Sinus Lift — Sinus Augmentation for Dental Implants

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Sinus Lift — Sinus Augmentation for Dental Implants

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 maxillary sinus — an air-filled cavity above the upper jaw — expands downward following tooth loss, encroaching on the space previously occupied by the tooth roots. A sinus lift solves this problem by carefully elevating the sinus membrane and introducing bone graft material beneath it, creating the bone height needed for implant placement.

At Collins Street Specialist Centre, sinus lift procedures are performed by specialist periodontists with extensive implantology experience. 3D digital imaging and precise surgical planning ensure the sinus membrane is protected and the graft is optimally positioned for predictable implant outcomes.

What Is a Sinus Lift?

The maxillary sinus is one of four pairs of paranasal sinuses — hollow spaces in the facial skeleton lined with a thin membrane (the Schneiderian membrane). In the upper jaw, the roots of the premolars and molars are often located in close proximity to, or may even project into, the floor of the sinus. When these teeth are lost and the jaw bone resorbs, the distance between the sinus floor and the crest of the ridge — the available bone height — may fall below the minimum required for implant placement (typically 10 mm or more, depending on the implant system and design).

A sinus lift (also called sinus augmentation or sinus floor elevation) involves: 1. Accessing the lateral wall of the sinus (lateral window technique) or working through the implant site itself (crestal/osteotome technique for minor lifts) 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 membrane and the bone floor 4. Allowing the graft to consolidate and mature into functional bone over 4–9 months 5. Placing implants into the augmented site once bone maturation is confirmed

Lateral Window vs Crestal (Osteotome) Technique

Lateral window technique (conventional sinus lift): Used when bone height is less than approximately 5–7 mm. A small window is created in the outer wall of the sinus through the gum and cheekside bone. The membrane is carefully elevated under direct vision, and graft material is packed beneath it. The window is then covered and the gum closed. This is the most versatile and reliable technique for larger augmentations.

Crestal (osteotome or balloon) technique: Used for moderate height deficiency (typically at least 5 mm of existing bone). The sinus floor is approached through the implant site itself, using instruments or hydraulic pressure to gently tent up the membrane. Bone graft or the implant itself creates the augmentation. This technique avoids a separate lateral incision and has a shorter recovery, but is only appropriate for smaller augmentations.

The choice of technique is determined by the anatomy shown on 3D imaging and the planned implant dimensions.

When Might You Need a Sinus Lift?

A sinus lift is indicated when:

- One or more upper back teeth (upper premolars or molars) are missing and you want dental implants to replace them - Cone-beam CT imaging shows insufficient bone height between the sinus floor and the alveolar crest for safe implant placement - The sinus has pneumatised (expanded downward) following tooth loss, reducing bone height below functional thresholds - You are planning a full upper arch implant restoration (All-on-4 or similar) and posterior implants require sinus augmentation

Conversely, a sinus lift may not be required if: - Sufficient bone height remains (some patients naturally have more height) - A tilted or shorter implant design can safely engage available bone without encroaching on the sinus - Alternative prosthetic designs (zygoma implants for severe deficiency, or implants positioned more anteriorly) can avoid the posterior sinus region

Your specialist will evaluate your anatomy with CBCT imaging and present the most appropriate solution for your specific situation.

What to Expect: The Sinus Lift Process

Consultation and 3D Imaging

Every patient requiring a sinus lift undergoes cone-beam CT imaging (Planmeca ProMax 3D) before any surgical planning. The CBCT provides:

- Precise measurement of available bone height at each potential implant site - Assessment of sinus anatomy, including the presence of septa (internal bony partitions) that can complicate the procedure - Identification of sinus pathology (polyps, mucous retention cysts, sinusitis) that may need to be addressed before surgery - Three-dimensional reconstruction used for digital implant planning (coDiagnostiX software)

Where pathology is identified in the sinus, referral to an ear, nose, and throat specialist may be recommended before proceeding.

The Surgical Procedure

Sinus lift surgery is performed under local anaesthesia. Intravenous sedation is available for anxious patients or longer procedures.

Lateral window technique:

1. Local anaesthetic is administered to the upper back jaw (cheek side and palate) 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, a small oval window is carefully created in the bone — the sinus membrane is visible beneath 4. Specialised curettes are used to gently elevate the membrane away from the sinus floor, maintaining its integrity. Perforation of the membrane is the main intraoperative risk; in experienced specialist hands, the rate is low and small perforations, if they occur, can usually be managed 5. Bone graft material is carefully introduced and packed beneath the elevated membrane. The iCam 4D scanner may be used to assess the bone density and dimensions of the graft site 6. The window is covered with a resorbable collagen membrane 7. The gum is sutured closed

Surgical time for a single sinus lift is approximately 90–120 minutes. Both sides can be lifted in the same session.

