

| POLICY TITLE | TEMPOROMANDIBULAR JOINT DISORDER | | | |
|-----------------|----------------------------------|--|--|--|
| POLICY NUMBER | MP 2.062 | | | |
| | | | | |
| Effective Date: | 9/1/2023 | | | |

POLICY RATIONALE DISCLAIMER POLICY HISTORY PRODUCT VARIATIONS DEFINITIONS CODING INFORMATION DESCRIPTION/BACKGROUND BENEFIT VARIATIONS REFERENCES

I. POLICY

Diagnostic Procedures

The following diagnostic procedures may be considered **medically necessary** in the diagnosis of Temporomandibular Joint Disorder (TMJD):

- Diagnostic X-ray tomograms, and arthrograms;
- Cephalograms (X-rays of the jaw and skull);
- Pantograms (X-rays of maxilla and mandible).

The following diagnostic procedures are considered **investigational** in the diagnosis of TMJD. There is insufficient evidence to support a general conclusion concerning the health outcomes or benefits associated with these tests:

- Electromyography (EMG), including surface EMG;
- Kinseiography;
- Thermography;
- Neuromuscular junction testing;
- Somatosensory testing;
- Transcranial or lateral skull X-rays;
- Intra-oral tracing or gnathic arch tracing (intended to demonstrate deviations in the positioning of the jaws that are associated with TMJD);
- Muscle testing;
- Standard dental radiographic procedures
- Range-of-motion measurements;
- Computerized mandibular scan (this measures and records muscle activity related to movement and positioning of the mandible and is intended to detect deviations in occlusion and muscle spasms related to TMJD);
- Ultrasound imaging/sonogram;
- Arthroscopy of the temporomandibular joint (TMJ) for purely diagnostic purposes;
- Joint vibration analysis.

Nonsurgical Treatments

The following non-surgical treatments may be considered **medically necessary** in the treatment of TMJD:

 Intra-oral removable prosthetic devices/appliances (encompassing fabrication, insertion, and adjustment)



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The following non-surgical treatments are considered **investigational** in the treatment of TMJ dysfunction. There is insufficient evidence to support a general conclusion concerning the health outcomes or benefits associated with these procedures:

- Electrogalvanic stimulation;
- Iontophoresis;
- Biofeedback;
- Ultrasound;
- Devices to maintain joint range of motion and to develop muscles involved in jaw function;
- Orthodontic services;
- Dental restorations/prostheses;
- Transcutaneous electrical nerve stimulation (TENS);
- Percutaneous electrical nerve stimulation (PENS);
- Low-level laser therapy;
- Hyaluronic acid.
- Platelet concentrates
- Dextrose prolotherapy

Surgical Treatments

The following surgical treatments may be considered **medically necessary** in the treatment of TMJD dysfunction:

- Arthrocentesis;
- Manipulation for reduction of fracture or dislocation of the TMJ;
- Arthroscopic surgery in patients with objectively demonstrated (by physical examination or imaging) internal derangements (displaced discs) or degenerative joint disease who have failed conservative treatment;
- Open surgical procedures (when TMJD is the result of congenital anomalies, trauma, or disease in patients who have failed conservative treatment) including, but not limited to, arthroplasties, condylectomies; meniscus or disc plication and disc removal.

Cross-references:

Botox

Viscosupplements

- MP 1.097 Low Level Laser Therapy
- **MP 1.101** Orthognathic Surgery
- MP 2.061 Prolotherapy
- MP 2.064 Biofeedback and Neurofeedback Therapy
- MP 4.039 Orthopedic applications of platelet rich plasma
- MP 6.020 Transcutaneous Electrical Nerve Stimulation
- MP 6.050 Percutaneous Electrical Nerve Stimulation and Percutaneous Neuromodulation Therapy



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MEDICAL POLICY

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II. PRODUCT VARIATIONS

This policy is only applicable to certain programs and products administered by Capital Blue Cross and subject to benefit variations as discussed in Section VI. Please see additional information below.

FEP PPO - Refer to FEP Medical Policy Manual. The FEP Medical Policy manual can be found at:

https://www.fepblue.org/benefit-plans/medical-policies-and-utilization-management-guidelines/medical-policies

All plans – Refer to the member's Certificate of Coverage for variations of coverage for services related to TMJD.

