for nerve proximity: diversion of the canal, darkening of the root, interruption of the canal's white line. If present, we add a CBCT.
- **Coronectomy** is now planned for 1 in 10 lower third molars we treat. **No patient has had altered sensation lasting beyond two weeks** (125 planned cases since 2024).
- **Pericoronitis**: local measures first; antibiotics only for spreading or systemic infection; recurrence means removal.
- **Refer same day** for progressive trismus, floor-of-mouth or submandibular swelling, dysphagia or fever. Airway signs go to the emergency department.
- **Unsure whether to refer?** Email the OPG or CBCT to reception@oromaxnsw.com.au marked "For Dr Jaunay".

1 When to remove, and when to watch

Removal is generally indicated when there is associated pathology. The NICE criteria¹ remain a useful framework:

- Recurrent pericoronitis, or one severe episode
- Unrestorable caries in the third molar
- Distal caries or a periodontal defect on the second molar
- Pulpal or periapical pathology
- Cellulitis, abscess or osteomyelitis
- Resorption of the third or second molar
- Follicular enlargement, cyst or other pathology
- Tooth in a planned surgical or tumour field

Asymptomatic, disease-free teeth. The 2020 Cochrane review² found insufficient evidence to support or refute prophylactic removal; low-certainty evidence links retention with periodontal problems distal to the second molar. The decision weighs likely future pathology against surgical morbidity, which rises with age and root development.

PRACTICAL POINT

A partially erupted mesioangular lower 8 contacting the 7 at or near the cementoenamel junction is the pattern we most often see behind distal cervical caries on the 7. These lesions are easily missed until late. Review or refer even if the patient is asymptomatic.

2 Reading the OPG for nerve risk

Rood and Shehab described seven panoramic signs of a close root–canal relationship.³ Three were most strongly associated with nerve injury: **diversion of the canal**, **darkening of the root** and **interruption of the white line**.

Root signs	Canal signs
Darkening of the root	Interruption of the white line
Deflection of the root	Diversion of the canal
Narrowing of the root	Narrowing of the canal
Dark and bifid apex	

Where CBCT fits. When these signs are present we obtain a CBCT to see where the canal runs and whether the root grooves or compresses it. A 2020 meta-analysis⁴ found CBCT does *not* by itself reduce neurosensory disturbance compared with panoramic radiography. Its value is in choosing the technique and giving the patient an accurate individual risk, not in routine use.

Reported inferior alveolar nerve injury after lower third molar extraction ranges from about 0.4% to 8.4%, with permanent deficit in up to 3.6% in higher-risk series.⁷

IF YOU ALREADY HAVE A CBCT

Please send the full DICOM dataset rather than screenshots. It saves a repeat scan.

3 Coronectomy

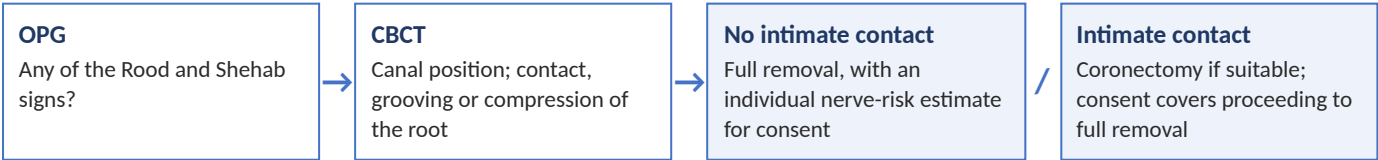
Coronectomy removes the crown and deliberately leaves vital roots in place, reduced below the crest, when the roots are intimately related to the canal. Two randomised trials^{5,6} showed fewer nerve injuries than full extraction in high-risk teeth. A 2025 umbrella review⁷ pooling 7,913 coronectomies reported:

Outcome	Pooled rate	Comment
Inferior alveolar nerve injury	0.76%	Compared with 0.4–8.4% for extraction
Root migration	12.5%	Usually 2–4 mm, mostly in the first 1–2 years
Re-intervention	4.5%	Mean about 10 months, mainly for root exposure

Usually not suitable when: there is active infection or periapical pathology on the roots, the tooth is mobile, the impaction runs horizontally along the canal, or the patient is immunocompromised or facing head and neck radiotherapy.

