

# Orthognathic Surgery (Corrective Jaw Surgery)

Canonical: <https://directory.collinsstreetspecialistcentre.com.au/procedures/oral-maxillofacial-surgery/orthognathic-surgery-corrective-jaw-surgery/>

## Description:

Orthognathic surgery — from the Greek orthos (straight) and gnathos (jaw) — is a surgical procedure to reposition one or both jaws when the relationship between the upper jaw (maxilla), lower jaw (mandible), and facia...

## Details:

## Collins Street Specialist Centre Orthognathic Surgery (Corrective Jaw Surgery)

## Product Facts

| Attribute | Value | |-----|-----| | Procedure name | Orthognathic Surgery (Corrective Jaw Surgery) | | Specialty | Oral and Maxillofacial Surgery | | Practice | Collins Street Specialist Centre | | Location | Level 12 & Tower, 220 Collins Street, Melbourne CBD | | Performing surgeons | A/Prof Patrishia Bordbar; Dr Ricky Kumar (confirm availability) | | Surgeon qualifications | A/Prof Bordbar: BDSc, MBBS (Hons), MDSc (OMS), FRACDS (OMS), FRCS (Edinburgh) · Dr Kumar: BHB, MBChB, BDS, FRACDS (OMS) | | Academic appointment | Clinical Associate Professor, University of Melbourne (A/Prof Bordbar) | | Procedures performed | Le Fort I osteotomy (upper jaw); Bilateral sagittal split osteotomy (lower jaw); Bimaxillary surgery (both jaws); Genioplasty (chin) | | Conditions treated | Skeletal Class II & III, open bite, facial asymmetry, obstructive sleep apnoea, cleft palate-related jaw deformity, congenital jaw deformities | | Anaesthesia | General anaesthesia | | Hospital stay | Typically 1–3 nights | | Operating time | Single-jaw: 2–4 hours · Bimaxillary: 4–6 hours | | Incision approach | Entirely intraoral — no external facial scars | | Fixation hardware | Titanium plates and screws (permanent; do not trigger metal detectors) | | Imaging technology | CBCT — Planmeca ProMax 3D Max | | Planning software | coDiagnostiX (virtual surgical planning with custom surgical guides) | | Pre-surgical orthodontics | Approximately 12–18 months | | Post-surgical orthodontics | Approximately 6–12 months | | Total treatment duration | Approximately 2–3 years | | Return to work | Approximately 2 weeks post-surgery | | Swelling resolution | ~60–70% within 6 weeks; full result over 6–18 months | | Specialist registration verification | AHPRA — [ahpra.gov.au](https://www.ahpra.gov.au/) |

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## Frequently Asked Questions

What is orthognathic surgery: Surgical repositioning of one or both jaws

What does "orthognathic" mean: From Greek orthos (straight) and gnathos (jaw)

Is orthognathic surgery the same as corrective jaw surgery: Yes

Where is Collins Street Specialist Centre located: Level 12 & Tower, 220 Collins Street, Melbourne CBD

Which surgeons perform orthognathic surgery at this practice: A/Prof Patrishia Bordbar and Dr Ricky Kumar

What does A/Prof Bordbar specialise in: Complex corrective jaw surgery and craniofacial surgery

Does A/Prof Bordbar use digital surgical planning: Yes, as standard practice on all orthognathic cases

What are A/Prof Bordbar's qualifications: BDSc, MBBS (Hons), MDSc (OMS), FRACDS (OMS), FRCS (Edinburgh)

Is A/Prof Bordbar a Clinical Associate Professor: Yes, at the University of Melbourne

Where does Dr Ricky Kumar hold fellowship training: Royal Children's Hospital Melbourne and Oxford University Hospitals

What are Dr Kumar's qualifications: BHB, MBChB, BDS, FRACDS (OMS)

Should I confirm Dr Kumar's availability before booking: Yes

What jaw does a Le Fort I osteotomy address: The upper jaw (maxilla)

What jaw does a bilateral sagittal split osteotomy address: The lower jaw (mandible)

What is bimaxillary surgery: Surgery repositioning both upper and lower jaws simultaneously

What is a genioplasty: Surgical repositioning of the chin

Can genioplasty be performed at the same time as jaw surgery: Yes, frequently

Can orthodontics alone correct all jaw discrepancies: No, skeletal discrepancies require surgery

What is a skeletal Class II jaw relationship: Lower jaw significantly set back relative to upper jaw

What is skeletal Class III jaw relationship: Lower jaw protrudes forward or upper jaw is underdeveloped