III. DESCRIPTION/BACKGROUND

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Temporomandibular Joint Disorder

TMJD, also known as temporomandibular joint syndrome, refers to a cluster of problems associated with the temporomandibular joint and musculoskeletal structures. The etiology of TMJD remains unclear and is believed to be multifactorial. TMJD is divided into two main categories: articular disorders (e.g., ankylosis, congenital or developmental disorders, disc derangement disorders, fractures, inflammatory disorders, osteoarthritis, and joint dislocation) and masticatory muscle disorders (e.g., myofascial pain, myofibrotic contracture, myospasm, and neoplasia).

Diagnosis

In the clinical setting, TMJD is often a diagnosis of exclusion and involves physical examination, patient interview, and a review of dental records. Diagnostic testing and radiologic imaging are generally only recommended for patients with severe and chronic symptoms. Diagnostic criteria for TMJD have been developed and validated for use in both clinical and research settings. The American Society of Temporomandibular Joint Surgeons, and the American Association of Oral and Maxillofacial Surgeons support the use of history and physical, as well as imaging studies such as X-ray, CT, and MRI in the diagnosis of TMJD. The AAOMS does not support use of muscle evoked potential studies and sonography for the diagnosis of TMJ.

Symptoms attributed to TMJD vary and include, but are not limited to, clicking sounds in the jaw; headaches; closing or locking of the jaw due to muscle spasms (trismus) or displaced disc; pain in the ears, neck, arms, and spine; tinnitus; and bruxism (clenching or grinding of the teeth).



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Treatment

For many patients, symptoms of TMJD are short-term and self-limiting. Conservative treatments (e.g., eating soft foods, rest, heat, ice, avoiding extreme jaw movements) and anti-inflammatory medication are recommended before considering more invasive and/or permanent therapies (e.g., surgery). Societal guidance supports use of medications, orthotic appliance, and physical therapy. The AAOMS lists ultrasound, and iontophoresis as possible treatments during a physical therapy course, however there is a lack of evidence to support these modalities. Similarly, there is little evidence to support electrotherapy and low-level laser therapy. Ultimately, treating underlying conditions provides a greater chance of success in the management of TMJD.

Note that low-level laser therapy for TMJD is addressed in evidence review MP 1.097.

Regulatory Status

Since 1981, several muscle-monitoring devices have been cleared for marketing by the U.S. Food and Drug Administration (FDA) through the 510(k) process. Some examples are the K6-I Diagnostic System (Myotronics), the BioEMG III™ (Bio-Research Associates), M-Scan™ (Bio-Research Associates), and the GrindCare Measure (Medotech A/S). These devices aid clinicians in the analysis of joint sound, vibrations, and muscle contractions when diagnosing and evaluating TMJD. FDA product code: KZM.

| Devices | Manufacturer | Date Cleared | 510(k) No. | Indication |
|--------------------------|----------------------------------|-----------------|------------|---|
| K7x Evaluation System | Myotronics, Inc. | Nov 2000 | K003287 | Electromyography |
| BioEMG III™ | Bio-Research Associates, Inc. | Feb 2009 | K082927 | Electromyography, Joint Vibration Recording |
| M-Scan [™] | Bio-Research Associates | Jul 2013 | K130158 | Electromyography |
| GrindCare Measure | Medotech A/S | Apr 2012 | K113677 | Electromyography, Nocturnal Bruxism |
| TEETHAN 2.0 | BTS S.P.A. | Dec 2016 | K161716 | Electromyography |
| GrindCare System | Sunstar Suisse S.A. | Sep 2017 | K163448 | Electromyography, Sleep Bruxism |

Table 1. Muscle-Monitoring Devices Cleared by the U.S. Food and Drug Administration



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IV. RATIONALE

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SUMMARY OF EVIDENCE

For individuals who have suspected TMJD who receive ultrasound, surface electromyography, or joint vibration analysis, the evidence includes systematic reviews of diagnostic test studies. Relevant outcomes are test accuracy, test validity, and other performance measures. None of the systematic reviews found that these diagnostic techniques accurately identify patients with TMJD and many of the included studies had methodologic limitations. The evidence is insufficient to determine the effects of the technology on health outcomes.

