

## Orthognathic Surgery

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### Background

<p>Orthognathic surgery</p>	<p>A class of surgical procedures designed to realign the maxillofacial skeletal structures with each other and with the other craniofacial structures. This surgery usually involves the maxilla and/or mandible, but other bony components may be involved as well.</p> <p>Orthognathic surgery can be performed to correct malocclusion, which cannot be improved with routine orthodontic therapy and where the functional impairments are directly caused by the malocclusion. The surgical goal is to improve function through correcting the underlying skeletal deformity that contributes to chewing, breathing and swallowing dysfunction.</p>
<p>Maxillary advancement</p>	<p>A type of orthognathic surgery that may be necessary to improve the facial contour and normalize dental occlusion when there is a relative deficiency of the midface region. This is done by surgically moving the maxilla with sophisticated bone mobilization techniques and fixing it securely into place.</p>
<p>Mandibular surgery</p>	<p>Can be performed in conjunction with or separate from maxillary surgery. The mandible can be advanced, set back, tilted or augmented with bone grafts. A combination of these procedures may be necessary. Following any significant surgical movement of the mandible, fixation may be accomplished with mini-plates and screws or with a combination of interosseous wires and intermaxillary fixation (IMF). Rigid fixation (screws and plates) has the advantage of needing limited or no IMF. However, if interosseous wiring is used, IMF is maintained for approximately 6 weeks.</p>
<p>Malocclusion</p>	<p>Imperfect contact with the mandibular and maxillary teeth.</p> <ul style="list-style-type: none"> <li>Class II malocclusion: Occurs when the mandibular teeth are distal or behind the normal relationship with the maxillary teeth. This can be due to a deficiency of the lower jaw or an excess of the upper jaw, and therefore, presents two types: (1) Division I is when the mandibular arch is behind the upper jaw with a consequential protrusion of the upper front teeth. (2) Division II exists when the mandibular teeth are behind the upper teeth, with a retrusion of the maxillary front teeth. Both of these malocclusions have a tendency toward a deep bite because of the uncontrolled migration of the lower front teeth upwards. Commonly referred to as an overbite.</li> <li>Class III malocclusion: Occurs when the lower dental arch is in front of (mesial to) the upper dental arch. People with this type of occlusion usually have a strong or protrusive chin, which can be due to either horizontal mandibular excess or horizontal maxillary deficiency. Commonly referred to as an under bite.</li> </ul>

Occlusion	Bringing the opposing surfaces of the teeth of the two jaws (mandible and maxilla) into contact with each other.
Supraeruption	The occurrence of a tooth continuing to grow out of the gum if the opposing tooth in the opposite jaw is missing.
Genioplasty	Plastic surgery of the chin (See <a href="#">Limitations/Exclusions</a> )

## Related Medical Guidelines

[Cosmetic Surgery Procedures](#)

[Obstructive Sleep Apnea Diagnosis and Treatment](#)

### Guideline

Note: Expenses associated with the pre-and-post surgical orthodontic component of are considered dental in nature and not covered under the member's Medical Benefit.

- I. Orthognathic surgery is medically necessary for correcting the following skeletal deformities of the maxilla or mandible when the deformities are directly attributable to significant dysfunction that precludes dental/orthodontic therapeutics or when intra-oral trauma to soft tissues occurs through mastication secondary to malocclusion:

#### A. Anteroposterior discrepancies defined as either:

1. Maxillary/mandibular incisor relationship; any:
  - a. Horizontal overjet of  $\geq 5$  millimeter (mm)
  - b. Zero to a negative value (norm 2mm)
2. Maxillary/mandibular anteroposterior molar relationship discrepancy of  $\geq 4$  mm (norm is 0–1 mm)

*Numeric values above represent  $\geq 2$  standard deviations (SDs) from published norms.*

