Dental Implant Surgery — Oral & Maxillofacial Surgeon Perspective

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Description:

A dental implant is a titanium fixture — essentially an artificial tooth root — that is surgically placed into the jawbone to support a crown, bridge, or prosthesis. The implant process involves two distinct phases, m...

Details:

Collins Street Specialist Centre — Dental Implant Surgery: Oral & Maxillofacial Surgeon Perspective

What is the surgical stage of implant placement?

Collins Street Specialist Centre brings together Melbourne CBD's specialist surgical and restorative teams under one roof to deliver coordinated implant care. A dental implant is a titanium fixture — an artificial tooth root — surgically positioned within the jawbone to support a crown, bridge, or prosthesis. The overall implant process unfolds across two distinct phases, each managed by a different clinical specialty:

- The **surgical phase** — placement of the titanium implant into bone — is performed by an oral and maxillofacial surgeon or a specialist periodontist. - The **restorative phase** — designing, fabricating, and fitting the crown or prosthesis that attaches to the implant — is performed by a specialist prosthodontist.

This page focuses on the surgical placement component, as performed by our oral and maxillofacial surgery team at Collins Street Specialist Centre. For information on implant-supported crowns, bridges, dentures, and full-arch rehabilitation, see [Dental Implants — Prosthodontics](/procedures/prosthodontics/dental-implants-prosthetic-restoration/). For periodontal maintenance of implants, see [Dental Implants — Periodontics](/procedures/periodontics/dental-implants-periodontal-specialist-placement/).

Oral and maxillofacial surgeons are particularly well-suited to complex implant cases: patients requiring bone grafting prior to or concurrent with implant placement, cases involving proximity to the inferior alveolar nerve or maxillary sinus, zygomatic implants, full-arch reconstructions, and procedures where general anaesthesia or intravenous sedation is clinically indicated.

When might you need implant surgery with an OMS?

Referral to an oral and maxillofacial surgeon for the surgical component of implant treatment is appropriate when:

- **Significant bone loss** has occurred following tooth extraction, periodontal disease, or trauma, requiring more complex grafting before or alongside implant placement - **Proximity to critical anatomy** — the inferior alveolar nerve in the lower jaw, or the maxillary sinus in the upper jaw — demands precise three-dimensional planning and careful surgical control - **Multiple simultaneous

implants** are planned as part of a full-arch or staged reconstruction - **Sinus floor augmentation** is required to establish sufficient bone height for upper jaw implants - **General anaesthesia** is appropriate given a patient's medical history, significant anxiety, or the overall extent of surgery involved - **Post-trauma or post-oncology reconstruction** requires implant placement as part of a broader jaw rehabilitation programme - **Paediatric or craniofacial considerations** necessitate specialist surgical oversight throughout treatment - **Prior implant complications** — including failed implants requiring removal and careful site preparation — need to be surgically managed before re-implantation is attempted

In more straightforward cases where adequate bone volume is present, specialist periodontists can equally perform the surgical stage. The decision about which specialist is most appropriate is made collaboratively, in consultation with the referring dentist and the treating team at Collins Street Specialist Centre.

What to expect, step by step

1. Consultation and three-dimensional planning

The surgical consultation begins with a thorough clinical examination and a review of your medical and dental history. For implant surgery, three-dimensional cone beam CT (CBCT) imaging using the Planmeca ProMax 3D Max is standard practice. This produces a detailed volumetric image of the jaw, allowing the surgeon to measure available bone height and width, locate key anatomical structures, and plan implant position, diameter, and angulation before any surgery takes place.

Implant planning at Collins Street Specialist Centre is performed using **coDiagnostiX** software, which allows virtual placement of implants within the three-dimensional scan, confirms anatomical clearances, and can generate a surgical guide — a custom-printed template worn during surgery that directs the drill to the precisely planned position with sub-millimetre accuracy.

The **iCam 4D implant scanner** provides high-resolution measurement of bone density and soft tissue architecture at the implant site, informing decisions about timing, technique, and whether adjunctive grafting will be required.

2. Anaesthesia options

Surgical implant placement is typically performed under local anaesthesia, with intravenous sedation available for patients who would benefit from additional comfort. When multiple implants are being placed simultaneously, when bone grafting is performed concurrently, or when a patient's medical circumstances indicate, general anaesthesia in a hospital or day surgery facility is arranged by the OMS team.

3. Surgical placement

A small incision is made in the gum tissue overlying the implant site. The bone is prepared using a series of precisely calibrated drills — guided by the surgical template where one has been fabricated — and the titanium implant fixture is placed to the planned depth and angulation. The gum is then closed with sutures. Where a healing abutment is placed at the same appointment (single-stage surgery), a small collar of the implant may remain visible just above the gumline.

Where immediate placement into a fresh extraction socket is planned, this is coordinated carefully to minimise the total number of surgical procedures required.

