

# Medical Coverage Policy



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## Temporomandibular Joint (TMJ) Disorder Surgery

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#### INSTRUCTIONS FOR USE

The following Coverage Policy applies to health benefit plans administered by Cigna Companies. Certain Cigna Companies and/or lines of business only provide utilization review services to clients and do not make coverage determinations. References to standard benefit plan language and coverage determinations do not apply to those clients. Coverage Policies are intended to provide guidance in interpreting certain standard benefit plans administered by Cigna Companies. 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.

### Overview

This Coverage Policy addresses surgical procedures for temporomandibular joint (TMJ) disorder. This Coverage Policy is not intended to address procedures performed on the temporomandibular joint for indications other than TMJ disorder.

### Coverage Policy

Coverage for the treatment of temporomandibular joint (TMJ) disorder varies across plans. Refer to the customer's benefit plan document for coverage details.

Many medical plans do not cover orthodontic treatment provided as an adjunct to temporomandibular joint (TMJ) disorder surgery, because such treatment is considered dental in nature and, therefore, not covered under the medical benefit.

A letter of medical necessity is required for all requests for TMJ surgery and should include a detailed history of the condition, diagnostic imaging results and documentation of prior medical and surgical treatment.

### **Arthrocentesis**

**Arthrocentesis for temporomandibular joint (TMJ) disorder is considered medically necessary when EITHER of the following criteria is met:**

- Pain persists despite at least six months of noninvasive therapies such as pharmacologic pain control, physical therapy and the use of intra-oral appliances.
- Clinical examination and/or diagnostic imaging indicate the presence of hypomobility of the temporomandibular joint and symptoms persist despite at least six months of noninvasive therapy such as physical therapy and the use of intra-oral appliances.

### **Arthroscopy**

**Arthroscopy for TMJ disorder is considered medically necessary when BOTH of the following criteria are met:**

- Pain or significant hypomobility persists despite at least six months of scientifically recognized noninvasive therapies such as pharmacologic pain control, physical therapy and the use of intra-oral appliances.
- Clinical examination and diagnostic imaging indicate the presence of joint pathology that requires internal structural modification.

### **Arthrotomy**

**Arthrotomy for TMJ disorder is considered medically necessary when the criteria for arthroscopy listed above are met but arthroscopy is not technically feasible, appropriate, or has previously failed to resolve the problem being treated.**

**Arthrotomy with a FDA-approved total or partial prosthetic joint replacement is considered medically necessary when ANY of the following criteria are met, and the indication for surgery is confirmed by magnetic resonance imaging (MRI), computed tomography (CT) or corrected tomogram:**

- inflammatory arthritis involving the TMJ not responsive to other modalities of treatment
- recurrent fibrosis and/or bony ankylosis not responsive to other modalities of treatment
- failed tissue graft
- failed alloplastic joint reconstruction
- loss of vertical mandibular condylar height due to bone resorption, trauma, developmental abnormality or pathologic lesion

## **General Background**

The temporomandibular joint (TMJ) consists of two bilateral synovial joints formed by the mandibular condyles that fit into the glenoid fossa of the temporal bones. The function of the TMJ is unique in that two joints act as a single unit. An articular disc, or meniscus, composed of dense fibrous tissue, separates the condyle from the fossa and is connected by collateral ligaments to the condyle. The collateral ligaments allow rotational movement of the disc on the condyle during opening and closing of the jaw. Six principal skeletal masticatory muscles control TMJ movement and stabilization.

Temporomandibular Disease (TMD) is a collective term, which describes clinical problems that involve the function of the masticatory muscles and the jaw joint. TMD has been used to refer to a group of conditions that are often called "TMJ syndrome" by physicians and dentists to describe the pain associated with the head, neck, and jaw. This has resulted in confusion regarding diagnostic and treatment options.

There are two distinct categories: masticatory muscle disorders and temporomandibular joint disorders.