#### B. Vertical discrepancies; defined as any:

1. Vertical facial skeletal deformity of  $\geq 2$  SDs from norms for accepted skeletal landmarks
2. Open Bite; either:
  - a. No vertical overlap of anterior teeth
  - b. Unilateral or bilateral posterior open bite  $> 2$  mm
3. Deep overbite with impingement or irritation of buccal, palatal or lingual soft tissues of the opposing arch
4. Supraeruption of a dentoalveolar segment secondary to lack of opposing occlusion that creates dysfunction not amenable to conventional prosthetics

#### C. Transverse discrepancies; defined as either:

1. Transverse skeletal discrepancy  $\geq 2$  SDs from norms
2. Total bilateral maxillary palatal cusp to mandibular fossa discrepancy of  $\geq 4$  mm, or unilateral discrepancy  $\geq 3$  mm (given normal axial inclination of the posterior teeth)

#### D. Asymmetries; defined as anteroposterior, transverse or lateral asymmetries $> 3$ mm with concomitant occlusal asymmetry such as a maxillary cant or a cross-bite malocclusion

- II. Facial Skeletal Discrepancies Associated with Documented Sleep Apnea, Airway Defects, and Soft Tissue Discrepancies

Orthognathic surgery is considered medically necessary for members with underlying congenital and acquired (i.e., post-traumatic or post-ablative) craniofacial skeletal deformities that are contributing to obstructive sleep apnea (see [Obstructive Sleep Apnea](#)) or other demonstrated significant functional deficiency.

### III. Speech Impairments

Orthognathic surgery is medically necessary for the treatment of speech abnormalities (as determined by a speech pathologist or therapist) when the impairment is secondary to a malocclusion (e.g., from cleft deformity), and when post-surgical improvement can be expected (as determined by a speech pathologist) which is refractory to either:

1. Orthodontia management
2. At least 6 months of speech therapy

### Documentation

The following documentation must be submitted to the plan for medical necessity consideration:

1. Evidence of skeletal, facial or craniofacial deformity demonstrated by study models (plaster, printed, or digital) and pre-orthodontic photographic and radiographic imaging
2. Medical record detailing the following:
  - a. Objective findings (i.e., functional impairment directly attributable to skeletal abnormality)
  - b. Symptoms (e.g., dysphagia, choking), clinical course/treatment history

### Limitations/Exclusions

1. Orthognathic surgery is considered cosmetic (and therefore not medically necessary) when anatomic variation is normal, and the member wishes to alter physical appearance in order to improve aesthetics. (Psychological motivation [e.g., self-esteem] is not a factor for plan-consideration).
2. Three-dimensional virtual treatment planning of orthognathic surgery regarded as investigational and not medically necessary, as effectiveness has not been established.
3. Orthognathic surgery is considered investigational for correcting articulation disorders (except in the presence of severe cleft palate; indicated above) and other impairments in the production of speech due to insufficient evidence of therapeutic value in the published peer-reviewed medical literature.
4. Orthognathic surgery is not considered medically necessary the correction of sibilant sound-class distortions or other speech quality distortions (e.g., hyper-nasal or hypo-nasal speech) because the distortions do not cause functional impairment.
5. Condylar positioning devices in orthognathic surgery are experimental and investigational because their effectiveness in orthognathic surgery has not been established
6. Orthognathic surgery for temporomandibular joint disease (TMJ) or myofascial pain dysfunction is considered investigational due to insufficient evidence of therapeutic value for these indications.
7. Genioplasty is considered cosmetic and not medically necessary.

### Revision History

Apr. 14, 2023	Added that post-surgical improvement should be determined by a speech pathologist RE speech impairments Added maxillary cant and cross-bite malocclusion as examples of asymmetries Added clarification that plaster, printed, or digital study models may be submitted as evidentiary documentation
Mar. 8, 2019	Added "palatal" to vertical discrepancies definition related to deep overbite

<p>Added congenital, acquired, or other demonstrated significant functional deficiency, that contributes to obstructive sleep apnea (regarding craniofacial skeletal deformities)</p> <p>Added photographic to documentation section</p>
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## Applicable Procedure Codes