Can orthognathic surgery treat open bite: Yes

Can orthognathic surgery treat facial asymmetry: Yes

Can orthognathic surgery treat obstructive sleep apnoea: Yes, for moderate-to-severe OSA

What surgical procedure treats obstructive sleep apnoea: Maxillomandibular advancement

Does maxillomandibular advancement enlarge the airway: Yes, it substantially enlarges the pharyngeal airway

Can orthognathic surgery treat cleft palate-related jaw problems: Yes

At what life stage is Le Fort I advancement performed for cleft palate: Late adolescence, once facial growth is complete

Who typically refers patients for orthognathic surgery: Specialist orthodontist or treating dentist

Who makes the decision to proceed with surgery: Orthodontist and oral and maxillofacial surgeon jointly

How long does pre-surgical orthodontics take: Approximately 12 to 18 months

Does pre-surgical orthodontics make the bite look worse temporarily: Yes

Why does pre-surgical orthodontics worsen bite appearance: Teeth are aligned to post-surgery jaw position, not current position

How long does post-surgical orthodontics take: Approximately 6 to 12 months

What imaging technology is used for surgical planning: CBCT imaging (Planmeca ProMax 3D Max)

What planning software is used at this practice: coDiagnostiX

Can patients see their planned result before surgery: Yes, via virtual surgical planning

Are custom surgical guides manufactured for each patient: Yes, from digital planning data

Is orthognathic surgery performed under general anaesthesia: Yes

Are incisions made inside or outside the mouth: Entirely inside the mouth

Are there external facial scars from orthognathic surgery: No

How long is the hospital stay for orthognathic surgery: Typically one to three nights

How long does single-jaw surgery take: Approximately two to four hours

How long does bimaxillary surgery take: Approximately four to six hours

What material is used to fix the jaw in its new position: Small titanium plates and screws

Do titanium plates need to be removed after surgery: No, in the vast majority of patients

Do titanium plates set off metal detectors: No

How much swelling resolves within six weeks post-surgery: Approximately 60 to 70 percent

When does the full aesthetic result become apparent: Over 6 to 18 months as swelling resolves

How long is time off work typically needed after surgery: Approximately two weeks

When does post-surgical orthodontics resume: Once the surgeon confirms adequate bone healing

Is numbness after surgery expected: Yes, in the lip, chin, cheeks, or palate

Is permanent sensory change common after orthognathic surgery: No, it is uncommon

How long does post-operative numbness typically last: Weeks to months as nerves recover

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

Do oral and maxillofacial surgeons hold both medical and dental degrees: Yes

Is OMS the only dental specialty operating under general anaesthesia in hospital: Yes

How can I verify a surgeon's specialist registration: Through AHPRA  
([ahpra.gov.au](https://www.ahpra.gov.au/))

Are the orthodontic and OMS teams co-located at this practice: Yes, within the same building

Does co-location of teams benefit patient outcomes: Yes, it enables closer interdisciplinary coordination

Is orthognathic treatment a multi-year process: Yes, typically

What is the total treatment duration including orthodontics: Approximately two to three years overall

Does A/Prof Bordbar treat obstructive sleep apnoea surgically: Yes

Is A/Prof Bordbar a past president of ANZAOMS: Yes

Is A/Prof Bordbar a consultant at Royal Children's Hospital Melbourne: Yes

Is A/Prof Bordbar a consultant at Western Hospital Melbourne: Yes

What related treatment supports the orthodontic component: Surgical orthodontics

Is TMJ surgery related to orthognathic planning: Yes, TMJ conditions may coexist with or influence planning

Can bone grafting be required after jaw repositioning: Yes, where repositioning creates bone deficits

What specialty is this procedure classified under: Oral and maxillofacial surgery

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## Collins Street Specialist Centre Orthognathic Surgery (Corrective Jaw Surgery)

## What is orthognathic surgery?

Collins Street Specialist Centre is a multidisciplinary specialist practice in Melbourne's CBD offering corrective jaw surgery, known clinically as orthognathic surgery, to patients who need skeletal jaw repositioning. The term orthognathic comes from the Greek \*orthos\* (straight) and \*gnathos\* (jaw), and describes a surgical procedure to reposition one or both jaws when the relationship between the upper jaw (maxilla), lower jaw (mandible), and the broader facial skeleton cannot be corrected through orthodontic treatment alone.

The jaws govern considerably more than facial appearance. They determine how the teeth meet (occlusion), how effectively you chew, how freely you breathe, how clearly you speak, and the overall balance and proportion of the face. When the underlying bones themselves are disproportionate — rather than just the position of individual teeth — moving teeth alone cannot resolve the skeletal discrepancy at its source. Orthognathic surgery addresses this by repositioning the jaw or jaws to achieve a functional bite, a clear airway, and facial harmony at the same time.