- Masticatory muscle problems may result from abnormal parafunctional habits such as bruxism and clenching of teeth in response to stress, referred pain patterns of the cervical spine, and systemic muscle disorders (e.g., dyskinesia, fibromyalgia, myositis). If the abnormal habits exceed the functional capacity of the jaw joint, temporomandibular joint pathology may occur.

- Temporomandibular joint disorders (e.g., internal derangement, degenerative joint disease, rheumatoid arthritis, mandibular dislocation, ankylosis, hyper- or hypoplasia, condylar osteolysis, fractures) may also occur from varied etiologies.

Typically, the initial presentation can be confusing as both a masticatory element and a joint disorder can coexist.

### Diagnosis

There is no widely accepted standard test to diagnose TMD. In the majority of cases, the patient's history, signs and symptoms, combined with a physical examination of the face and jaw, provide sufficient information to diagnose these disorders. Routine x-rays may be used to identify underlying osteoarthritis or other bony abnormalities of the TMJ. Arthrography, magnetic resonance imaging (MRI) and computed tomography (CT) are generally not indicated, although selected studies may be appropriate for persistent TMD when clinical examination indicates the presence of internal derangement and surgery is being considered.

### Treatment

Noninvasive, reversible therapies are used in the initial treatment of symptomatic TMD. In many cases, TMD is self-limiting and often responds to simple measures such as eating soft foods, applying heat or ice, and avoiding extreme jaw movements (e.g., wide yawning, gum chewing). Other conservative treatments may include:

- Pharmacological pain control: Nonsteroidal anti-inflammatory drugs (NSAIDs), opiates, muscle relaxants and low-dose antidepressants may be useful for symptom management.
- Physical therapy: A variety of modalities may be employed, including active or passive jaw movement, application of heat/ice and vapocoolant spray followed by gentle stretching.
- Intra-oral appliances: The two most common intra-oral appliances are stabilization splints and anterior positioning appliances. Stabilization splints may be used to provide joint stabilization, reduction of pressure within the joint and relaxation of elevator muscles. These appliances should not create major alteration in occlusion, since these changes may be irreversible and lead to other problems. Anterior positioning appliances, also called orthopedic repositioning appliances, are used for acute joint pain, painful crepitus and symptoms associated with acute limitation of motion caused by an anterior displaced disc without reduction (closed lock).

Surgery is only considered if there is persistent pain and functional limitations in patients with structural anatomic pathology or TMJ intraarticular disorders that do not respond to a reasonable course of nonsurgical interventions.

### Literature Review

**Arthrocentesis:** This is a minimally invasive procedure that involves insertion of one or two needles into the joint (no skin incisions are made). The joint is washed to remove debris and inflammatory byproducts. Some surgeons will also manipulate the joint under anesthesia and/or inject a therapeutic medication in the joint. The procedure is intended to increase range of motion and function and reduce pain. Arthrocentesis is performed on an outpatient basis under local anesthesia and is an established treatment option for persistent symptoms (e.g., pain) following failed conservative treatment (Laskin, 2018; American Association of Oral and Maxillofacial Surgeons, 2017; Vos, et al., 2014).

**Arthroscopy:** Arthroscopy of the TMJ is a surgical procedure that provides direct visualization of joint function and allows confirmation of intra-articular pathology that cannot be confirmed by other means of evaluation. It is intended to reduce pain and increase mandibular range of motion. It may be indicated when joint pathology is refractory to medical treatment and requires internal structural modifications. Arthroscopy may be used to treat internal derangement, hypomobility secondary to intra-joint adhesions, synovitis, degenerative joint disease and hypermobility causing painful subluxation or dislocation. Arthroscopy is performed under general anesthesia and in many cases can be performed on an outpatient basis. Arthroscopy is an established treatment option for persistent symptoms (e.g., pain) following failed conservative treatment Hossameldin, et al., 2018; American Association of Oral and Maxillofacial Surgeons, 2017; Al-Moraissi, et al., 2015).

