

Sinus Lift — Sinus Augmentation for Dental Implants

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Description:

When upper back teeth are lost, the available bone in the posterior maxilla (upper jaw) often presents a specific challenge: it may be too thin in height to accommodate a dental implant safely. This is because the max...

Details:

Collins Street Specialist Centre — Sinus lift & sinus augmentation for dental implants

When upper back teeth are lost, the bone of the posterior maxilla — the upper jaw — frequently presents a specific anatomical challenge: there may not be enough height to place a dental implant safely. This happens because the maxillary sinus, an air-filled cavity above the upper jaw, tends to expand downward after tooth loss, gradually encroaching on the space the tooth roots once occupied. A sinus lift addresses this directly by carefully elevating the sinus membrane and introducing bone graft material into the space beneath it, building the bone height needed for predictable implant placement.

Collins Street Specialist Centre is a Melbourne specialist dental centre where sinus lift procedures are performed by specialist periodontists with extensive implantology experience. On-site 3D digital imaging and precise surgical planning work together to protect the sinus membrane and position the graft optimally, supporting reliable, long-term implant outcomes.

What is a sinus lift?

The maxillary sinus is one of four pairs of paranasal sinuses — hollow spaces within the facial skeleton, each lined by a thin, delicate tissue layer known as the Schneiderian membrane. In the upper jaw, the roots of the premolars and molars often sit close to the floor of this sinus, and in some cases may project slightly into it. When these teeth are lost and the surrounding jaw bone resorbs over time, the vertical distance between the sinus floor and the top of the bone ridge — the available bone height — can fall below the minimum needed for implant placement. Depending on the implant system and design, that threshold is typically around 10 mm or more.

A sinus lift (also called sinus augmentation or sinus floor elevation) involves a carefully sequenced surgical process:

1. Accessing the lateral wall of the sinus (lateral window technique) or working through the implant site itself (crestal or osteotome technique, appropriate for minor augmentations)
2. Gently elevating the sinus membrane away from the sinus floor without perforating it
3. Introducing bone graft material into the space created between the elevated membrane and the underlying bone floor
4. Allowing the graft to consolidate and mature into functional, load-bearing bone over 4–9 months
5. Placing implants into the augmented site once bone maturation has been confirmed on follow-up imaging

Lateral window vs crestal (osteotome) technique

Which technique is appropriate for your situation is part of the specialist assessment process. The two principal approaches differ in their indication, access, and recovery profile.

****Lateral window technique (conventional sinus lift):**** Indicated when available bone height is less than approximately 5–7 mm. A small access window is created in the outer wall of the sinus through the gum and bone on the cheek side. The membrane is then elevated under direct visualisation, and graft material is carefully packed into the space beneath it. The window is covered with a resorbable collagen membrane and the gum is closed with sutures. This is the most versatile and well-established technique for larger augmentations, and it remains the standard of care where significant bone height is required.

****Crestal (osteotome or balloon) technique:**** Suited to moderate height deficiency, typically where at least 5 mm of existing bone is present. Rather than creating a separate lateral window, the sinus floor is accessed through the planned implant site using specialised instruments or hydraulic pressure to gently tent the membrane upward. Bone graft material — or in some cases the implant itself — creates the augmentation. Because no separate lateral incision is required, recovery tends to be shorter. However, it is only appropriate for smaller augmentations where the anatomy is favourable.

The choice between these two approaches is guided by the anatomy shown on 3D imaging and the dimensions of the planned implants.

When might you need a sinus lift?

A sinus lift is considered when the available bone in the posterior upper jaw is insufficient for safe implant placement — specifically when:

- One or more upper back teeth (upper premolars or molars) are missing and dental implants are the preferred replacement option
- Cone-beam CT imaging shows insufficient bone height between the sinus floor and the alveolar crest
- The sinus has pneumatized (expanded downward) following tooth loss, reducing bone height below functional thresholds
- Full upper arch implant rehabilitation is planned — such as an All-on-4 or similar design — and posterior implant positions require sinus augmentation for adequate bone support

That said, a sinus lift is not always necessary. There are situations where it can be avoided:

- Where sufficient bone height remains naturally — some patients retain adequate height even after tooth loss
- Where a tilted or shorter implant design can safely engage the available bone without encroaching on the sinus
- Where alternative surgical strategies — such as zygoma implants for cases of severe deficiency, or implant positions placed more anteriorly — can avoid the posterior sinus region altogether

Your specialist will assess your individual anatomy using cone-beam CT imaging and present the most appropriate treatment pathway for your specific situation. There is no single approach that suits every patient, and the recommendation will be tailored accordingly.