21076	Impression and custom preparation; surgical obturator prosthesis
21079	Impression and custom preparation; interim obturator prosthesis
21080	Impression and custom preparation; definitive obturator prosthesis
21081	Impression and custom preparation; mandibular resection prosthesis
21082	Impression and custom preparation; palatal augmentation prosthesis
21083	Impression and custom preparation; palatal lift prosthesis
21125	Augmentation, mandibular body or angle; prosthetic material
21127	Augmentation, mandibular body or angle; with bone graft, onlay or interpositional (includes obtaining autograft)
21141	Reconstruction midface, LeFort I; single piece, segment movement in any direction (eg, for Long Face Syndrome), without bone graft
21142	Reconstruction midface, LeFort I; 2 pieces, segment movement in any direction, without bone graft
21143	Reconstruction midface, LeFort I; 3 or more pieces, segment movement in any direction, without bone graft
21145	Reconstruction midface, LeFort I; single piece, segment movement in any direction, requiring bone grafts (includes obtaining autografts)
21146	Reconstruction midface, LeFort I; 2 pieces, segment movement in any direction, requiring bone grafts (includes obtaining autografts) (eg, ungrafted unilateral alveolar cleft)
21147	Reconstruction midface, LeFort I; 3 or more pieces, segment movement in any direction, requiring bone grafts (includes obtaining autografts) (eg, ungrafted bilateral alveolar cleft or multiple osteotomies)
21150	Reconstruction midface, LeFort II; anterior intrusion (eg, Treacher-Collins Syndrome)
21151	Reconstruction midface, LeFort II; any direction, requiring bone grafts (includes obtaining autografts)
21154	Reconstruction midface, LeFort III (extracranial), any type, requiring bone grafts (includes obtaining autografts); without LeFort I
21155	Reconstruction midface, LeFort III (extracranial), any type, requiring bone grafts (includes obtaining autografts); with LeFort I
21188	Reconstruction midface, osteotomies (other than LeFort type) and bone grafts (includes obtaining autografts)
21193	Reconstruction of mandibular rami, horizontal, vertical, C, or L osteotomy; without bone graft
21194	Reconstruction of mandibular rami, horizontal, vertical, C, or L osteotomy; with bone graft (includes obtaining graft)
21195	Reconstruction of mandibular rami and/or body, sagittal split; without internal rigid fixation
21196	Reconstruction of mandibular rami and/or body, sagittal split; with internal rigid fixation
21198	Osteotomy, mandible, segmental;
21199	Osteotomy, mandible, segmental; with genioglossus advancement
21206	Osteotomy, maxilla, segmental (eg, Wassmund or Schuchard)
21208	Osteoplasty, facial bones; augmentation (autograft, allograft, or prosthetic implant)
21209	Osteoplasty, facial bones; reduction
21210	Graft, bone; nasal, maxillary or malar areas (includes obtaining graft)
21215	Graft, bone; mandible (includes obtaining graft)
21230	Graft; rib cartilage, autogenous, to face, chin, nose or ear (includes obtaining graft)
21244	Reconstruction of mandible, extraoral, with transosteal bone plate (eg, mandibular staple bone plate)
21245	Reconstruction of mandible or maxilla, subperiosteal implant; partial
21246	Reconstruction of mandible or maxilla, subperiosteal implant; complete
21247	Reconstruction of mandibular condyle with bone and cartilage autografts (includes obtaining grafts) (eg, for hemifacial microsomia)
21248	Reconstruction of mandible or maxilla, endosteal implant (eg, blade, cylinder); partial

21249	Reconstruction of mandible or maxilla, endosteal implant (eg, blade, cylinder); complete
21255	Reconstruction of zygomatic arch and glenoid fossa with bone and cartilage (includes obtaining autografts)
21270	Malar augmentation, prosthetic material
21275	Secondary revision of orbitocraniofacial reconstruction
21295	Reduction of masseter muscle and bone (eg, for treatment of benign masseteric hypertrophy); extraoral approach
21296	Reduction of masseter muscle and bone (eg, for treatment of benign masseteric hypertrophy); intraoral approach
21299	Unlisted craniofacial and maxillofacial procedure
42226	Lengthening of palate, and pharyngeal flap
42227	Lengthening of palate, with island flap
42235	Repair of anterior palate, including vomer flap
42280	Maxillary impression for palatal prosthesis
42281	Insertion of pin-retained palatal prosthesis