For individuals who have a confirmed diagnosis of TMJD who receive intraoral devices or appliances or pharmacologic treatment, the evidence includes randomized controlled trials (RCTs) and systematic reviews of RCTs. Relevant outcomes are symptoms, functional outcomes, quality of life, and treatment-related morbidity. A systematic review of intraoral appliances (44 studies) and meta-analyses of subsets of these studies have found a significant benefit of intraoral appliances compared with control interventions. Several studies, meta-analyses, and systematic reviews exploring the effectiveness of stabilization splints on TMJD pain revealed conflicting results. Overall, the evidence shows that stabilizing splints may improve pain and positively impact depressive and anxiety symptoms. The evidence related to pharmacologic treatment varies because studies, systematic reviews have found a significant benefit of several pharmacologic treatments (e.g., analgesics, muscle relaxants, and anti-inflammatory medications [vs. placebo]), but other studies showed a lack of benefit with agents such as methylprednisolone and botulinum toxin type A. The evidence is sufficient to determine that the technology results in a meaningful improvement in the net health outcome.

For individuals with a confirmed diagnosis of TMJD who receive acupuncture, biofeedback, transcutaneous electrical nerve stimulation, orthodontic services, hyaluronic acid, platelet concentrates, or dextrose prolotherapy, the evidence includes RCTs, systematic reviews of these RCTs, and observational studies. Relevant outcomes are symptoms, functional outcomes, quality of life, and treatment-related morbidity. The systematic reviews did not find that these technologies reduced pain or improved functional outcomes significantly more than control treatments. Moreover, many individual studies were small and/or had methodologic limitations. The evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

For individuals who have a confirmed diagnosis of TMJD, who receive arthrocentesis or arthroscopy, the evidence includes RCTs, systematic reviews of RCTs, and observational studies. Relevant outcomes are symptoms, functional outcomes, quality of life, and treatment-related morbidity. One review, which included 3 RCTs, compared arthrocentesis or arthroscopy with nonsurgical interventions for TMJD. Pooled analyses of the RCTs found that arthrocentesis and arthroscopy resulted in superior pain reduction than control interventions. A network meta-analysis, which included 36 RCTs, revealed that arthroscopy and arthrocentesis improve pain control and maximum mouth opening. The evidence is sufficient to determine that the technology results in a meaningful improvement in the net health outcome.

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V. DEFINITIONS

ANOMALY refers to a deviation from normal.

BRUXISM involves activation of the masticatory muscles, resulting in tooth clenching and teeth grinding. Although often asymptomatic, frequent bruxism can become clinically significant when it interferes with sleep or results in tooth wear or jaw discomfort.

CONGENITAL refers to something, which is present at birth.

TINNITUS is a subjective ringing, buzzing, or hissing sound in the ear. For some patients, this causes only minor irritation; for others, it is disabling.

VI. BENEFIT VARIATIONS

The existence of this medical policy does not mean that this service is a covered benefit under the member's health benefit plan. Benefit determinations should be based in all cases on the applicable health benefit plan language. Medical policies do not constitute a description of benefits. A member's health benefit plan governs which services are covered, which are excluded, which are subject to benefit limits and which require preauthorization. There are different benefit plan designs in each product administered by Capital Blue Cross. Members and providers should consult the member's health benefit plan for information or contact Capital Blue Cross for benefit information.

VII. DISCLAIMER

Capital Blue Cross's medical policies are developed to assist in administering a member's benefits, do not constitute medical advice and are subject to change. Treating providers are solely responsible for medical advice and treatment of members. Members should discuss any medical policy related to their coverage or condition with their provider and consult their benefit information to determine if the service is covered. If there is a discrepancy between this medical policy and a member's benefit information, the benefit information will govern. If a provider or a member has a question concerning the application of this medical policy to a specific member's plan of benefits, please contact Capital Blue Cross' Provider Services or Member Services. Capital Blue Cross considers the information contained in this medical policy to be proprietary and it may only be disseminated as permitted by law.