What to expect: the sinus lift process

Consultation and 3D imaging

Every patient requiring a sinus lift at Collins Street Specialist Centre undergoes cone-beam CT imaging — using the Planmeca ProMax 3D unit — before any surgical planning takes place. This imaging gives the clinical team information that conventional two-dimensional X-rays simply cannot provide, including:

- Precise measurement of available bone height at each potential implant site - Detailed assessment of sinus anatomy, including the presence of septa (internal bony partitions within the sinus that can complicate membrane elevation if not identified in advance) - Identification of any sinus pathology — polyps, mucous retention cysts, or evidence of sinusitis — that may need to be addressed before surgery proceeds - Three-dimensional reconstruction used for digital implant planning via coDiagnostiX software

Where sinus pathology is identified during this assessment, referral to an ear, nose, and throat specialist will be recommended before proceeding with augmentation. This step protects the outcome of the graft and ensures the sinus environment is suitable for surgery.

The surgical procedure

Sinus lift surgery is performed under local anaesthesia. Intravenous sedation is available for patients who experience dental anxiety or for longer, more complex procedures — and many patients find this option makes the experience considerably more comfortable.

****Lateral window technique — step by step:****

1. Local anaesthetic is administered to the upper back jaw, both on the cheek side and the palate, to achieve thorough anaesthesia 2. A small incision is made in the gum to expose the lateral wall of the sinus 3. Using a combination of rotary instruments and ultrasonic piezoelectric devices — which allow precise, controlled bone removal with minimal vibration — a small oval window is carefully created in the outer sinus wall. The sinus membrane is visible beneath this window once complete 4. Specialised curettes are used to gently elevate the membrane away from the sinus floor, working methodically to maintain its integrity throughout. Perforation of the membrane is the principal intraoperative risk; in experienced specialist hands, the rate of perforation is low, and small perforations — should they occur — can generally be managed without compromising the outcome 5. Bone graft material is carefully introduced and packed beneath the elevated membrane. The iCam 4D scanner may be used intraoperatively to assess bone density and dimensions at the graft site 6. The access window is covered with a resorbable collagen membrane to protect the graft 7. The gum is closed with sutures

Surgical time for a single sinus lift is typically 90–120 minutes. Where both sides require augmentation, this can be performed in the same surgical session.

****Can implants be placed at the same time as the sinus lift?***

The answer depends on how much native bone is available. Where at least 4–5 mm of existing bone is present to provide initial implant stability, implants can sometimes be placed simultaneously with the sinus lift — completing both stages in a single visit and reducing overall treatment time. Where native bone is minimal, a staged approach — grafting first, followed by implant placement 4–6 months later once the graft has matured — is generally more predictable. Your specialist will advise which approach is appropriate based on your imaging and anatomy.

Healing and integration

Following a lateral window sinus lift:

- Initial soft tissue healing at the gum incision occurs over the first 2–3 weeks - Graft consolidation and new bone formation within the sinus proceeds progressively over 4–9 months - A follow-up cone-beam CT at 4–6 months confirms graft maturation and readiness for implant placement

For patients who have undergone a crestal sinus lift, the maturation period is generally shorter. Where implants are placed simultaneously, osseointegration proceeds alongside graft maturation.

Recovery and aftercare

Recovery following a sinus lift requires specific precautions that differ from those for other oral surgical procedures. These precautions exist to protect the graft and sinus membrane during the critical early healing period.

****Critical aftercare instructions:****

- ****Do not blow your nose**** for at least 2–3 weeks following surgery. Increased sinus pressure is the primary risk for membrane disruption during this period, and nose-blowing is the most common cause. - ****Sneeze with your mouth open**** — this allows pressure to equalise without building force within the sinus cavity - ****Avoid creating suction**** — no drinking through straws and no forceful sniffing - ****No smoking**** — smoking impairs wound healing, reduces graft vascularity, and significantly increases the risk of graft failure. This is one of the most important factors influencing outcomes - ****Avoid flying****, particularly within the first week — changes in cabin pressure can place stress on the sinus and the healing graft

****General recovery expectations:****

- Swelling over the cheek and beneath the eye is common following a lateral window sinus lift and typically peaks at 48–72 hours before gradually resolving - Bruising across the cheek and around the eye is not unusual and generally resolves over 7–10 days - A small amount of blood-tinged discharge from the nostril on the day of surgery is normal and not a cause for concern - Antibiotics are routinely prescribed following surgery; a nasal decongestant spray may also be recommended to help manage sinus pressure during early healing - A soft diet is recommended for the first 2–3 weeks - Sutures are typically removed at around the two-week mark

Most patients return to their normal daily activities within 3–5 days. The two-week nose-blowing restriction applies regardless of how comfortable or well you feel — the graft remains vulnerable during this period even when symptoms have largely settled.

