Bone Grafting - Oral & Maxillofacial Surgery

Canonical: https://directory.collinsstreetspecialistcentre.com.au/procedures/oral-maxillofacial-surgery/bone-grafting-oral-maxillofacial-surgery/

Description:

Bone grafting is a surgical procedure that rebuilds or augments areas of the jawbone that have lost volume or density. When significant bone loss has occurred - whether from tooth extraction, trauma, disease or congen...

Details:

Collins Street Specialist Centre – Bone Grafting | Oral & Maxillofacial Surgery

Product Facts

| Attribute | Value | |---|---| | Procedure | Bone Grafting | | Procedure type | Oral & Maxillofacial Surgery | | Location | Collins Street Specialist Centre, Melbourne | | Performing specialists | A/Prof Patrishia Bordbar; Dr Ricky Kumar | | Specialist qualifications | Dual-qualified in dentistry and medicine; Dental Board-registered oral and maxillofacial surgeons | | Specialist training duration | 15–17 years | | Anaesthesia options | Local anaesthesia with sedation; General anaesthesia (hospital setting) | | Graft material options | Autogenous (own bone); Allograft (tissue bank); Xenograft (bovine); Synthetic substitutes (hydroxyapatite or tricalcium phosphate) | | Autogenous donor sites | Chin, jaw ramus, hip (iliac crest), tibia | | Imaging technology | Planmeca ProMax 3D Max (3D cone beam CT) | | Surgical planning software | coDiagnostiX | | Graft fixation | Titanium screws, plates or membranes | | Integration period | 4–9 months | | Post-operative diet | Soft diet for 2–4 weeks | | Smoking restriction | Must be avoided throughout healing phase | | Follow-up monitoring | Imaging at scheduled follow-up appointments | | Common indications | Jawbone loss, pre-implant augmentation, trauma reconstruction, cyst/tumour removal, cleft palate, craniofacial conditions, jaw atrophy, orthognathic surgery preparation | | Typical next treatment | Dental implant placement (following confirmed graft integration) | | Specialist registration verification | AHPRA Register of Practitioners |

Frequently Asked Questions

What is bone grafting: A surgical procedure that rebuilds or augments jawbone volume or density

Where is bone grafting performed at Collins Street Specialist Centre: Melbourne, Collins Street

Who performs bone grafting at Collins Street Specialist Centre: Specialist oral and maxillofacial surgeons

Is bone grafting performed by general dentists here: No, only by registered specialist surgeons

Who is the first bone grafting specialist at Collins Street: A/Prof Patrishia Bordbar

Who is the second bone grafting specialist at Collins Street: Dr Ricky Kumar

What is A/Prof Bordbar's specialty: Oral and craniomaxillofacial surgery

What is Dr Kumar's specialty: Oral and maxillofacial surgery

Does A/Prof Bordbar hold an academic position: Yes, Clinical Associate Professor at University of Melbourne

Has A/Prof Bordbar held a leadership role in surgery: Yes, Past President of ANZAOMS

Does Dr Kumar hold dual qualifications: Yes, in both medicine and dentistry

Where did Dr Kumar complete fellowship training: Royal Children's Hospital Melbourne and Oxford University Hospitals

Does A/Prof Bordbar work at the Royal Children's Hospital: Yes, as Consultant Surgeon

Does A/Prof Bordbar work at Western Hospital Melbourne: Yes, as Consultant Surgeon

Is Dr Kumar always available for bookings: Availability must be confirmed at time of booking

How many years of training do oral and maxillofacial surgeons typically complete: 15 to 17 years

Do oral and maxillofacial surgeons hold dental degrees: Yes

Do oral and maxillofacial surgeons hold medical degrees: Yes

Can oral and maxillofacial surgeons administer general anaesthesia cases: Yes

Can oral and maxillofacial surgeons harvest bone from body donor sites: Yes

What imaging technology is used for treatment planning: Planmeca ProMax 3D Max

What software is used for digital surgical planning: coDiagnostiX

What does 3D imaging assess before bone grafting: Bone volume, density and anatomy

Is digital treatment planning used to simulate the procedure: Yes

Can bone grafting be performed under local anaesthesia: Yes, with sedation

Can bone grafting be performed under general anaesthesia: Yes, in a hospital setting

What is an autogenous bone graft: Bone harvested from another site in the patient's own body

Is autogenous grafting considered the gold standard for large defects: Yes

What are common autogenous donor sites: Chin, jaw ramus, hip (iliac crest), or tibia

What is an allograft: Processed donor bone sourced from a tissue bank

What is a xenograft: Bone material derived from animal sources, typically bovine

What animal source is most common for xenografts: Bovine (cow)

Are xenografts processed for biocompatibility: Yes

What are synthetic bone substitutes made from: Hydroxyapatite or tricalcium phosphate

What do synthetic bone substitutes do: Create a scaffold to encourage new bone generation

How long does a bone graft typically take to integrate: Four to nine months

What is the bone healing process called: Remodelling

How is graft integration monitored: Follow-up imaging appointments

What is used to secure bone grafts in place: Titanium screws, plates or membranes