What patients should expect: recovery similar to an extraction, a review radiograph in the first year, and a small chance of a second, usually simpler, procedure if a root migrates. Migrating roots generally move away from the canal.

How we decide: lower third molar with nerve signs



“ Not sure whether a lower third molar is high risk? Send the OPG or CBCT through reception and I will let you know whether, and how urgently, to refer.

Dr Tom Jaunay · reception@oromaxnsw.com.au, marked “For Dr Jaunay”

Our results: Oromax coronectomy audit

~40% of lower third molars now have a pre-operative CBCT, up from about 1 in 5 in 2023	1 in 10 planned for coronectomy since 2024 (125 of 1,246)	0 coronectomy patients with altered sensation beyond two weeks (pooled literature: 0.76% nerve injury)	2 cases where retained roots were dislodged during surgery
--	---	--	--

What this means for referrers: rising CBCT use lets us identify higher-risk teeth and offer coronectomy selectively, with no persisting nerve changes to date. With 125 cases a zero count is consistent with a true rate of up to about 2.4% (the rule of three), so it is reassuring rather than definitive. Because roots were dislodged twice, consent always covers proceeding to full removal. We will report root migration and re-intervention rates once follow-up is complete.

Source: Oromax NSW audit of lower third molar surgery (item D324, teeth 38/48), Sept 2022 – Oct 2026, 1,518 teeth. Coronectomy figures from documented treatment plans 2024–2026; complications from surgeon case review.

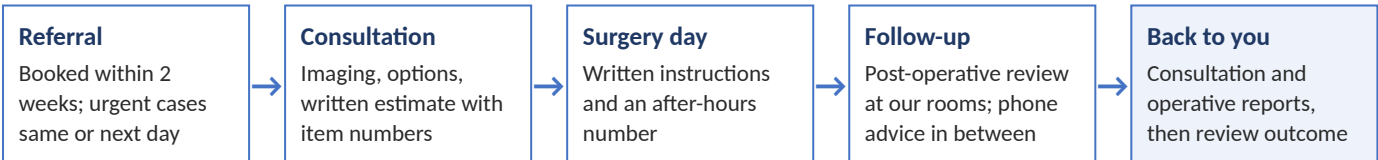
4 Pericoronitis in general practice

- **Local measures first:** irrigate under the operculum, debride, warm saline or 0.2% chlorhexidine rinses, analgesia.⁸
- **Check the opposing tooth:** an over-erupted upper 8 traumatising the operculum often drives recurrence.
- **Antibiotics** only for spreading infection, systemic involvement or immunocompromise (Therapeutic Guidelines: Oral and Dental).
- **Recurrence** (a second episode, or one severe one) is an indication for removal. Refer once the acute phase settles.

SAME-DAY REFERRAL

Progressive trismus, submandibular or floor-of-mouth swelling, dysphagia, fever or malaise. **Difficulty breathing, stridor or voice change: emergency department.**

5 After surgery: the patient journey and what we see most



Most common issues	How we manage it
Pain and swelling beyond the expected peak (day 2–3)	Structured analgesia plan; review if worsening after day 3
Dry socket	Chlorhexidine prevention (rinse OR 0.38; gel OR 0.44) ⁹ ; irrigation and dressing at our rooms
Post-operative infection	Single IV dose at surgery ¹⁰ ; oral course afterwards only if pericoronitis is active at the time of surgery
Altered sensation (lip, chin or tongue)	Documented at review and followed until resolved; early assessment if it persists
Trismus or minor bleeding	Advice by phone; seen the same day if needed

IF ONE OF OUR PATIENTS TURNS UP IN YOUR CHAIR

Please call us rather than manage it alone. We would rather see post-operative problems ourselves, and there is no charge for aftercare.

