



Cigna Medical Coverage Policy

Effective Date 10/15/2014
Next Review Date 10/15/2015
Coverage Policy Number 0209

Subject **Orthognathic Surgery**

Table of Contents

Coverage Policy	1
General Background	3
Coding/Billing Information	5
References	6

Hyperlink to Related Coverage Policies

[Distraction Osteogenesis \(DO\) for Craniofacial Deformities](#)
[Obstructive Sleep Apnea \(OSA\) Diagnosis and Treatment Services](#)
[Redundant Skin Surgery](#)
[Rhinoplasty, Vestibular Stenosis Repair, and Septoplasty](#)

INSTRUCTIONS FOR USE

The following Coverage Policy applies to health benefit plans administered by Cigna companies. Coverage Policies are intended to provide guidance in interpreting certain **standard** Cigna benefit plans. Please note, the terms of a customer's particular benefit plan document [Group Service Agreement, Evidence of Coverage, Certificate of Coverage, Summary Plan Description (SPD) or similar plan document] may differ significantly from the standard benefit plans upon which these Coverage Policies are based. For example, a customer's benefit plan document may contain a specific exclusion related to a topic addressed in a Coverage Policy. In the event of a conflict, a customer's benefit plan document **always supersedes** the information in the Coverage Policies. In the absence of a controlling federal or state coverage mandate, benefits are ultimately determined by the terms of the applicable benefit plan document. Coverage determinations in each specific instance require consideration of 1) the terms of the applicable benefit plan document in effect on the date of service; 2) any applicable laws/regulations; 3) any relevant collateral source materials including Coverage Policies and; 4) the specific facts of the particular situation. Coverage Policies relate exclusively to the administration of health benefit plans. Coverage Policies are not recommendations for treatment and should never be used as treatment guidelines. In certain markets, delegated vendor guidelines may be used to support medical necessity and other coverage determinations. Proprietary information of Cigna. Copyright ©2014 Cigna

Coverage Policy

Coverage for orthognathic surgery is dependent on benefit plan language, may be subject to the provisions of a cosmetic and/or reconstructive surgery benefit and may be governed by state and/or federal mandates.

Under many benefit plans, orthognathic surgery is not covered when performed solely for the purpose of improving or altering appearance or self-esteem or to treat psychological symptomatology or psychosocial complaints related to one's appearance. In addition, orthognathic surgery is specifically excluded under some benefit plans.

Cigna medical plans do not cover orthodontic treatment provided as an adjunct to orthognathic surgery, because such treatment is considered dental in nature and therefore, not covered under the medical benefit.

Under many benefit plans formerly administered by Great-West Healthcare, reconstructive services and surgery are covered when reconstruction services are being performed for one of the following primary purposes: to relieve severe physical pain caused by an abnormal body structure; or to treat a functional impairment caused by an abnormal body structure or restore an individual's normal appearance, regardless of whether a functional impairment exists when the abnormality results from a documented illness that occurred within the preceding 12 months. Please refer to the applicable benefit plan language to determine the terms, conditions and limitations of coverage.

If coverage for orthognathic surgery is available, the following clinical documentation is required to support medical necessity for orthognathic surgery:

- medical history and physical examination with reference to symptoms related to the orthognathic deformity
- description of specific anatomic deformity present
- lateral and anterior-posterior cephalometric radiographs
- cephalometric tracings
- copy of medical records from treating physician documenting evaluation, diagnosis and previous management of the functional medical impairment(s)
- diagnostic quality (clear) photographs that fully demonstrate the dental occlusion

Molds may also be requested depending on the individual circumstances of the case.

Cigna covers orthognathic surgery as medically necessary when BOTH of the following criteria are met:

- **ANY of the following facial skeletal deformities is present:**
 - anteroposterior discrepancies:
 - maxillary/mandibular incisor relationship: overjet of 5 mm or more, or a zero to negative value (norm = 2 mm)
 - maxillary/mandibular anteroposterior molar relationship discrepancy of 4 mm or more (norm = 0–1 mm)
 - vertical discrepancies:
 - presence of a vertical facial skeletal deformity which is two or more standard deviations from published norms for accepted skeletal landmarks
 - open bite with no vertical overlap of anterior teeth or unilateral or bilateral posterior open bite greater than 2 mm
 - deep overbite with impingement of palatal soft tissue
 - supraeruption of a dentoalveolar segment resulting from lack of occlusion when dentition in segment is intact
 - transverse discrepancies:
 - presence of a transverse skeletal discrepancy which is two or more standard deviations 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:
 - anteroposterior, transverse or lateral asymmetries greater than 3 mm, with concomitant occlusal asymmetry
- **ANY of the following functional impairments is present:**
 - persistent difficulties with mastication and swallowing after causes such as neurological or metabolic diseases have been excluded
 - malnutrition, significant weight loss, or failure-to-thrive secondary to facial skeletal deformity
 - speech dysfunction directly related to a jaw deformity as determined by a speech and language pathologist
 - myofascial pain secondary to facial skeletal deformity that has persisted for at least six months, despite conservative treatment such as physical therapy and splints
 - obstructive sleep apnea when ALL of the following criteria are met:
 - criteria for positive airway pressure (PAP) met and individual has proved intolerant to or failed a trial of PAP
 - mandibular repositioning appliance (MRA) or tongue-retaining appliance has been considered and found to be ineffective or undesirable
 - craniofacial disproportion or deformities