### Applicable ICD-10 Diagnosis Codes

G47.33	Obstructive sleep apnea (adult) (pediatric)
M26.00	Unspecified anomaly of jaw size
M26.01	Maxillary hyperplasia
M26.02	Maxillary hypoplasia
M26.03	Mandibular hyperplasia
M26.04	Mandibular hypoplasia
M26.05	Macrogenia
M26.06	Microgenia
M26.07	Excessive tuberosity of jaw
M26.09	Other specified anomalies of jaw size
M26.10	Unspecified anomaly of jaw-cranial base relationship
M26.11	Maxillary asymmetry
M26.12	Other jaw asymmetry
M26.19	Other specified anomalies of jaw-cranial base relationship
M26.20	Unspecified anomaly of dental arch relationship
M26.211	Malocclusion, Angle's class I
M26.212	Malocclusion, Angle's class II
M26.213	Malocclusion, Angle's class III
M26.219	Malocclusion, Angle's class, unspecified
M26.220	Open anterior occlusal relationship
M26.221	Open posterior occlusal relationship
M26.23	Excessive horizontal overlap
M26.24	Reverse articulation
M26.25	Anomalies of interarch distance
M26.29	Other anomalies of dental arch relationship
M26.30	Unspecified anomaly of tooth position of fully erupted tooth or teeth
M26.31	Crowding of fully erupted teeth
M26.32	Excessive spacing of fully erupted teeth
M26.33	Horizontal displacement of fully erupted tooth or teeth
M26.34	Vertical displacement of fully erupted tooth or teeth
M26.35	Rotation of fully erupted tooth or teeth

M26.36	Insufficient interocclusal distance of fully erupted teeth (ridge)
M26.37	Excessive interocclusal distance of fully erupted teeth
M26.39	Other anomalies of tooth position of fully erupted tooth or teeth
M26.4	Malocclusion, unspecified
M26.50	Dentofacial functional abnormalities, unspecified
M26.51	Abnormal jaw closure
M26.52	Limited mandibular range of motion
M26.53	Deviation in opening and closing of the mandible
M26.54	Insufficient anterior guidance
M26.55	Centric occlusion maximum intercuspation discrepancy
M26.56	Non-working side interference
M26.57	Lack of posterior occlusal support
M26.59	Other dentofacial functional abnormalities
M26.70	Unspecified alveolar anomaly
M26.71	Alveolar maxillary hyperplasia
M26.72	Alveolar mandibular hyperplasia
M26.73	Alveolar maxillary hypoplasia
M26.74	Alveolar mandibular hypoplasia
M26.79	Other specified alveolar anomalies
M26.81	Anterior soft tissue impingement
M26.82	Posterior soft tissue impingement
M26.89	Other dentofacial anomalies
M26.9	Dentofacial anomaly, unspecified
Q35.1	Cleft hard palate
Q35.3	Cleft soft palate
Q35.5	Cleft hard palate with cleft soft palate
Q35.7	Cleft uvula
Q35.9	Cleft palate, unspecified
Q36.0	Cleft lip, bilateral
Q36.1	Cleft lip, median
Q36.9	Cleft lip, unilateral
Q37.0	Cleft hard palate with bilateral cleft lip
Q37.1	Cleft hard palate with unilateral cleft lip
Q37.2	Cleft soft palate with bilateral cleft lip
Q37.3	Cleft soft palate with unilateral cleft lip
Q37.4	Cleft hard and soft palate with bilateral cleft lip
Q37.5	Cleft hard and soft palate with unilateral cleft lip
Q37.8	Unspecified cleft palate with bilateral cleft lip
Q37.9	Unspecified cleft palate with unilateral cleft lip

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