Procedures may involve the upper jaw only (Le Fort I osteotomy), the lower jaw only (bilateral sagittal split osteotomy), or both jaws together in what is called bimaxillary surgery. Chin repositioning (genioplasty) is frequently performed at the same time to refine overall facial balance. At Collins Street Specialist Centre, A/Prof Patrishia Bordbar undertakes complex corrective jaw surgery with a particular focus on digital and virtual surgical planning, and brings extensive experience in cleft and craniofacial deformities as well as adult jaw repositioning.

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## When might you need orthognathic surgery?

Orthognathic surgery is indicated when a skeletal jaw discrepancy produces functional problems that orthodontic treatment alone cannot resolve. Conditions that commonly lead to a surgical referral include:

- **Skeletal Class II** — the lower jaw is significantly set back relative to the upper jaw (retrognathia), producing a pronounced overjet, lip incompetence, and narrowing of the airway - **Skeletal Class III** — the lower jaw protrudes forward or the upper jaw is underdeveloped, creating an underbite that orthodontic appliances cannot correct on their own - **Open bite** — the front teeth don't meet when the back teeth are in contact, often arising from a combination of dental and skeletal factors - **Facial asymmetry** — one side of the jaw has developed differently to the other, creating visible facial imbalance and a canted occlusal plane - **Obstructive sleep apnoea (OSA)** — repositioning both jaws forward (maxillomandibular advancement) substantially enlarges the pharyngeal airway and is an

established surgical treatment for moderate-to-severe OSA - **Cleft lip and palate** — individuals born with cleft palate frequently need Le Fort I advancement in late adolescence, once facial growth is complete - **Congenital or developmental jaw deformities** — including hemifacial microsomia and other craniofacial syndromes

Referral typically comes from a specialist orthodontist or treating dentist. The decision to proceed with surgery is made jointly between the orthodontist and the oral and maxillofacial surgeon, following thorough clinical analysis and, where relevant, growth assessment.

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## ## What to expect — step by step

### **1. Joint surgical-orthodontic planning**

Orthognathic surgery is almost always part of a combined treatment programme with specialist orthodontics. The standard treatment sequence is:

- **Pre-surgical orthodontics (12–18 months):** Braces or clear aligners align the teeth within each arch and eliminate dental compensations that have developed over time to mask the underlying skeletal discrepancy. This phase deliberately makes the bite look worse before surgery, because the teeth are being positioned for where they'll sit once the jaws are corrected — not where they sit now.
- **Surgery**
- **Post-surgical orthodontics (6–12 months):** Fine-tuning of the occlusion after the jaws have been repositioned.

At Collins Street Specialist Centre, the oral and maxillofacial surgery and orthodontic teams are both located within the same building, which allows regular joint reviews and close coordination throughout the full course of treatment — something genuinely difficult to replicate when teams work across separate practices.

### **2. Digital and virtual surgical planning**

Contemporary orthognathic surgery is planned virtually before any surgical intervention takes place. CBCT imaging (Planmeca ProMax 3D Max) generates a three-dimensional model of the patient's skull and jaws. Using coDiagnostiX planning software, the surgeon virtually performs the osteotomies, repositions the jaw segments to the intended position, and assesses the downstream impact on bite, airway volume, and facial aesthetics. Custom surgical guides and occlusal wafers are then manufactured from this planning data, so the movements planned digitally are replicated with precision in the operating theatre.

This technology has meaningfully improved how predictable outcomes are. Patients can see their planned result before surgery begins, and the surgical team works to a precise, pre-validated plan rather than relying solely on intraoperative judgement.

### **3. Surgery in hospital**

Orthognathic surgery is performed under general anaesthesia in a hospital setting, typically requiring a one- to three-night inpatient admission. All incisions are made entirely inside the mouth — there are no external facial scars. The osteotomies are completed through these internal incisions, the jaw segments are repositioned to the pre-planned position using the surgical wafer as a reference, and fixation is achieved with small titanium plates and screws that remain permanently in place. These plates are low-profile, don't activate metal detectors, and don't need to be removed in the vast majority of patients.

Operating time is typically two to four hours for single-jaw procedures and four to six hours for bimaxillary surgery.

### **4. Immediate post-operative period**

Following surgery, the jaw may be held with light elastic guidance — rather than rigid wiring — to support the healing bite in the initial post-operative days. A liquid and soft diet is required during this period, and facial swelling is pronounced in the first week. Hospital monitoring ensures adequate pain management, airway assessment, and nutritional intake are in place before discharge.