VIII. CODING INFORMATION

Note: This list of codes may not be all-inclusive, and codes are subject to change at any time. The identification of a code in this section does not denote coverage as coverage is determined by the terms of member benefit information. In addition, not all covered services are eligible for separate reimbursement.



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Investigational; therefore, not covered for the diagnosis and treatment of TMJD

| Procedu | re Codes | | | | | | | |
|---------|----------|-------|-------|-------|-------|-------|-------|-------|
| A4595 | D0210 | D0386 | D0370 | D5934 | D5935 | D7872 | D8690 | D8999 |
| E0720 | E0730 | E0746 | E1700 | E1701 | E1702 | J7318 | J7320 | J7321 |
| J7322 | J7323 | J7324 | J7325 | J7326 | J7327 | J7328 | J7329 | J7331 |
| J7332 | M0076 | P9020 | S3900 | S8948 | 0232T | 29800 | 64450 | 64999 |
| 90901 | 93740 | 95851 | 95927 | 95937 | 97014 | 97032 | 97033 | 97035 |

Covered when medically necessary for the diagnosis and treatment of TMJD:

| Procedu | re Codes | | | | | | | |
|---------|----------|-------|-------|-------|-------|-------|-------|-------|
| D0320 | D0321 | D0330 | D0340 | D0368 | D0384 | D7810 | D7820 | D7840 |
| D7850 | D7852 | D7854 | D7856 | D7858 | D7860 | D7865 | D7870 | D7874 |
| D7876 | D7880 | D7881 | 20605 | 20606 | 21010 | 21050 | 21060 | 21070 |
| 21116 | 21240 | 21242 | 21243 | 21480 | 21485 | 21490 | 29804 | 64400 |
| 70100 | 70110 | 70328 | 70330 | 70332 | 70350 | 70355 | 76100 | |

| ICD-10-CM Diagnosis Codes | Description |
|---------------------------------|--|
| 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 |
| M26.50 | 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 |



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| | _ack of posterior occlusal support | | | | |
| M26.59 0 | Other dentofacial functional abnormalities | | | | |
| M26.601 F | Right temporomandibular joint disorder, unspecified | | | | |
| M26.602 L | _eft temporomandibular joint disorder, unspecified | | | | |
| M26.603 E | Bilateral temporomandibular joint disorder, unspecified | | | | |
| M26.609 l | Jnspecified temporomandibular joint disorder, unspecified side | | | | |
| M26.611 A | Adhesions and ankylosis of right temporomandibular joint | | | | |
| M26.612 | Adhesions and ankylosis of left temporomandibular joint | | | | |
| M26.613 | Adhesions and ankylosis of bilateral temporomandibular joint | | | | |
| M26.619 | Adhesions and ankylosis of temporomandibular joint, unspecified side | | | | |
| M26.621 A | Arthralgia of right temporomandibular joint | | | | |
| M26.622 | Arthralgia of left temporomandibular joint | | | | |
| M26.623 | Arthralgia of bilateral temporomandibular joint | | | | |
| M26.629 A | Arthralgia of temporomandibular joint, unspecified side | | | | |
| M26.631 A | Articular disc disorder of right temporomandibular joint | | | | |
| M26.632 A | Articular disc disorder of left temporomandibular joint | | | | |
| M26.633 | Articular disc disorder of bilateral temporomandibular joint | | | | |
| M26.639 A | Articular disc disorder of temporomandibular joint, unspecified side | | | | |
| M26.641 A | Arthritis of Temporomandibular Joint | | | | |
| M26.642 A | Arthritis of Left Temporomandibular Joint | | | | |
| M26.643 A | Arthritis of Bilateral Temporomandibular Joint | | | | |
| M26.649 A | Arthritis of Unspecified Temporomandibular Joint | | | | |
| M26.651 A | Arthropathy of Right Temporomandibular Joint | | | | |
| M26.652 | Arthropathy of Left Temporomandibular Joint | | | | |
| M26.653 | Arthropathy of Bilateral Temporomandibular Joint | | | | |
| M26.659 | Arthropathy of Unspecified Temporomandibular Joint | | | | |
| M26.69 0 | Other specified disorders of temporomandibular joint | | | | |
| M79.11 N | Myalgia of mastication muscle | | | | |
| S03.01XA [| Dislocation of jaw, right side, initial encounter | | | | |
| S03.01XD [| Dislocation of jaw, right side, subsequent encounter | | | | |
| S03.01XS [| Dislocation of jaw, right side, sequela | | | | |
| S03.02XA [| Dislocation of jaw, left side, initial encounter | | | | |
| S03.02XD [| Dislocation of jaw, left side, subsequent encounter | | | | |
| S03.02XS [| Dislocation of jaw, left side, sequela | | | | |
| S03.03XA [| Dislocation of jaw, bilateral, initial encounter | | | | |
| | Dislocation of jaw, bilateral, subsequent encounter | | | | |
| S03.03XS [| Dislocation of jaw, bilateral, sequela | | | | |