Why see a specialist periodontist for a sinus lift?

A sinus lift is among the more technically demanding procedures in implant dentistry. The proximity of the maxillary sinus membrane and the importance of maintaining its integrity throughout the elevation make this a procedure that benefits significantly from specialist experience and training. The clinician performing a sinus lift should have:

- Extensive experience in implant surgery and a thorough understanding of the relevant surgical anatomy - Access to high-quality 3D imaging and digital planning tools - The skills to recognise and manage potential intraoperative complications, including membrane perforation and intraoperative haemorrhage - A sound understanding of bone biology and the evidence base for graft material selection

The specialist periodontists at Collins Street Specialist Centre bring collectively decades of sinus augmentation experience to each procedure, supported by on-site cone-beam CT imaging, digital planning software, and contemporary surgical instrumentation including piezoelectric devices and laser tools.

For cases of greater complexity — severe bilateral sinus augmentation, sinus pathology requiring concurrent management, or major maxillary reconstruction — the periodontics team works closely with the Collins Street Specialist Centre oral and maxillofacial surgery team. Both specialties are accessible within the same building, which means coordinated care without patients needing to attend multiple separate facilities.

All Collins Street Specialist Centre periodontists are Dental Board-registered specialists. Patients and referring practitioners are encouraged to verify specialist registration independently at the [AHPRA

website](<https://www.ahpra.gov.au>) before proceeding with any treatment.

Our specialists

Sinus lift procedures at Collins Street Specialist Centre are performed by the periodontics team, located on Level 12 & Tower of the Manchester Unity Building:

- **Dr Simon Hinckfuss** — Dual Specialist Periodontist and Prosthodontist. Dr Hinckfuss provides comprehensive implant planning that spans the full treatment arc — from sinus augmentation through to final prosthetic restoration — offering patients a cohesive, integrated approach across both specialties.

- **Dr James van den Berg** — Specialist Periodontist with over 25 years of specialist implantology experience. Dr van den Berg brings considerable depth of experience to complex sinus augmentation cases, including those requiring significant bilateral augmentation or concurrent management of challenging anatomy.

- **Dr Ahmed El Hadidi** — Specialist Periodontist with experience across all aspects of implant dentistry, including sinus augmentation across a diverse range of patient presentations and anatomical complexity.

- **Dr Peishan Jiang** — Specialist Periodontist with training in bone grafting, sinus lifts, and comprehensive implant surgery. Dr Jiang maintains active research interests in translational dental biology, contributing to an evidence-informed approach to clinical practice.

Related treatments

- **Dental Implants**

(Periodontics)](/procedures/periodontics/dental-implants-periodontal-specialist-placement/)** — Sinus lifting is the preparatory step that makes implant placement possible in the posterior upper jaw where bone height is insufficient. - **Bone Grafting**

(Periodontics)](/procedures/periodontics/bone-grafting-guided-bone-regeneration/)** — Horizontal or vertical ridge augmentation may be required alongside a sinus lift where the ridge also lacks width. - **Bone Grafting**

(OMS)](/procedures/oral-maxillofacial-surgery/bone-grafting-oral-maxillofacial-surgery/)** — For major jaw reconstruction involving the maxilla, the oral and maxillofacial surgery team at Collins Street Specialist Centre is involved in complex cases requiring a multidisciplinary approach. - **Implant Prosthetics (Prosthodontics)](/procedures/prosthodontics/dental-implants-prosthetic-restoration/)** — The crown, bridge, or full-arch restoration placed on implants following sinus augmentation and osseointegration. - **All-on-4****

(Prosthodontics)](/procedures/prosthodontics/all-on-4-full-arch-implant-rehabilitation/)** — In full-arch rehabilitation, sinus lifting may be required for posterior implant positions within an All-on-4 or similar full-arch design.