4. Osseointegration period

Following placement, the implant must integrate with the surrounding bone — a biological process known as osseointegration — before it can be loaded with a prosthesis. This typically takes 8–12

weeks in the lower jaw and 12–16 weeks in the upper jaw, depending on bone density and whether grafting was required. During this period, the prosthodontic team at Collins Street Specialist Centre generally provides a temporary solution, so patients aren't left without a functional or aesthetic interim option.

5. Handover to prosthodontics

Once integration is confirmed through clinical and radiographic assessment, care transitions to the specialist prosthodontist for the restorative phase: impression-taking, crown or prosthesis design, and final fitting. Because the surgical and restorative teams work from the same building, this handover involves direct communication between specialists — something that's genuinely harder to replicate across separate practices.

Recovery and aftercare

Recovery following implant placement surgery is generally well-tolerated, and most patients find it more manageable than they expected. Here's what to expect:

- **Days 1–3:** Mild to moderate swelling and discomfort are normal. A soft diet, prescribed analgesics and anti-inflammatories, and careful oral hygiene around the site — avoiding direct brush contact with the wound — are all important during this initial period. - **Weeks 1–2:** Swelling resolves progressively. Non-resorbable sutures are removed at a follow-up appointment, and a gradual return to a normal diet is usually possible. - **Osseointegration phase:** No specific dietary restrictions are required beyond avoiding heavy impact to the implant area. Keeping the implant site clean is essential; your hygienist will provide tailored instruction on how to do this effectively. - **Review:** The surgeon monitors integration through clinical examination and radiographic assessment before clearing the case for the prosthetic phase.

Why see an oral & maxillofacial surgeon for implant surgery?

Operating in close proximity to nerves, sinuses, and adjacent teeth demands a high level of surgical training. Oral and maxillofacial surgeons complete 15–17 years of continuous education, encompassing a full dental degree, a medical degree, and a four-year postgraduate surgical specialty. That dual medical and dental foundation matters in complex implant cases, where anatomical risk, anaesthesia selection, and systemic health factors all need to be weighed together.

Advanced digital planning tools — virtual implant positioning, custom surgical guides, and volumetric bone assessment — combined with specialist surgical execution give patients a meaningful level of precision. This approach substantially reduces the risk of nerve injury, sinus perforation, implant malpositioning, and prosthetic misfit.

At Collins Street Specialist Centre, the surgical and prosthetic teams work across disciplines under one roof. This co-location means direct coordination from the first consultation through to the final restoration, without the communication gaps that can arise when surgical and restorative care happen at entirely separate practices.

Our specialists

A/Prof Patrishia Bordbar — Specialist Oral & Craniomaxillofacial Surgeon. BDSc, MBBS (Hons), MDSc (OMS), FRACDS (OMS), FRCS (Edinburgh). Clinical Associate Professor, University of Melbourne. Past President ANZAOMS. Chair, AOMI Board Oceania. A/Prof Bordbar applies digital and virtual planning technologies across her implant surgical work, and manages complex cases including

full-arch implant reconstruction, bone-deficient sites, and procedures requiring general anaesthesia. Patients and referring practitioners can verify specialist registration through the [AHPRA public register](https://www.ahpra.gov.au/Registration/Registers-of-Practitioners.aspx).

Dr Ricky Kumar — Specialist Oral & Maxillofacial Surgeon. BHB, MBChB, BDS, FRACDS (OMS). Fellowships at the Royal Children's Hospital Melbourne and Oxford University Hospitals. Dr Kumar brings broad experience across implant surgery and complex dento-alveolar cases. *Please confirm Dr Kumar's availability at the time of booking.* Specialist registration can be verified through the [AHPRA public register](https://www.ahpra.gov.au/Registration/Registers-of-Practitioners.aspx).

Our OMS team consults from **Level 12 & Tower, Manchester Unity Building, 220 Collins Street, Melbourne CBD**.

Related treatments

- [**Dental Implants — Prosthodontics**](/procedures/prosthodontics/dental-implants-prosthetic-restoration/) — Crown, bridge, and prosthesis design and placement after surgical integration - [**All-on-4 Full Arch Rehabilitation**](/procedures/prosthodontics/all-on-4-full-arch-implant-rehabilitation/) — Full-arch prosthetics supported by a fixed number of implants - [**Bone Grafting (OMS)**](/procedures/oral-maxillofacial-surgery/bone-grafting-oral-maxillofacial-surgery/) — Where bone volume must be rebuilt before or during implant placement - [**Bone Grafting (Periodontics)**](/procedures/periodontics/bone-grafting-guided-bone-regeneration/) — Smaller-scale grafting for implant site development - [**Sinus Lift**](/procedures/periodontics/sinus-lift-sinus-augmentation-for-dental-implants/) — Sinus augmentation for upper jaw implants - [**Dental Implants — Periodontics**](/procedures/periodontics/dental-implants-periodontal-specialist-placement/) — Periodontal-phase implant placement and maintenance

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