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- Schiffman E, Ohrbach R, Truelove E, et al. Diagnostic Criteria for Temporomandibular Disorders (DC/TMD) for Clinical and Research Applications: recommendations of the International RDC/TMD Consortium Network* and Orofacial Pain Special Interest Group. J Oral Facial Pain Headache. 2014; 28(1): 6-27. PMID 24482784
- Ohrbach R, Turner JA, Sherman JJ, et al. The Research Diagnostic Criteria for Temporomandibular Disorders. IV: evaluation of psychometric properties of the Axis II measures. J Orofac Pain. 2010; 24(1): 48-62. PMID 20213031
- 3. Schiffman E, Ohrbach R. Executive summary of the Diagnostic Criteria for Temporomandibular Disorders for clinical and research applications. J Am Dent Assoc. Jun 2016; 147(6): 438-45. PMID 26922248
- 4. Almeida FT, Pacheco-Pereira C, Flores-Mir C, et al. Diagnostic ultrasound assessment of temporomandibular joints: a systematic review and meta-analysis. Dentomaxillofac Radiol. Feb 2019; 48(2): 20180144. PMID 30285469
- 5. Manfredini D, Guarda-Nardini L. Ultrasonography of the temporomandibular joint: a literature review. Int J Oral Maxillofac Surg. Dec 2009; 38(12): 1229-36. PMID 19700262
- Klasser GD, Okeson JP. The clinical usefulness of surface electromyography in the diagnosis and treatment of temporomandibular disorders. J Am Dent Assoc. Jun 2006; 137(6): 763-71. PMID 16803805
- 7. Sharma S, Crow HC, McCall WD, et al. Systematic review of reliability and diagnostic validity of joint vibration analysis for diagnosis of temporomandibular disorders. J Orofac Pain. 2013; 27(1): 51-60. PMID 23424720
- 8. List T, Axelsson S. Management of TMD: evidence from systematic reviews and metaanalyses. J Oral Rehabil. May 2010; 37(6): 430-51. PMID 20438615
- Randhawa K, Bohay R, Cote P, et al. The Effectiveness of Noninvasive Interventions for Temporomandibular Disorders: A Systematic Review by the Ontario Protocol for Traffic Injury Management (OPTIMa) Collaboration. Clin J Pain. Mar 2016; 32(3): 260-78. PMID 25924094
- 10. Fricton J, Look JO, Wright E, et al. Systematic review and meta-analysis of randomized controlled trials evaluating intraoral orthopedic appliances for temporomandibular disorders. J Orofac Pain. 2010; 24(3): 237-54. PMID 20664825
- 11. Ivorra-Carbonell L, Montiel-Company JM, Almerich-Silla JM, et al. Impact of functional mandibular advancement appliances on the temporomandibular joint a systematic review. Med Oral Patol Oral Cir Bucal. Sep 01 2016; 21(5): e565-72. PMID 27475694
- 12. Ebrahim S, Montoya L, Busse JW, et al. The effectiveness of splint therapy in patients with temporomandibular disorders: a systematic review and meta-analysis. J Am Dent Assoc. Aug 2012; 143(8): 847-57. PMID 22855899
- Zhang C, Wu JY, Deng DL, et al. Efficacy of splint therapy for the management of temporomandibular disorders: a meta-analysis. Oncotarget. Dec 20 2016; 7(51): 84043-84053. PMID 27823980
- Tonlorenzi D, Brunelli M, Conti M, et al. An observational study of the effects of using an high oral splint on pain control. Arch Ital Biol. Sep 30 2019; 157(2-3): 66-75. PMID 31821530