Cigna does not cover surgical procedures such as rhinoplasty, genioplasty or rhytidectomy performed in conjunction with orthognathic surgery for the sole purpose of improving individual appearance and profile because they are considered cosmetic in nature and not medically necessary.

General Background

Orthognathic surgery is a subset of craniofacial surgery involving the surgical correction of abnormalities of the mandible, maxilla or both. These dentofacial skeletal malformations may be congenital, resulting from genetic and/or environmental influences that impact fetal growth between the 20th and 50th day of gestation. Additionally, dentofacial anomalies may be evident at birth or they may emerge during growth and development. Jaw deformities may result from acquired defects, neoplastic processes and degenerative diseases.

Jaw Deformities

Jaw deformities include abnormalities of jaw-to-jaw size and shape and may include excessive or deficient bone-to-bone or bone-to-soft-tissue relationships. Deformities may be present in any of the three planes: horizontal, vertical or transverse, or a combination of these.

In a position paper issued in 1988, the American Association of Oral and Maxillofacial Surgeons (AAOMS) classified dentofacial deformities as mid-face or mandibular, as follows:

- skeletal deformities of the mid-face
 - maxillary hyperplasia
 - maxillary hypoplasia
 - cleft deformities
 - other mid-face deformities, including nasal, zygomatic, orbital, ethmoidal, frontal or other cranial bones
- skeletal deformities of the mandible
 - mandibular hyperplasia
 - mandibular hypoplasia
 - mandibular asymmetry
 - condylar abnormalities, including hypoplasia, hyperplasia, neoplasia, ankylosis, post-traumatic conditions, and agenesis

The relationship between facial skeletal abnormalities and malocclusion is generally accepted. A strong correlation has been established between the state of a patient's occlusion and chewing efficiency, bite forces, and restricted mandibular excursions. Other signs of dysfunction related to facial skeletal abnormalities, such as obstructive sleep apnea, may also be present. Orthognathic surgery may be performed to improve function by correcting the underlying skeletal deformity when dental/orthodontic treatment alone is precluded due to the severity of deformities and related impairment.

Dental Occlusion/Malocclusion

The classification of dental occlusions is based on Edward Angle's early observations that the key to occlusion is the relationship of the mandibular first molar to the maxillary first molar. Angle's occlusal classifications are as follows (Patel, 2012; Wood, Jurkiewicz, 1999):

- **Class I (neutro-occlusion):** The mesiobuccal cusp of the maxillary first molar articulates within the mesiobuccal groove of the mandibular first molar.
- **Class II (disto-occlusion):** The mandibular first molar articulates distal to the mesiobuccal cusp of the maxillary first molar. This may be due to a deficiency of the lower jaw or excess of the upper jaw, and is, therefore, categorized into two divisions. In Division I, the mandibular arch is behind the upper jaw with protrusion of the upper front teeth, while in Division II the mandibular teeth are behind the upper teeth, with a retrusion of the maxillary front teeth.
- **Class III (mesio-occlusion):** The mesiobuccal groove of the mandibular first molar is mesial to the mesiobuccal cusp of the maxillary first molar. This occlusion usually produces a strong protruding chin, due to either horizontal mandibular excess or horizontal maxillary deficiency.

The terms Class I, II, and III are also used to define the maxillary and mandibular canine relation. The above classification relates only to maxillary/mandibular dentition. Although it is often assumed that a similar skeletal relationship of Class I, II, and III follows, this is not always the case. A Class I molar relationship is possible with

a Class II skeletal relationship by dental extractions and orthodontic alignment regardless of skeletal status (Patel, 2012).