6 Anaesthesia, fees and payment options

Option	Typically suits	Fees involved
Local anaesthetic, in the rooms	Upper teeth, erupted or partially erupted lowers, single teeth	Surgical fee only
General anaesthetic, day surgery in a private hospital	Deep impactions, multiple teeth, marked anxiety, medical or airway factors	Surgical fee + anaesthetist fee + hospital fee (hospital cover usually pays most of the hospital component, less any excess)

Typical fees

Surgical fee	\$740–\$1,010 per tooth
Anaesthetist (GA)	about \$900
Hospital (GA)	\$1,350–\$2,600

Fees before health fund rebates. Private hospital cover usually pays most of the hospital fee, less any excess.

Extras cover may rebate part of the surgical fee, depending on the policy. Every patient gets a written estimate with item numbers after consultation, so they can check with their fund before booking.

Payment options

- **Zip Money:** 6 months interest free
- No charge for aftercare and post-operative reviews
- Our reception team can explain the options at the consultation.

7 Making a referral

Helpful to include

- Recent OPG (within 12 months), or CBCT DICOM
- Symptoms and number of pericoronitis episodes
- Anticoagulants/antiplatelets, antiresorptives, head and neck radiotherapy, immunosuppression, pregnancy
- Orthodontic or restorative plans
- Anaesthetic preference, if discussed

02 8513 9810

reception@oromaxnsw.com.au

Unsure whether to refer? Email imaging marked “For Dr Jaunay” and we will advise whether, and how urgently, to refer. Urgent cases: call the number above.

**Sydney CBD Level 2, 225 Macquarie St
Hurstville Suite 9.06, Level 9, 288 Forest Rd
Miranda Suite 2, Level 5, 86 Kiora Rd**

Coming up: Issue 2 (Summer 2027) implants and bone grafting · Issue 3 (Autumn 2027) impacted teeth and the orthodontic interface · Issue 4 (Winter 2027) oral pathology.

References

1. NICE. Guidance on the extraction of wisdom teeth. Technology Appraisal Guidance 1. 2000.
2. Ghaemini H, et al. Surgical removal versus retention for asymptomatic disease-free impacted wisdom teeth. Cochrane Database Syst Rev. 2020;5:CD003879.
3. Rood JP, Shehab BA. The radiological prediction of inferior alveolar nerve injury during third molar surgery. Br J Oral Maxillofac Surg. 1990;28(1):20–25.
4. de Toledo Telles-Araújo G, et al. CBCT does not reduce neurosensory disturbances after third molar removal compared to panoramic radiography. Clin Oral Invest. 2020;24(3):1137–1149.
5. Renton T, et al. RCT comparing inferior alveolar nerve injury after coronectomy and removal of mandibular third molars. Br J Oral Maxillofac Surg. 2005;43(1):7–12.
6. Leung YY, Cheung LK. Safety of coronectomy versus excision of wisdom teeth: a randomized controlled trial. Oral Surg Oral Med Oral Pathol Oral Radiol Endod. 2009;108(6):821–827.
7. Di Spirito F, et al. Re-intervention rate, timing, and indications following coronectomy of the mandibular third molar: a systematic review of systematic reviews. J Clin Med. 2025;14(11):3877.
8. SDCEP. Management of Acute Dental Problems: acute pericoronitis.
9. Daly BJ, et al. Local interventions for the management of alveolar osteitis (dry socket). Cochrane Database Syst Rev. 2022;9:CD006968.
10. Lodi G, et al. Antibiotics to prevent complications following tooth extractions. Cochrane Database Syst Rev. 2021;2:CD003811.

Educational material for dental practitioners; it does not replace individual clinical assessment.