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- 15. Alajbeg IZ, Vrbanovic E, Lapic I, et al. Effect of occlusal splint on oxidative stress markers and psychological aspects of chronic temporomandibular pain: a randomized controlled trial. Sci Rep. Jul 03 2020; 10(1): 10981. PMID 32620810
- 16. Melo RA, de Resende CMBM, Rego CRF, et al. Conservative therapies to treat pain and anxiety associated with temporomandibular disorders: a randomized clinical trial. Int Dent J. Aug 2020; 70(4): 245-253. PMID 32153038
- 17. Riley P, Glenny AM, Worthington HV, et al. Oral splints for temporomandibular disorder or bruxism: a systematic review. Br Dent J. Feb 2020; 228(3): 191-197. PMID 32060462
- Al-Moraissi EA, Farea R, Qasem KA, et al. Effectiveness of occlusal splint therapy in the management of temporomandibular disorders: network meta-analysis of randomized controlled trials. Int J Oral Maxillofac Surg. Aug 2020; 49(8): 1042-1056. PMID 31982236
- 19. Isacsson G, Schumann M, Nohlert E, et al. Pain relief following a single-dose intraarticular injection of methylprednisolone in the temporomandibular joint arthralgia-A multicentre randomised controlled trial. J Oral Rehabil. Jan 2019; 46(1): 5-13. PMID 30240024
- 20. Study of Orofacial Pain and PropRANOIol (SOPPRANO). ClinicalTrials.gov.
- 21. Haggman-Henrikson B, Alstergren P, Davidson T, et al. Pharmacological treatment of oro-facial pain health technology assessment including a systematic review with network meta-analysis. J Oral Rehabil. Oct 2017; 44(10): 800-826. PMID 28884860
- 22. Mena M, Dalbah L, Levi L, et al. Efficacy of topical interventions for temporomandibular disorders compared to placebo or control therapy: a systematic review with metaanalysis. J Dent Anesth Pain Med. Dec 2020; 20(6): 337-356. PMID 33409363
- 23. Machado D, Martimbianco ALC, Bussadori SK, et al. Botulinum Toxin Type A for Painful Temporomandibular Disorders: Systematic Review and Meta-Analysis. J Pain. Mar 2020; 21(3-4): 281-293. PMID 31513934
- 24. Jung A, Shin BC, Lee MS, et al. Acupuncture for treating temporomandibular joint disorders: a systematic review and meta-analysis of randomized, sham-controlled trials. J Dent. May 2011; 39(5): 341-50. PMID 21354460
- 25. Manfredini D, Piccotti F, Guarda-Nardini L. Hyaluronic acid in the treatment of TMJ disorders: a systematic review of the literature. Cranio. Jul 2010; 28(3): 166-76. PMID 20806734
- 26. Machado E, Bonotto D, Cunali PA. Intra-articular injections with corticosteroids and sodium hyaluronate for treating temporomandibular joint disorders: a systematic review. Dental Press J Orthod. Sep-Oct 2013; 18(5): 128-33. PMID 24352399
- 27. Goiato MC, da Silva EV, de Medeiros RA, et al. Are intra-articular injections of hyaluronic acid effective for the treatment of temporomandibular disorders? A systematic review. Int J Oral Maxillofac Surg. Dec 2016; 45(12): 1531-1537. PMID 27374020
- Liu Y, Wu J, Fei W, et al. Is There a Difference in Intra-Articular Injections of Corticosteroids, Hyaluronate, or Placebo for Temporomandibular Osteoarthritis?. J Oral Maxillofac Surg. Mar 2018; 76(3): 504-514. PMID 29182905
- 29. Al-Hamed FS, Hijazi A, Gao Q, et al. Platelet Concentrate Treatments for Temporomandibular Disorders: A Systematic Review and Meta-analysis. JDR Clin Trans Res. May 28 2020: 2380084420927326. PMID 32464073