Surgical Procedures

In orthognathic surgery, an osteotomy is made in the affected jaw, and the bones are repositioned in a more normal alignment. The bones are held in position with plates, screws and/or wires. Intermaxillary fixation, a procedure in which arch bars are placed on both jaws, may also be needed to provide added stability. Simultaneous osteotomies may be performed when deformities must be corrected in both jaws. Grafts from the ribs, hip or skull may be performed for patients with deficient bone tissue; alloplastic bone replacement may also be required. Orthognathic surgery is generally performed under general anesthesia on an inpatient basis. Although sometimes performed for cosmetic purposes, orthognathic surgery is generally considered to be medically necessary when performed to treat a significant abnormality that is causing considerable functional impairment. Functional impairments include:

- persistent inability to masticate and swallow food adequately when other causes such as neurological or metabolic diseases have been ruled out by physical exam and/or appropriate diagnostic testing
- malnutrition, significant weight loss, or failure to thrive
- speech and articulation disorders directly related to jaw deformity, as determined by a speech and language pathologist
- myofascial pain that has persisted for at least six months, despite conservative treatment, such as physical therapy
- airway obstruction, such as obstructive sleep apnea, when documented by sleep study when:
 - conservative treatment (e.g., continuous positive airway pressure [CPAP], oral appliance) has been attempted and failed despite patient compliance (Thorpy, et al., 1996)
 - the patient has failed prior less invasive surgical procedures (Thorpy, et al., 1996) or has craniofacial skeletal abnormalities that are associated with a narrowed posterior airway space and tongue-base obstruction (Sher, et al., 1996)

Patients with bone or soft tissue deficiency of the face may require distraction osteogenesis. In this procedure, a distraction device is applied to the bone, and a controlled fracture is created and gradually separated, allowing new bone formation in the distracted segments. This allows the facial bone and adjacent soft tissue to elongate.

Other Procedures

Procedures such as rhinoplasty, genioplasty or rhytidectomy may be performed in conjunction with orthognathic surgery. Procedures performed with the primary purpose of improving physical appearance or to treat psychological symptomatology or psychosocial complaints are cosmetic in nature and not medically necessary.

Professional Societies/Organizations

The AAOMS Criteria for Orthognathic Surgery (2008) 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:

- anteroposterior discrepancies:
 - maxillary/mandibular incisor relationship: overjet of 5 mm or more*, or a zero to negative value* (norm = 2 mm)
 - maxillary/mandibular anteroposterior molar relationship discrepancy of 4 mm or more* (norm = 0–1 mm)
- *These values represent two or more standard deviations from published norms.
- vertical discrepancies:
 - presence of a vertical facial skeletal deformity which is two or more standard deviations from published norms for accepted skeletal landmarks
 - open bite:
 - no vertical overlap of anterior teeth
 - 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 dentoalveolar segment resulting from lack of occlusion

- transverse discrepancies:
 - presence of a transverse skeletal discrepancy which is two or more standard deviations 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:
 - anteroposterior, transverse or lateral asymmetries greater than 3 mm, with concomitant occlusal asymmetry

In addition to the above conditions, the AAOMS states that orthognathic surgery may be indicated in cases where there are specific documented signs of dysfunction. These may include conditions involving:

- Facial Skeletal Discrepancies Associated with Documented Sleep Apnea, Airway Defects, and Soft Tissue Discrepancies.
 - Before surgery, such patients should be properly evaluated to determine the cause and site of their disorder with appropriate non-surgical treatment attempted when indicated.
- Facial Skeletal Discrepancies Associated with Documented Temporomandibular Joint Pathology
 - Prior to performing an orthognathic procedure on such patients, non-surgical therapies should be attempted, including those procedures and treatments that mimic the effects of occlusal alteration.
- Facial Skeletal Discrepancies Associated with Documented Psychological Disorders
 - Prior to surgical treatment designed primarily to improve psychological conditions, appropriate consultation should be obtained and non-surgical therapy attempted when reasonable.
- Facial Skeletal Discrepancies Associated with Documented Speech Impairments
 - Prior to surgery, speech evaluation should be obtained to demonstrate the nature of the problem and to determine if improvement can be expected.

Use Outside of the US

No relevant information.

Summary

The American Association of Oral and Maxillofacial Surgeons (AAOMS) Criteria for Orthognathic Surgery have been widely adopted as a tool to assist in determining whether orthognathic surgery is medically indicated. Orthognathic surgery is generally indicated for selected patients when dental and/or orthodontic treatment is precluded due to the severity of the deformity and related impairment.

Coding/Billing Information

- Note:** 1) This list of codes may not be all-inclusive.
 2) Deleted codes and codes which are not effective at the time the service is rendered may not be eligible for reimbursement.