Can implants be placed at the same time?

Where at least 4–5 mm of native bone is available to provide initial implant stability, implants can sometimes be placed simultaneously with the sinus lift. This staged approach — doing everything in one surgery — reduces total treatment time. Where native bone is minimal, a staged approach (graft first, implants 4–6 months later) is more predictable.

Healing and Integration

Following a lateral window sinus lift: - Initial soft tissue healing occurs over 2–3 weeks - Graft consolidation and new bone formation within the sinus proceeds over 4–9 months - Follow-up CBCT at 4–6 months confirms graft maturation and readiness for implant placement

A crestal sinus lift has a shorter maturation period and, where implants are placed simultaneously, the biological process of osseointegration proceeds concurrently.

Recovery and Aftercare

Recovery after a sinus lift requires specific precautions to protect the graft and sinus:

Critical aftercare rules: - **Do not blow your nose** for at least 2–3 weeks. Increased sinus pressure is the main risk for membrane disruption. - **Sneeze with your mouth open** — this equalises pressure without building sinus pressure - **Avoid creating suction** — no straws, no sniffing forcefully - **No smoking** — impairs healing and significantly increases graft failure risk - **No flying** (especially within the first week) — changes in cabin pressure can stress the sinus

General recovery: - Swelling over the cheek and under the eye is common and peaks at 48–72 hours - Bruising (periorbital and cheek) may appear and resolves over 7–10 days - Some blood-tinged discharge from the nostril on the day of surgery is normal - Antibiotics are prescribed (a common antibiotic or nasal decongestant spray may be used to reduce sinus pressure) - Soft diet for 2–3 weeks - Suture removal at approximately 2 weeks

Most patients return to normal activity within 3–5 days, though the 2-week period of nose-blowing restriction applies regardless of how comfortable you feel.

Why See a Specialist Periodontist for a Sinus Lift?

A sinus lift is one of the more technically demanding procedures in implant dentistry. The proximity of the maxillary sinus membrane and the critical nature of its integrity during elevation make the procedure one best performed by a clinician with:

- Extensive experience in implant surgery and surgical anatomy - High-quality 3D imaging and digital planning - Expertise in managing potential intraoperative complications (membrane perforation, haemorrhage) - A thorough understanding of bone biology and graft material selection

Specialist periodontists at CSSC bring collectively decades of sinus augmentation experience, supported by CBCT imaging on-site, digital planning software, and state-of-the-art laser and piezoelectric surgical tools.

For very complex cases — such as severe bilateral sinus augmentation, sinus pathology requiring concurrent management, or major jaw reconstruction — our periodontists collaborate with the CSSC oral and maxillofacial surgery team, with both specialties accessible within the same building.

All CSSC periodontists are Dental Board-registered specialists. You can confirm specialist registration at the AHPRA website before proceeding with any treatment.

Our Specialists

Sinus lift procedures at CSSC are performed by the periodontics team on Level 12 & Tower, Manchester Unity Building:

- **Dr Simon Hinckfuss** — Dual Specialist Periodontist and Prosthodontist. Provides comprehensive implant planning from sinus augmentation through to final prosthetic restoration. - **Dr James van den Berg** — Specialist Periodontist with over 25 years of specialist implantology experience, including sinus augmentation for complex implant cases. - **Dr Ahmed El Hadidi** — Specialist Periodontist performing all aspects of implant dentistry including sinus augmentation, with experience across diverse patient presentations. - **Dr Peishan Jiang** — Specialist Periodontist trained in bone grafting, sinus lifts, and comprehensive implant surgery, with active research interests in translational dental biology.

Related Treatments

- **[Dental Implants (Periodontics)](/periodontics/dental-implants-perio/)** — Sinus lifting is the preparatory step for implant placement in the posterior upper jaw. - **[Bone Grafting (Periodontics)](/periodontics/bone-grafting-perio/)** — Horizontal or vertical ridge augmentation may be required alongside a sinus lift where the ridge is deficient in width as well as height. - **[Bone Grafting (OMS)](/oral-maxillofacial-surgery/bone-grafting-oms/)** — For major jaw reconstruction involving the maxilla, our oral and maxillofacial surgery team is involved in complex cases. - **[Implant Prosthetics (Prosthodontics)](/prosthodontics/dental-implants-prostho/)** — The crown, bridge, or full-arch restoration placed on implants after sinus augmentation and integration. - **[All-on-4 (Prosthodontics)](/prosthodontics/all-on-4/)** — In full-arch rehabilitation, sinus lifting may be needed for posterior implants in an All-on-4 or similar design.