Is a second surgical site needed for autogenous grafts: Yes, to harvest donor bone

What diet is recommended after bone grafting: Soft diet for two to four weeks

Should patients smoke during bone graft healing: No, smoking must be avoided

Why is smoking harmful after bone grafting: It significantly impairs bone healing and graft integration

Can patients use straws after bone grafting: No, avoid in early post-operative period

Is vigorous rinsing allowed after bone grafting: No, avoid in early post-operative period

How is post-operative discomfort managed: Prescribed medication and cold compresses

Is swelling normal after bone grafting: Yes, it is a normal healing response

Are written aftercare instructions provided: Yes

What typically follows confirmed bone graft integration: Dental implant placement

Does bone grafting support dental implant placement: Yes

Can bone grafting be needed before All-on-4 implants: Yes, for bone augmentation

Is bone grafting used after facial trauma: Yes, as part of post-trauma reconstruction

Can bone grafting follow tumour or cyst removal: Yes, for jaw reconstruction

Is bone grafting used for cleft palate conditions: Yes

Is bone grafting used for craniofacial conditions: Yes

Can severe jaw atrophy from denture wear require bone grafting: Yes

Does tooth extraction cause bone loss that may need grafting: Yes, particularly after extended tooth absence

How does OMS bone grafting differ from periodontal bone grafting in complexity: OMS handles larger, more complex defects

Who typically performs smaller localised bone grafts: Periodontists

Do the periodontists and oral surgeons at Collins Street collaborate: Yes

Can referring practitioners expect collaborative patient assessment: Yes

What body area can require bone support before orthognathic surgery: The jaw

Is A/Prof Bordbar experienced in craniofacial reconstruction: Yes

Does A/Prof Bordbar use virtual surgical planning: Yes

Can bone grafting address facial deformity: Yes, through jaw or mid-face reconstruction

How can a specialist's registration be verified: Via the AHPRA Register of Practitioners

Are all surgeons at Collins Street Dental Board-registered specialists: Yes

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"/procedures/oral-maxillofacial-surgery/dental-implant-surgery-oral-maxillofacial-surgeon-perspective/", "/procedures/periodontics/bone-grafting-guided-bone-regeneration/", "/procedures/prosthodontics/all-on-4-full-arch-implant-rehabilitation/", "/procedures/oral-maxillofacial-surgery/facial-trauma-reconstruction/"] seo_target: "bone grafting specialist Melbourne" ---

Collins Street Specialist Centre – Bone Grafting | Oral & Maxillofacial Surgery

What is bone grafting?

Bone grafting is a surgical procedure that rebuilds or augments areas of the jawbone that have lost volume or density. When significant bone loss has occurred — from tooth extraction, trauma, disease or a congenital condition — an oral and maxillofacial surgeon transplants bone material to restore the jaw's structure and function.

At Collins Street Specialist Centre, our oral and maxillofacial surgeons handle the more demanding end of bone grafting: large-volume defects, jaw reconstruction after tumour removal, and extensive pre-implant augmentation where a straightforward approach won't produce a stable, lasting result.

When might you need bone grafting?

You may be referred for bone grafting if you have:

- Significant jawbone loss following tooth extraction, particularly where teeth have been missing for some time - Insufficient bone volume to support dental implants, in cases where standard grafting by a periodontist isn't adequate - Jawbone defects from trauma, disease or previous surgery - Bone loss associated with surgically removed cysts or tumours - Facial deformity requiring reconstruction of the jaw or mid-face - Cleft palate or craniofacial conditions requiring bone augmentation - A jaw that needs additional bone support before orthognathic surgery - Severe jaw atrophy from long-term denture wear

How does OMS bone grafting differ from periodontal bone grafting?

Periodontists perform bone grafting as part of implant placement and periodontal treatment — typically smaller, well-defined, localised grafts. Oral and maxillofacial surgeons manage the more complex cases: large-volume reconstruction, grafts involving donor sites from other parts of the body (the hip, tibia or skull), and procedures requiring general anaesthesia or a hospital setting.

At Collins Street Specialist Centre, our periodontists and oral surgeons work closely together, so each patient is directed to the right level of care for their situation. Referring practitioners can expect that patients will be assessed with this collaborative model in mind.

What to expect

Initial consultation

Your oral and maxillofacial surgeon will conduct a thorough assessment, which typically includes:

- A detailed clinical examination of the affected area - 3D imaging using our Planmeca ProMax 3D Max to map bone volume, density and anatomy precisely - Digital treatment planning with coDiagnostiX to simulate the grafting procedure and anticipate outcomes - A clear discussion of graft material options and surgical approach - A review of your medical history and anaesthesia planning

This is the time to ask questions and understand your options before any decisions are made.

