Medical Policy
Orthognathic Surgery

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Policy Number: 179
BCBSA Reference Number: N/A
NCD/LCD: N/A

Related Policies
Plastic Surgery, #068
Temporomandibular Joint Disorder, #035
Surgical Treatment of Snoring and Obstructive Sleep Apnea Syndrome, #130

Policy¹
Commercial Members: Managed Care (HMO and POS), PPO, and Indemnity Medicare HMO BlueSM and Medicare PPO BlueSM Members

Congenital anomalies - Prior authorization is not required
Orthognathic surgery for correction of congenital (apparent at birth) deformities may be considered MEDICALLY NECESSARY for the following diagnoses (list may not be all inclusive):
- Apert syndrome
- Cleft deformity
- Crouzon syndrome
- Hemifacial microsomia (HFM)
- Pfeiffer syndrome
- Pierre Robin syndrome
- Treacher Collins syndrome.

Note: Abnormal growth of the jaws (resulting in maxillary and/or mandibular hypo- or hyperplasia) is NOT considered a congenital anomaly.

Traumatic injury or tumor - Prior authorization is not required
Orthognathic surgery may be considered MEDICALLY NECESSARY for restoration of function related to an acute traumatic injury or surgical removal of a tumor.

Maxillary and/or mandibular facial skeletal deformities associated with masticatory malocclusion
Prior authorization is required
Orthognathic surgery for correction of skeletal deformities of the maxilla or mandible may be considered MEDICALLY NECESSARY when ALL of the following criteria (A, B, C) are met:

A. ONE of the following significant functional impairments is present and persists for at least 4 months:
   • Impaired masticatory or incisive function (difficulty chewing), OR
   • Chewing-induced trauma to the soft tissues of the mouth, OR
   • Impaired swallowing or choking on incompletely chewed solid foods, OR
   • Abnormal tongue thrust is present, OR
   • Speech abnormality impairs the patient's ability to communicate and is determined by a speech pathologist or therapist to be due to skeletal malocclusion and the speech deficit cannot be resolved by speech therapy

AND

B. ONE of the following facial skeletal deformities: is present
   • Mandibular excess or maxillary deficiency with a reverse overjet (ROJ) of at least 2 mm, OR
   • Maxillary excess or mandibular deficiency with an overjet (OJ) of at least 5 mm, OR
   • Open bite (OB) of at least 2 mm, OR
   • Deep bite (DB) of at least 7 mm or impingement or irritation of the buccal or lingual soft tissue of the opposing arch

AND

C. An orthodontic specialist has documented that orthodontia (conservative therapy) alone is not adequate for remediation of the condition

Treatment of severe malocclusion that contributes to TMJ syndrome symptoms - Prior authorization is required
Treatment of severe malocclusion that contributes to temporomandibular joint (TMJ) syndrome symptoms may be considered MEDICALLY NECESSARY when ONE of each of the following elements (A, B, C) are met:

• ONE of the following symptoms is present and has persisted for at least 4 months:
  o Painful chewing clearly related to the TMJ
  o Frequent and significant headaches clearly related to TMJ
  o Significant temporomandibular joint and/or muscle tenderness, AND

• Symptoms persist after 4 months of treatment with ONE of the following conservative measures:
  o Elimination of aggravating factors such as: gum chewing, chewing hard or tough foods
  o Use of anti-inflammatory medications, unless contraindicated
  o Treatment with splint therapy, unless not tolerated, AND

• Malocclusion or dental misalignment is present and supported by ONE of the following measurements:
  o Mandibular excess or maxillary deficiency with a reverse overjet (ROJ) of at least 2 mm, OR
  o Maxillary excess or mandibular deficiency with an overjet (OJ) of at least 5 mm, OR
  o Open bite (OB) of at least 4 mm or deep bite (DB) of at least 7 mm or impingement or irritation of the buccal or lingual soft tissue of the opposing arch.