**Arthrotomy:** Arthrotomy is the most invasive surgical technique used to treat TMD. Arthrotomy is performed under general anesthesia, usually on an inpatient basis. The following surgical procedures are carried out through arthrotomy:

- Disc Surgery: In cases where the joint problem is in the disc itself, your surgeon may recommend a procedure to reposition (disc plication), remove (discectomy), or replace (disk replacement) the diseased cartilage.
- Arthroplasty: procedure aimed to remove adhesions, bone spurs and other growths in the jaw that are causing joint dysfunction and pain.
- Joint Replacement: The TMJ can be replaced partially or completely. Individuals with end-stage pathology and severe physiologic dysfunction benefit most from partial or total joint replacement.

There is inadequate guidance in the published medical literature regarding patient-selection criteria for these procedures. Invasive surgical treatment to treat TMD should only be considered when all appropriate conservative treatment has failed and minimally invasive surgery such as arthrocentesis or arthroscopy is not indicated.

### Prosthetic Joint Replacement

**U.S. Food and Drug Administration (FDA):** In 1993, TMJ implants were reclassified by the Dental Products Advisory Panel as Class III Devices. Manufacturers were required at that time to submit a Premarket Approval Application (PMA) for any TMJ prosthetic implants currently on the market (product codes LZD and MPI). There are three prosthetic temporomandibular joint replacement (TJR) systems approved by the FDA:

<p>TMJ Concepts Patient-Fitted TMJ Reconstruction Prosthesis</p> <ul style="list-style-type: none"> <li>➤ TMJ CONCEPTS, Ventura, CA; P980052 July 1999</li> <li>➤ Patient-specific custom prosthesis with computer-aided design.</li> </ul>
<p>TMJ Fossa-Eminence/Condylar Prostheses (formerly TMJ Implants, Inc., known as the Christensen device)</p> <ul style="list-style-type: none"> <li>➤ NEXUS CMF, LLC., Golden CO; P000023 Jan 2001, P000035 Feb 2001</li> <li>➤ Includes stock and custom devices, and partial devices.</li> </ul>
<p>Walter Lorenz Total Temporomandibular Joint Replacement System (known as BIOMET)</p> <ul style="list-style-type: none"> <li>➤ Zimmer Biomet, Jacksonville, Florida; P020016 Sept 2005</li> <li>➤ Includes stock and custom devices.</li> </ul>

Prosthesis is contraindicated in patients with active or suspected infections in or about the implantation site, known allergy to any of the component materials, patients with infection or malignancy in the head or neck region, and in patients with the ability to exert significant postoperative masticatory muscle hyperfunction (clenching or grinding) which may lead to overload and fracture of the device or loosening of the screws.

**Literature Review:** There are no randomized trials comparing the three prosthetic temporomandibular joint replacement (TJR) systems approved by the FDA. Recent meta-analyses have been completed (Zou, et al., 2018; Johnson, et al., 2017). Zou et al. (2018a) meta-analysis included 20 studies with 1,262 patients. Case reports and cases series of fewer than 10 cases or a follow-up time shorter than 1 year were excluded. Outcome measurements were changes in maximal incisal opening (MIO), pain, dietary limitations, and functional deficiencies from before to after TJR. Comparison of the TJR systems showed no real difference for pre- versus postoperative MIO, pain, diet, and function. MIO and functional efficiency decreased gradually over time, but effective pain relief and improvements in dietary limitations were stable with no relevant differences during follow-up. Comparison of the custom and stock devices showed similar results for pre- and postoperative MIO, pain, function, and diet.

### Professional Societies/Organizations

**American Association of Oral and Maxillofacial Surgeons (AAOMS):** The AAOMS Clinical Condition Statements on Temporomandibular Disorders was updated in 2017. The statement lists the following:

- Non-surgical management:
  - Medication (e.g., NSAIDs)
  - Orthotic appliance
  - Physical therapy
  