Covered when medically necessary:

CPT®* Codes	Description
21110	Application of interdental fixation device for conditions other than fracture or dislocation, includes removal
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 (e.g., for Long Face Syndrome), without bone graft

21142	Reconstruction midface, LeFort I; two pieces, segment movement in any direction, without bone graft
21143	Reconstruction midface, LeFort I; three 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; two pieces, segment movement in any direction, requiring bone grafts (includes obtaining autografts) (e.g., ungrafted unilateral alveolar cleft)
21147	Reconstruction midface, LeFort I; three or more pieces, segment movement in any direction, requiring bone grafts (includes obtaining autografts) (e.g., ungrafted bilateral alveolar cleft or multiple osteotomies)
21150	Reconstruction midface, LeFort II; anterior intrusion (e.g., 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
21159	Reconstruction midface, LeFort III (extra and intracranial) with forehead advancement (eg, mono bloc), requiring bone grafts (includes obtaining autografts); without LeFort I
21160	Reconstruction midface, LeFort III (extra and intracranial) with forehead advancement (eg, mono bloc), 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 mandible rami; horizontal, vertical, C, or L osteotomy; without bone graft
21194	Reconstruction of mandible 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
21206	Osteotomy, maxilla, segmental (e.g., 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)
21247	Reconstruction of mandibular condyle with bone and cartilage autografts (includes obtaining grafts) (e.g., for hemifacial microsomia)

***Current Procedural Terminology (CPT®) © 2013 American Medical Association: Chicago, IL.**

References

1. American Association of Oral and Maxillofacial Surgeons. Criteria for orthognathic surgery. Published 1999. Updated 2008. © The American Association of Oral and Maxillofacial Surgeons 2013. Accessed August 27, 2014. Available at URL address: http://www.aaoms.org/docs/practice_mgmt/ortho_criteria.pdf

2. American Association of Oral and Maxillofacial Surgeons. Guidelines to the evaluation of impairment of the oral and maxillofacial region. Rosemont, IL: AAOMS; 2008. Accessed August 27, 2014. Available at URL address: http://www.aaoms.org/docs/practice_mgmt/impairment_guidelines.pdf
3. American Association of Oral and Maxillofacial Surgeons. Parameters of care for oral and maxillofacial surgery. A guide for practice, monitoring, and evaluation. Surgical correction of maxillofacial skeletal deformities. Version 2.0. Rosemont, IL: AAOMS;1995 Sep.
4. American Association of Oral and Maxillofacial Surgeons. Position Paper: Orthognathic Surgery. Rosemont, IL: AAOMS;1988 Aug.
5. American Society of Plastic and Reconstructive Surgeons. Position paper. Orthognathic surgery Recommended criteria for third party coverage. Arlington Heights, IL: ASPRS;1997 Sep.
6. Aurora RN, Casey KR, Kristo D, Auerbach S, Bista SR, Chowdhuri S, Karippot A, Lamm C, Ramar K, Zak R, Morgenthaler TI; American Academy of Sleep Medicine. Practice parameters for the surgical modifications of the upper airway for obstructive sleep apnea in adults. *Sleep*. 2010 Oct;33(10):1408-13.
7. Baur DA. Distraction osteogenesis of the mandible. *eMedicine*. Updated Feb 2014. Accessed August 27, 2014. Available at URL address: <http://www.emedicine.com/ent/topic765.htm>
8. Costa F, Robiony M, Politi M. Stability of LeFort I osteotomy in maxillary advancement. Review of the literature. *Int J Adult Orthodon Orthognath Surg*. 1999;14(3):207-13.
9. Costa F, Robiony M, Toro C, Sembronio S, Polini F, Politi M. Condylar positioning devices for orthognathic surgery: a literature review. *Oral Surg Oral Med Oral Pathol Oral Radiol Endod*. 2008 Aug;106(2):179-90.
10. Fish LC, Epker BN, Sullivan CR. Orthognathic surgery: the correction of dentofacial deformities. *J Oral Maxillofac Surg*. 1993 Jan;51(suppl 1):28-41.
11. Patel PK. Craniofacial, orthognathic surgery. *eMedicine*. Feb 1, 2012. Accessed August 27, 2014. Available at URL address: <http://www.emedicine.com/plastic/topic177.htm>
12. Sher AE, Schechtman KB, Piccirillo JF. The efficacy of surgical modifications of the upper airway in adults with obstructive sleep apnea syndrome. *Sleep*. 1996 Feb;19(2):156-77.
13. Thorpy M, Chesson A, Derderian S, Kader G, Millman R, Potolicchio S, et al. Practice parameters for the treatment of obstructive sleep apnea in adults: the efficacy of surgical modifications of the upper airway. *Sleep*. 1996;19(2):152-155.
14. Wood RJ, Jurkiewicz, MJ. Plastic and reconstructive surgery: head and neck. In: Schwartz SI, editor. *Principles of surgery*. New York, NY: McGraw-Hill Companies, Inc;1999. Chapter 43.

The registered marks "Cigna" and the "Tree of Life" logo are owned by Cigna Intellectual Property, Inc., licensed for use by Cigna Corporation and its operating subsidiaries. All products and services are provided by or through such operating subsidiaries and not by Cigna Corporation. Such operating subsidiaries include Connecticut General Life Insurance Company, Cigna Health and Life Insurance Company, Cigna Behavioral Health, Inc., Cigna Health Management, Inc., and HMO or service company subsidiaries of Cigna Health Corporation.