Related Policy: Medical policy #035 Temporomandibular Joint Disorder
Diagnostic procedures, non-surgical and surgical treatments of TMJD

Mandibular and maxillary deformities contributing to airway dysfunction and associated obstructive sleep apnea (OSA) - Prior authorization is required
Maxillofacial surgery for treatment of mandibular and maxillary deformities contributing to airway dysfunction and associated OSA may be considered MEDICALLY NECESSARY when ALL of the following are present and documented:

• Moderate to severe OSA (confirmed by a sleep study result of AHI* ≥ 15)
• Patient has trialed and failed a minimum 90-day use of positive airway pressure (PAP)
• A qualified sleep specialist has documented that other surgical options are not recommended for OSA or another surgical option has already been tried and was not adequate.

Note: *AHI: apnea/hypopnea index
Related AIM Specialty Health Guidelines

- Management of Obstructive Sleep Apnea using Oral Appliances
- Management of Obstructive Sleep Apnea using Auto-Titrating and Continuous Positive Airway Pressure Devices

Related Policy: 130 Surgical Treatment of Snoring and Obstructive Sleep Apnea Syndrome prn.pdf

Orthognathic surgical splints - Prior authorization is not required
The use of two orthognathic surgical splints is considered medically necessary. Any use of greater than two orthognathic surgical splints is considered **NOT MEDICALLY NECESSARY**.

Other indications
The use of condylar positioning devices in orthognathic surgery is considered **INVESTIGATIONAL**.

Orthognathic surgery is considered **INVESTIGATIONAL** for all other indications.

Unaesthetic facial features and psychological impairments
No benefits are available for orthognathic surgery when performed primarily for cosmetic purposes.

Orthognathic surgery performed to reshape or enhance the size of the chin to restore facial harmony and chin projection (e.g., mentoplasty chin augmentation, chin implants, genioplasty or mandibular osteotomies/osteotomies); to address genial hypoplasia, hypertrophy, or asymmetry; or when performed as an isolated procedure or with other procedures, is considered cosmetic in nature.

Documentation Requirements
The patient’s medical records submitted for review for all conditions should document that medical necessity criteria are met. The record should include the following:

- A written explanation of the member's clinical course, including dates and nature of any previous treatment, and specialist clinical documentation (e.g., Orthodontic and Sleep Specialist) **AND**
- A detailed description of the functional impairment considered to be the direct result of the skeletal abnormality **AND**
- Physical evidence of a skeletal, facial or craniofacial deformity defined by study models and pre-orthodontic imaging such as cephalometric radiographs cephalometric diagrams with standard computer-generated measurements, and panoramic radiographs **AND**
- Clear frontal/full face and lateral view photographs (digital or film).

Prior Authorization Information

**Inpatient**
- For services described in this policy, precertification/preauthorization **IS REQUIRED** for all products if the procedure is performed **inpatient**.

**Outpatient**
- For services described in this policy, see below for products where prior authorization **might be required** if the procedure is performed **outpatient**.

<table>
<thead>
<tr>
<th>Commercial Managed Care (HMO and POS)</th>
<th>(\text{Prior authorization is required})</th>
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<tbody>
<tr>
<td>Commercial PPO and Indemnity</td>
<td>(\text{Prior authorization is required})</td>
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<tr>
<td>Medicare HMO BlueSM</td>
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<tr>
<td>Medicare PPO BlueSM</td>
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CPT Codes / HCPCS Codes / ICD Codes
Inclusion or exclusion of a code does not constitute or imply member coverage or provider reimbursement. Please refer to the member’s contract benefits in effect at the time of service to determine coverage or non-coverage as it applies to an individual member.

Providers should report all services using the most up-to-date industry-standard procedure, revenue, and diagnosis codes, including modifiers where applicable.

The following codes are included below for informational purposes only; this is not an all-inclusive list.