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- 30. Sousa BM, Lopez-Valverde N, Lopez-Valverde A, et al. Different Treatments in Patients with Temporomandibular Joint Disorders: A Comparative Randomized Study. Medicina (Kaunas). Mar 05 2020; 56(3). PMID 32151101
- 31. Gokce Kutuk S, Gokce G, Arslan M, et al. Clinical and Radiological Comparison of Effects of Platelet-Rich Plasma, Hyaluronic Acid, and Corticosteroid Injections on Temporomandibular Joint Osteoarthritis. J Craniofac Surg. Jun 2019; 30(4): 1144-1148. PMID 31166260
- 32. Gorrela H, Prameela J, Srinivas G, et al. Efficacy of Temporomandibular Joint Arthrocentesis with Sodium Hyaluronate in the Management of Temporomandibular Joint Disorders: A Prospective Randomized Control Trial. J Maxillofac Oral Surg. Dec 2017; 16(4): 479-484. PMID 29038631
- 33. Manfredini D, Rancitelli D, Ferronato G, et al. Arthrocentesis with or without additional drugs in temporomandibular joint inflammatory-degenerative disease: comparison of six treatment protocols^{*}. J Oral Rehabil. Apr 2012; 39(4): 245-51. PMID 21999138
- 34. Bjornland T, Gjaerum AA, Moystad A. Osteoarthritis of the temporomandibular joint: an evaluation of the effects and complications of corticosteroid injection compared with injection with sodium hyaluronate. J Oral Rehabil. Aug 2007; 34(8): 583-9. PMID 17650168
- 35. Bertolami CN, Gay T, Clark GT, et al. Use of sodium hyaluronate in treating temporomandibular joint disorders: a randomized, double-blind, placebo-controlled clinical trial. J Oral Maxillofac Surg. Mar 1993; 51(3): 232-42. PMID 8445463
- 36. Vos LM, Huddleston Slater JJ, Stegenga B. Lavage therapy versus nonsurgical therapy for the treatment of arthralgia of the temporomandibular joint: a systematic review of randomized controlled trials. J Orofac Pain. 2013; 27(2): 171-9. PMID 23630689
- 37. Al-Moraissi EA, Wolford LM, Ellis E, et al. The hierarchy of different treatments for arthrogenous temporomandibular disorders: A network meta-analysis of randomized clinical trials. J Craniomaxillofac Surg. Jan 2020; 48(1): 9-23. PMID 31870713
- 38. Hossameldin RH, McCain JP. Outcomes of office-based temporomandibular joint arthroscopy: a 5-year retrospective study. Int J Oral Maxillofac Surg. Jan 2018; 47(1): 90-97. PMID 28751180
- 39. American Association for Dental Research (AADR). Science Policy: Temporomandibular disorders (TMD). 1996 (revised 2010, reaffirmed 2015.
- 40. American Society of Temporomandibular Joint Surgeons. Guidelines for diagnosis and management of disorders involving the temporomandibular joint and related musculoskeletal structures. 2003
- 41. Sit RW, Reeves KD, Zhong CC, et al. Efficacy of hypertonic dextrose injection (prolotherapy) in temporomandibular joint dysfunction: a systematic review and metaanalysis. Sci Rep. Jul 19 2021; 11(1): 14638. PMID 34282199
- 42. Gauer RL, Semidey MJ. Diagnosis and treatment of temporomandibular disorders. Am Fam Physician. 2015;91(6):378-386. PMID 25822556
- 43. American Association of Oral & Maxillofacial Surgeons (AAOMS). Statement by AAOMS concerning the Management of Selected Clinical Conditions and Associated Clinical Procedures: Temporomandibular Disorders
- 44. Blue Cross Blue Shield Association Medical Policy Reference Manual. 2.01.21, Temporomandibular Joint Disorder. March 2023.



| POLICY TITLE | TEMPOROMANDIBULAR JOINT DISORDER |
|------------------------|----------------------------------|
| POLICY NUMBER MP 2.062 | |