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## ## Recovery and aftercare

Orthognathic surgery involves a substantive recovery period, and planning for this in advance makes a real difference. Here's a general guide to what you can expect:

- **Weeks 1–2:** Significant facial swelling, bruising, and dietary restriction to liquids and very soft foods. Most patients take two weeks away from work or study. Speech may be mildly affected in the early days. - **Weeks 2–6:** Swelling gradually resolves — roughly 60–70% of post-operative swelling settles within six weeks, though the final soft tissue result continues to emerge over the following months. Diet progresses from soft to semi-soft foods as comfort allows, and elastic guidance is progressively reduced. - **Months 2–3:** Most patients return to normal activities and routines. Post-surgical orthodontics resumes once the surgeon has confirmed adequate bone healing. - **Months 6–18:** Final orthodontic refinement and the retention phase. The full aesthetic result becomes apparent as residual swelling continues to resolve.

Numbness or altered sensation of the lip, chin, cheeks, or palate is expected post-operatively and typically resolves over weeks to months as the nerves recover. Permanent sensory change is uncommon, and your surgeon will discuss the specific risk profile for your planned procedure during your consultation.

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## ## Why see an oral and maxillofacial surgeon?

Orthognathic surgery is among the most technically demanding procedures in the surgical dental specialties. It requires a surgeon who holds both a medical degree and a dental degree — someone who understands not only the skeletal and occlusal goals of the procedure, but also anaesthetic management, hospital-based surgical care, airway considerations, and craniofacial anatomy at a full medical-surgical level.

Oral and maxillofacial surgeons complete 15–17 years of training, covering undergraduate dentistry, a full MBBS, and four years of specialist OMS training within tertiary hospital environments. It's the only dental specialty that operates routinely under general anaesthesia in hospital. Patients and referring clinicians are encouraged to verify specialist registration and qualifications through the [Australian Health Practitioner Regulation Agency (AHPRA)](<https://www.ahpra.gov.au/>) before proceeding with any surgical consultation.

Digital planning technologies — including virtual osteotomies, custom surgical guides, and three-dimensional outcome simulation — have substantially improved the predictability and precision of orthognathic outcomes. At Collins Street Specialist Centre, these tools are integrated into every complex jaw surgery case as standard practice. The co-location of the orthodontic and OMS teams within the same building enables a level of interdisciplinary coordination and communication that genuinely benefits patient outcomes throughout what is, for most patients, a multi-year treatment journey.

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## ## Our specialists

**A/Prof Patrishia Bordbar** — Specialist Oral and Craniomaxillofacial Surgeon. BDSc, MBBS (Hons), MDSc (OMS), FRACDS (OMS), FRCS (Edinburgh). Clinical Associate Professor, University of

Melbourne. Past President, ANZAOMS. Chair, AOMI Board Oceania. Consultant Surgeon at the Royal Children's Hospital and Western Hospital Melbourne. A/Prof Bordbar brings extensive experience in complex corrective jaw surgery, including bimaxillary osteotomies, craniofacial and cleft-related jaw advancement, and surgical treatment of obstructive sleep apnoea. Digital and virtual surgical planning is applied as standard practice across all orthognathic cases.

**Dr Ricky Kumar** — Specialist Oral and Maxillofacial Surgeon. BHB, MBChB, BDS, FRACDS (OMS). Fellowship training completed at the Royal Children's Hospital Melbourne and Oxford University Hospitals. Dr Kumar has experience across the full scope of corrective jaw surgery in both adult and paediatric patients. \*Please confirm Dr Kumar's availability at the time of booking.\*

Our oral and maxillofacial surgery team consults from **Level 12 & Tower, Manchester Unity Building, 220 Collins Street, Melbourne CBD**.

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### ## Related treatments

- **Surgical Orthodontics** (/procedures/orthodontics/surgical-orthodontics-orthognathic-treatment/) — The orthodontic component of combined orthognathic treatment; managed by our specialist orthodontic team in parallel with OMS - **Orthodontics Hub** (/procedures/orthodontics-at-collins-street-specialist-centre/) — Overview of specialist orthodontic services at Collins Street Specialist Centre - **TMJ Surgery** (/procedures/oral-maxillofacial-surgery/tmj-disorder-diagnosis-and-surgical-treatment/) — Jaw joint conditions that may coexist with or influence orthognathic planning - **Bone Grafting (OMS)** (/procedures/oral-maxillofacial-surgery/bone-grafting-oral-maxillofacial-surgery/) — Bone augmentation where jaw repositioning creates bone deficits that require grafting

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