

# Intra-Oral Autogenously Bone Harvest Sites for Orthognathic Surgery

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## Description

Bone grafting in orthognathic surgery are wound healing, buttressing wide osteotomy gaps, and preventing skeletal recurrence after surgery. A plentiful supply of autogenous bone is easily accessible during orthognathic surgery; however this can be overlooked given the constantly shifting landscape of grafting materials available. In order to facilitate routine orthognathic surgery, this work aims to provide a thorough list of intra-oral autogenous bone harvest sites that are easily accessible. These methods are intended to support the surgeon in achieving the best possible surgical construct stability at the lowest possible expense and risk of complications.

## Numerous applications

In orthographic surgery, bone grafting is utilized for a number of purposes. There is compelling evidence that bone grafting improves the stability of maxillary surgery and speeds up the recovery of Effort I and BSSO osteotomies. The direction and size of the surgical movement, along with the type of fixation and the surgical method, are the most crucial aspects that determine the stability and predictability of orthographic surgery. The likelihood of relapsing rises with movement magnitude. Bone grafts stabilize massive unstable advances structurally by buttressing the segments and creating a channel for the formation of new bone. If they are not grafted at the time of surgery, large advances of the maxilla frequently heal with fibrous union components. In order to improve long-term skeletal stability, bone grafts are advised for critical defects measuring five millimeters or more between osteotomy segments, as these defects are known to recur. However, even with strong contact at the zygomaticomaxillary buttress and piriform rim, maxillary movements of less than 5 mm have shown fibrous gap healing without grafting. In orthopaedicsurgery, the main purpose of bone grafting is to stabilize the patient and avoid

recurrence until the healing process is finished. This is predicated on the biomechanical idea that the graft functions as a biological matrix that promotes secondary ossification and a mechanical barrier that inhibits relapse and soft tissue ingrowth. In orthographic surgery, extracted bone is used in many different ways. Grafting is necessary during maxilla lengthening in vertical deficit to maintain stability and prevent relapse. Traditionally, gaps from maxillary advancement osteotomies are patched when a key gap threshold—determined by the surgeon's preference is reached.

## Pelvis spinal reconstruction

In the past, autogenous iliac crest bone graft was thought to be the gold standard for a wide range of maxillofacial operations. Morbidity at the donor site, longer recovery times, and higher operating expenses are associated with this remote harvest site. During orthographic surgery, intraoral bone graft harvesting offers several benefits. The main benefit of intraoral graft extraction is that it doesn't require a second harvest site and uses the same tools and surgical techniques as orthographic surgery. Even in cases when grafting is not necessary, the bone at the recommended harvest areas is frequently removed to aid in the surgical process. Enough bone can be obtained from intraoral locations for situations requiring a high volume of tissue if appropriate planning is done. Bone grafts may also be beneficial in buttressing transverse growth of the maxilla, perhaps obviating the need for splint retention after surgery. Large mandibular advances at the osteotomy site, down-grafting of a chin segment following genioplasty, and dent alveolar grafting for future implant placement in need areas are more uses for harvested bone. This paper's goal is to give the surgeon an overview of possible intraoral bone grafting locations that are easily workable into orthographic procedures. Anatomy and harvesting methods for every site will be examined.