X. POLICY HISTORY

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| MP 2.062 | CAC 11/30/2004 |
|----------|---|
| MI 2.002 | CAC 09/13/2005 |
| | CAC 11/29/2005 |
| | CAC 01/30/2007 |
| | CAC 03/25/2008 |
| | CAC 05/26/2009 |
| | CAC 11/30/2010 Added acupuncture as investigational. Revised policy statement for physical medicine and TENS from medically necessary to investigational |
| | (consistent with BCBSA) Adopt BCBSA. |
| | CAC 04/24/2012 Consensus review. No changes, references updated. |
| | CAC 10/30/2012 Minor revision. Low-level laser therapy and hyaluronic acid added as investigational non-surgical treatments for treatment of TMJ. References updated. Codes reviewed 10/1/12 |
| | CAC 11/26/2013 Consensus review. Joint vibration analysis added as an investigational diagnostic procedure. In the statement on medically necessary treatments, intra-oral reversible prosthetic devices changed to intra-oral removable |
| | prosthetic devices for clarification only. FEP variation revised to refer to the FEP manual. Rationale added. |
| | CAC 11/25/2014 Consensus review. No change to policy statements. References and rationale updated. Coding reviewed and updated 11/12/14 |
| | 07/01/2015- S8262 removed from policy as a deleted code. |
| | CAC 01/26/2016 Minor revision. Bullet point on physical therapy removed from |
| | investigational statement on nonsurgical treatments. Rationale and reference |
| | updated. Medicare variation removed. Coding reviewed. |
| | 06/06/2016 Coding updated |
| | Admin Update 11/09/2016 Variation Reformatting |
| | Admin Update 01/01/2017 New diagnosis codes added effective 10/1/2016. New codes J7320, J7322 added and end dated code Q9980 removed effective 1/1/17. |
| | CAC 05/23/2017 Minor revision. Policy statement revisions are as follows: |
| | Ultrasound imaging/sonogram added to the list of diagnostic procedures considered investigational in the diagnosis of TMJ dysfunction (2nd policy statement 11th bullet). |
| | Therapacer 2000 removed as an example of a device used to maintain joint ROM and develop jaw muscle function (4th policy statement 5th bullet). Investigational statement added after the 4th policy statement. |
| | Medicare variation to LCD 33823 added. Cross References, Description/Background, Regulatory Status, Rationale and Reference sections updated. Coding Reviewed. |
| | Admin Update 01/01/2018: Updated J7321 and J7328 descriptions effective 1/1/18. Medicare variations removed from Commercial Policies. |



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| Admin Update 03/13/2018 Coding reviewed and updated. |
|---|
| 10/01/2018 Admin Update: New ICD-10 code added effective 10/1/18 |
| 03/05/2019 Consensus review. No change to policy statements. Background and |
| references updated. Rationale condensed. |
| 03/18/2020 Consensus review. No change to policy statement. References |
| updated. Coding reviewed. |
| 08/31/2020 Admin Update. New ICD 10 codes M26.652, M26.653 and M26.659 |
| added. |
| 09/1/2020 Admin Update. New ICD 10 codes M26.64, M26.641, M26.642, |
| M26.643, M26.649, M26.65, M26.651 added. |
| 03/12/2021 Administrative Update. Revised HCPC code J7321. Effective |
| 4/1/2021 |
| 07/29/2021 Minor Updates: Added platelet concentrates to the list of |
| investigational treatments. "Dysfunction" changed to "disorder" in the policy |
| statement and title. Removed CT and MRI (managed by NIA), acupuncture |
| (managed by benefits), and pharmacological treatments (managed by pharmacy |
| or medical injectable policy). Coding updated: removed 70336, 70486, 70487, |
| 70488, 97810, 97811, 97813, 97814; added J7318, J7329, J7331, J7332, P9020, |
| 0232T as investigational; removed M26.65. References updated. |
| 05/03/2022 Minor review. Added dextrose prolotherapy as INV. Added procedure |
| code M0076. Removed deleted procedure code D8690. Cross-reference added. |
| Description/Background updated. Reference added. Product Variations updated. |
| 03/13/2023 Consensus review. Added Botox to cross references. Updated |
| background, definitions and references. |
| 07/06/2023 Admin update. D0322 removed from policy and managed under |
| dental benefits. |
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