- Surgical treatment:
  - Manipulation under anesthesia (e.g., brisement)
  - Arthrocentesis
  - Non-arthroscopic lysis and lavage and manipulation
  - Arthroscopic surgery
  - Diagnostic
  - Operative
  - Open arthroplasty with or without autograft
  - Open arthroplasty with alloplast
  - Disc repair or removal, with or without replacement
  - Coronoidectomy
  - Condylectomy
  - Mandibular Condylotomy
  - Myotomy
  - Orthognathic Surgery
  - Partial or total joint reconstruction (e.g., autogenous graft, allogeneic graft and alloplastic implant)
  
- Favorable therapeutic outcomes:
  - Level of pain that is of little or no concern to the patient
  - Improved jaw function
  - Improved ability to masticate food
  - Functional and stable occlusion
  - In a growing child, continued symmetrical growth of the mandible in proper relationship to the midface
  - Limited period of disability
  - Acceptable clinical appearance
  - Absence of recurrent jaw locking or dislocation
  - Limited progression of the disease

The AAOMS 2017 Parameters of Care: Clinical Practice Guidelines for Oral and Maxillofacial Surgery (Temporomandibular Joint Surgery) state that temporomandibular joint (TMJ) surgery is indicated for the treatment of a wide range of pathologic conditions. The guideline details indications for therapy, therapeutic goals, and specific factors affecting risk, therapeutic parameters, and outcome assessment indices for multiple conditions. The authors' state that surgical intervention for internal derangement arthritic conditions, degenerative joint disease infectious arthritis and ankylosis/restricted jaw motion is indicated only when nonsurgical therapy has been ineffective and pain and/or dysfunction are moderate to severe.

**The American Board of Internal Medicine's (ABIM) Foundation Choosing Wisely® Initiative**

American Dental Association (Released June 27, 2016): Avoid routinely using irreversible surgical procedures such as braces, occlusal equilibration and restorations as the first treatment of choice in the management of temporomandibular joint disorders. There is a lack of evidence that temporomandibular joint disorders (TMD) (defined as musculo-skeletal disorders, not the lesion of traumatic occlusion) are always progressive, and evidence exists that in many instances, patients with TMD have spontaneous remissions without treatment. Therefore, management is generally conservative and includes reversible strategies such as patient education, medications, physical therapy and/or the use of occlusal appliances that do not alter the shape or position of the teeth or the alignment of the jaws.

**Centers for Medicare & Medicaid Services (CMS)**

- National Coverage Determinations (NCDs): None.
- Local Coverage Determinations (LCDs): None

## Use Outside the U.S.

**National Institute for Health and Clinical Excellence (NICE) (United Kingdom):** Interventional procedure guidance issued by NICE in August 2014 states that “Current evidence on the efficacy and safety of total prosthetic replacement of the temporomandibular joint is adequate to support the use of this procedure provided that normal arrangements are in place for clinical governance, consent and audit”.

## 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.

**Considered Medically Necessary when criteria in the applicable policy statements listed above are met:**

CPT®* Codes	Description
20605	Arthrocentesis, aspiration and/or injection, intermediate joint or bursa (eg, temporomandibular, acromioclavicular, wrist, elbow, or ankle, olecranon bursa); without ultrasound guidance
20606	Arthrocentesis, aspiration and/or injection, intermediate joint or bursa (eg, temporomandibular, acromioclavicular, wrist, elbow, or ankle, olecranon bursa); with ultrasound guidance, with permanent recording and reporting
21010	Arthrotomy, temporomandibular joint
21050	Condylectomy, temporomandibular joint (separate procedure)
21060	Meniscectomy, partial or complete, temporomandibular joint (separate procedure)
21240	Arthroplasty, temporomandibular joint, with or without autograft (includes obtaining graft)
21242	Arthroplasty, temporomandibular joint, with allograft
21243	Arthroplasty, temporomandibular joint, with prosthetic joint replacement
21247	Reconstruction of mandibular condyle with bone and cartilage autografts (includes obtaining grafts) (eg, for hemifacial microsomia)
29800	Arthroscopy, temporomandibular joint, diagnostic, with or without synovial biopsy (separate procedure)
29804	Arthroscopy, temporomandibular joint, surgical

\*Current Procedural Terminology (CPT®) ©2018 American Medical Association: Chicago, IL.

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