The above medical necessity criteria MUST be met for the following codes to be covered for Commercial Members: Managed Care (HMO and POS), PPO, Indemnity, Medicare HMO Blue, and Medicare PPO Blue:

### CPT Codes

<table>
<thead>
<tr>
<th>CPT codes</th>
<th>Code Description</th>
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<tbody>
<tr>
<td>21193</td>
<td>Reconstruction of mandibular rami, horizontal, vertical, C, or L osteotomy; without bone graft</td>
</tr>
<tr>
<td>21194</td>
<td>Reconstruction of mandibular rami, horizontal, vertical, C, or L osteotomy; with bone graft (includes obtaining graft)</td>
</tr>
<tr>
<td>21195</td>
<td>Reconstruction of mandibular rami and/or body, sagittal split; without internal rigid fixation</td>
</tr>
<tr>
<td>21196</td>
<td>Reconstruction of mandibular rami and/or body, sagittal split; with internal rigid fixation</td>
</tr>
<tr>
<td>21198</td>
<td>Osteotomy, mandible, segmental;</td>
</tr>
<tr>
<td>21199</td>
<td>Osteotomy, mandible, segmental; with genioglossus advancement</td>
</tr>
<tr>
<td>21206</td>
<td>Osteotomy, maxilla, segmental (eg, Wassmund or Schuchard)</td>
</tr>
<tr>
<td>21240</td>
<td>Arthroplasty, temporomandibular joint, with or without autograft (includes obtaining graft)</td>
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<tr>
<td>21242</td>
<td>Arthroplasty, temporomandibular joint, with allograft</td>
</tr>
<tr>
<td>21243</td>
<td>Arthroplasty, temporomandibular joint, with prosthetic joint replacement</td>
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**Description**

Orthognathic surgery is surgery to correct conditions of the jaw. The surgical revision by ostectomy, osteotomy or osteoplasty of the upper jaw (maxilla) and/or the lower jaw (mandible) is intended to alter the relationship of the jaws and teeth. These surgical procedures are intended to correct skeletal jaw and cranio-facial deformities that may be associated with significant functional impairment, and to reposition the jaws when conventional orthodontic therapy alone is unable to provide a satisfactory, functional dental occlusion within the limits of the available alveolar bone.

Congenital or developmental defects can interfere with the normal development of the face and jaws. These birth defects may interfere with the ability to chew properly and may also affect speech and swallowing. In addition, trauma to the face and jaws may create skeletal deformities that cause significant functional impairment. Functional deficits addressed by this type of surgery are those that affect the skeletal masticatory apparatus such that chewing, speaking and/or swallowing are impaired.

Certain jaw and cranio-facial deformities may cause significant functional impairment. These deformities include apertognathia (either lateral or anterior not correctable by orthodontics alone), significant asymmetry of the lower jaw, significant class 2 and class 3 occlusal discrepancies, and cleft palate. Orthognathic surgery may help to reduce the flattening of the face that is characteristic of severe cleft deformity. Treatment approaches include maxillary advancement, a type of orthognathic surgery which surgically moves the maxilla and fixes it securely into place using sophisticated bone mobilizing techniques. This method of surgery is used when there is a need to improve the facial contour and normalize dental occlusion due to relative deficiency of the mid-face region. The approach utilized is case dependent and may include surgery on the mandible, depending on the soft tissue profile of the face and/or severity of an occlusal discrepancy, and problems present in the lower face. By using ostectomy
techniques along with bone and cartilage grafts, the upper and lower jaws and facial skeletal framework are moved and appropriately reconstructed.

Studies demonstrate that persons with vertical hyperplasia of the maxilla have an associated increase in nasal resistance, as do persons with maxillary hypoplasia with or without clefts. Following orthognathic surgery, such individuals routinely demonstrate decreases in nasal airway resistance and improved respiration.

**Anomaly:** Deviation from normal  
**Anteroposterior:** From front to back  
**Apertognathia:** Open-bite deformity; the cause of poor speech, loss of masticatory function  
**Asymmetry:** The lack of balance or symmetry  
**Cephalometric:** A scientific measurement of the head  
**Dentoalveolar:** Relating to a tooth and the part of the alveolar bone that immediately surrounds it  
**Malocclusion:** Imperfect contact with the mandibular and maxillary teeth  
**Mandible:** The horseshoe-shaped bone forming the lower jaw  
**Maxilla:** A paired bone that forms the skeletal base of the upper face, roof of the mouth, sides of the nasal cavity and floor of the orbit (contains the eye); the upper jaw  
**Occlusion:** Bringing the opposing surfaces of the teeth of the two jaws (mandible and maxilla) into contact with each other  
**Orthodontics:** The division of dentistry dealing with prevention and correction of abnormally positioned or aligned teeth  
**Osteotomy:** Excision of a bone or part of a bone  
**Osteoplasty:** Surgical repair or alteration of bone  
**Osteotomy:** An operation in which a bone is cut to allow the bone to be repositioned; for example, to shorten, lengthen  
**Supraeruption:** The occurrence of a tooth continuing to grow out of the gum if the opposing tooth in the opposite jaw is missing