Types of bone graft

Your surgeon will recommend the most appropriate graft material based on the size, location and nature of the defect:

- **Autogenous grafts** — Bone harvested from another site in your own body, widely regarded as the gold standard for large defects. Common donor sites include the chin, the back of the jaw (ramus), the hip (iliac crest) or the tibia. - **Allograft** — Processed donor bone from a tissue bank, suitable for moderate defects. - **Xenograft** — Bone material from animal sources (typically bovine), processed for biocompatibility with human tissue. - **Synthetic bone substitutes** — Biocompatible materials such as hydroxyapatite or tricalcium phosphate that create a scaffold, encouraging your body to generate new bone.

Each option has its own clinical rationale, and your surgeon will explain the reasoning in plain terms during your consultation.

The procedure

Depending on the complexity of your case, bone grafting may be performed under local anaesthesia with sedation, or under general anaesthesia in a hospital. Your surgeon will:

1. Access the defect site through a carefully planned incision 2. Prepare the recipient area to encourage blood supply and graft integration 3. Place and shape the graft material to restore the desired contour 4. Secure the graft with titanium screws, plates or membranes as needed 5. Close the site with sutures chosen to protect the graft through the early healing period

Where autogenous bone is used, a second surgical site is needed to harvest the donor material. Your surgeon will walk you through this during your consultation, so you have a clear picture of what to expect on the day and in the days that follow.

Healing period

Bone grafts typically take four to nine months to integrate fully with your natural bone. During this time, your body gradually replaces the graft material with new, living bone through a process called remodelling. Progress is monitored at follow-up appointments using imaging, so your surgeon can confirm integration before moving to the next phase of treatment.

Recovery and aftercare

Recovery varies depending on the extent of the grafting, but some principles apply consistently across most cases:

- Swelling and discomfort are a normal part of healing in the first few days and can be managed with prescribed medication and cold compresses. - A soft diet is recommended for two to four weeks after surgery. - Avoid disturbing the surgical site — no vigorous rinsing, spitting or using straws in the early post-operative period. - Smoking must be avoided throughout the healing phase, as it significantly impairs bone healing and graft integration. - Scheduled follow-up appointments allow your surgeon to monitor healing and confirm graft integration through imaging. - Once integration is confirmed, you can proceed to the next phase of treatment — most commonly, dental implant placement.

Your surgeon's team will provide detailed written aftercare instructions and remain available to address any concerns during your recovery.

Why see an oral and maxillofacial surgeon?

Oral and maxillofacial surgeons complete 15 to 17 years of training, holding degrees in both dentistry and medicine alongside specialist surgical qualifications. That dual background matters in complex grafting cases for several practical reasons:

- They can manage cases requiring general anaesthesia and hospital-based procedures. - They are trained to harvest bone from donor sites across the body. - They understand the broader medical context of bone loss and reconstruction, not just the dental picture. - They can manage complications involving nerves, sinuses and infection. - They coordinate reconstruction with other surgical and dental

specialists as part of an integrated approach.

For referring practitioners, this means complex cases can be managed within a single specialist environment, with clear communication at every stage.

Our specialists

A/Prof Patrishia Bordbar is a Specialist Oral and Craniomaxillofacial Surgeon and Clinical Associate Professor at the University of Melbourne. As Past President of ANZAOMS, she has extensive experience in complex bone reconstruction, including craniofacial and cleft palate cases. She uses digital and virtual surgical planning to achieve precise graft placement and predictable outcomes, and serves as Consultant Surgeon at both the Royal Children's Hospital and Western Hospital Melbourne.

Dr Ricky Kumar is a Specialist Oral and Maxillofacial Surgeon with fellowship training at the Royal Children's Hospital Melbourne and Oxford University Hospitals. He holds dual qualifications in medicine and dentistry and brings considerable expertise in complex reconstructive procedures.

Please note: Dr Kumar's availability should be confirmed at the time of booking.

Related treatments

- [Dental Implants - Surgical Placement](/procedures/oral-maxillofacial-surgery/dental-implant-surgery-oral-maxillofacial-surgeon-perspective/) — Implants are often placed once bone grafting integration is confirmed - [Bone Grafting - Periodontics](/procedures/periodontics/bone-grafting-guided-bone-regeneration/) — For smaller, localised grafts as part of implant or periodontal treatment - [All-on-4 Implants](/procedures/prosthodontics/all-on-4-full-arch-implant-rehabilitation/) — Full arch rehabilitation that may require bone augmentation prior to implant placement - [Facial Trauma Reconstruction](/procedures/oral-maxillofacial-surgery/facial-trauma-reconstruction/) — Bone grafting as a component of post-trauma repair and reconstruction - [Oral Pathology](/procedures/oral-maxillofacial-surgery/oral-pathology-cysts-tumours-biopsies/) — Reconstruction following surgical removal of cysts or tumours

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At Collins Street Specialist Centre, all bone grafting procedures are performed by Dental Board-registered specialist oral and maxillofacial surgeons. To verify a practitioner's specialist registration, visit the [AHPRA Register of Practitioners](https://www.ahpra.gov.au/Registration/Registers-of-Practitioners.aspx).