**Summary**

There is convincing evidence of the relationship between facial skeletal abnormalities and malocclusions, including asymmetry and open bite deformities. A strong correlation has been demonstrated between the state of the individual’s occlusion and his or her chewing efficiency, bite forces, and restricted mandibular excursions. Orthognathic surgery has resulted in significant improvement in skeletal deformities that contribute to chewing, breathing and swallowing dysfunction and where the severity of the deformity cannot be corrected through dental therapeutics or orthodontics. Studies have shown that individuals with skeletal malocclusions suffer from a variety of functional impairments, including diminished bite forces, restricted mandibular excursions, and abnormal chewing patterns.

The evidence in the peer-reviewed literature to support this conclusion includes non-randomized controlled trials and case series studies. Clinical practice guidance has been published by the American Association of Oral and Maxillofacial Surgeons on criteria for orthognathic surgery (2020). Orthognathic surgery is supported by clinical evidence and medically appropriate for specific conditions. These include treatment of maxillary and/or mandibular facial skeletal deformities associated with masticatory malocclusion.

The AAOMS Criteria for Orthognathic Surgery have become widely adopted as a tool to assist in determining whether orthognathic surgery is medically indicated. As listed below, these maxillary and/or mandibular facial skeletal deformities associated with masticatory malocclusion relate verifiable clinical measurements to significant facial skeletal deformities:

**Antero-posterior discrepancies:**
- Maxillary/mandibular incisor relationship: overjet of 5 millimeter (mm) or more, or a 0 to a negative value (norm 2 mm)
• Maxillary/mandibular antero-posterior molar relationship discrepancy of 4 mm or more (norm 0 to 1 mm)
Note: These values represent 2 or more standard deviations (SDs) from published norms

Vertical discrepancies:
• Presence of a vertical facial skeletal deformity which is 2 or more SDs from published norms for accepted skeletal landmarks
• Open Bite
• No vertical overlap of anterior teeth greater than 2 mm
• Unilateral or bilateral posterior open bite greater than 2 mm
• Deep overbite with impingement or irritation of buccal or lingual soft tissues of the opposing arch
• Supraeruption of a dento-alveolar segment due to lack of opposing occlusion creating dysfunction not amenable to conventional prosthetics

Transverse discrepancies:
• Presence of a transverse skeletal discrepancy which is 2 or more SDs from published norms.
• Total bilateral maxillary palatal cusp to mandibular fossa discrepancy of 4 mm or greater, or a unilateral discrepancy of 3 mm or greater, given normal axial inclination of the posterior teeth

Asymmetries:
• Antero-posterior, transverse or lateral asymmetries greater than 3 mm with concomitant occlusal asymmetry


Policy History

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<thead>
<tr>
<th>Date</th>
<th>Action</th>
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<tbody>
<tr>
<td>3/2023</td>
<td>New medical policy describing ongoing medically necessary indications. Policy expanded to include additional medically necessary and not medically necessary indications. Effective 3/1/2023.</td>
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</table>

The following surgical procedures were transferred from policy #068 Plastic Surgery to new medical policy #179, Orthognathic Surgery.
- Mandibular or maxillary osteotomy/plasty for prognathism or micrognathism with documented severe handicapping malocclusion.
- Other osteotomy/plasty for congenital conditions that cause severe facial or craniofacial deformities including but not limited to Crouzon’s syndrome, Treacher Collin’s dysostosis, or Romberg’s disease.
- Mentoplasty.

Information Pertaining to All Blue Cross Blue Shield Medical Policies
Click on any of the following terms to access the relevant information:
Medical Policy Terms of Use
Managed Care Guidelines
Indemnity/PPO Guidelines
Clinical Exception Process
Medical Technology Assessment Guidelines

References


Endnotes

1 Based on expert opinion