

MEDICAL POLICY – 1.01.540**Continuous Passive Motion in the Home Setting**

BCBSA Ref. Policy: 1.01.10


Effective Date: June 1, 2024
Last Revised: May 13, 2024
Replaces: N/A

RELATED MEDICAL POLICIES:

7.01.48 Autologous Chondrocyte Implantation for Focal Articular Cartilage Lesions
7.01.78 Autografts and Allografts in the Treatment of Focal Articular Cartilage Lesions

Select a hyperlink below to be directed to that section.

[POLICY CRITERIA](#) | [DOCUMENTATION REQUIREMENTS](#) | [CODING](#)
[RELATED INFORMATION](#) | [EVIDENCE REVIEW](#) | [REFERENCES](#) | [HISTORY](#)

 Clicking this icon returns you to the hyperlinks menu above.

Introduction

A continuous passive motion (CPM) device moves or flexes a joint. This movement is done without the individual's help. A continuous passive motion device has been used most often after certain knee surgeries to allow the knee joint to slowly bend. Using CPM was very common; however, newer studies show that it does not improve the outcomes of knee surgery except in some complex knee surgeries, or when people have prolonged bed rest due to some other problem after knee replacement. Continuous passive motion usually starts in the hospital. For those who need it at home after knee surgery it is usually covered for 21 days. There are a number of high-quality studies showing that CPM is effective for specific types of knee surgery. There are not enough high-quality studies to show how effective CPM is for other joints. This policy describes when CPM is considered medically necessary.

Note: The Introduction section is for your general knowledge and is not to be taken as policy coverage criteria. The rest of the policy uses specific words and concepts familiar to medical professionals. It is intended for providers. A provider can be a person, such as a doctor, nurse, psychologist, or dentist. A provider also can be a place where medical care is given, like a hospital, clinic, or lab. This policy informs them about when a service may be covered.

Policy Coverage Criteria

This policy addresses CPM only in the home setting.

Procedure	Medical Necessity
Total knee arthroplasty (TKA) or TKA revision	<p>The use of continuous passive motion (CPM) in the home setting following a total knee arthroplasty or total knee arthroplasty revision may be considered medically necessary as an adjunct to physical therapy in the following situations:</p> <ul style="list-style-type: none"> • The member is not able to ambulate or comply with rehabilitation exercises. Examples include: <ul style="list-style-type: none"> ○ Complex regional pain syndrome (reflex sympathetic dystrophy) ○ Extensive arthrofibrosis or tendon fibrosis ○ Physical, mental, or behavioral inability to participate in active physical therapy • Following TKA or TKA revision, CPM in the home setting will be allowable for up to 21 days after surgery while individuals are immobile or unable to bear weight
<p>Articular cartilage repair, such as:</p> <ul style="list-style-type: none"> • Microfracture • Osteochondral grafting • Autologous chondrocyte implantation • Treatment of osteochondritis dissecans • Repair of tibial plateau fractures 	<p>The use of CPM following articular cartilage repair (see list) may be considered medically necessary as an adjunct to physical therapy in the following situations:</p> <ul style="list-style-type: none"> • During the non-weight-bearing rehabilitation period • For up to 6 weeks maximum
Other conditions	<p>The use of CPM in the home setting for all other conditions not listed in this medical policy is considered not medically necessary.</p>

Documentation Requirements

The individual's medical records submitted for review for all conditions should document that medical necessity criteria are met. The record should include the following:



Documentation Requirements

- Documentation of the type of knee surgery member had undergone and that member can't bear weight after surgery.
- For total knee replacement or total knee revision, additional documentation of the following:
 - That member is not able to comply with physical therapy because of certain conditions. Examples include:
 - Complex regional pain syndrome (reflex sympathetic dystrophy)
 - Extensive arthrofibrosis or tendon fibrosis
 - Physical, mental, or behavioral inability to participate in active physical therapy

Coding

Code	Description
HCPCS	
E0935	Continuous passive motion exercise device for use on knee only
E0936	Continuous passive motion exercise device for use other than knee

Note: CPT codes, descriptions and materials are copyrighted by the American Medical Association (AMA). HCPCS codes, descriptions and materials are copyrighted by Centers for Medicare Services (CMS).

Related Information

Benefit Application

When offered in the home setting, continuous passive motion may be adjudicated under durable medical equipment benefits. In other settings, continuous passive motion may be adjudicated as a form of physical therapy.

Evidence Review



Description

Continuous passive motion (CPM) devices are used to keep a joint in motion without individual assistance. CPM is being evaluated for treatment and postsurgical rehabilitation of the upper- and lower-limb joints and for a variety of musculoskeletal conditions.

Background

Physical therapy of joints following surgery focuses both on passive motion to restore mobility and on active exercises to restore strength. While passive motion can be administered by a therapist, CPM devices have also been used. CPM is thought to improve recovery by stimulating the healing of articular tissues and the circulation of synovial fluid; reducing local edema; and preventing adhesions, joint stiffness or contractures, or cartilage degeneration.¹ CPM has been investigated primarily in the knee, particularly after total knee arthroplasty (TKA) or ligamentous or cartilage repair. Acceptance of its use in the knee joint has created interest in CPM for other weight-bearing joints (i.e., hip, ankle, metatarsals) as well as non-weight-bearing joints (i.e., shoulder, elbow, metacarpals, interphalangeal joints). Use of CPM in stroke and burn individuals is also being explored.

The device used for the knee moves the joint (e.g., flexion and extension) without individual assistance, continuously for extended periods of time (i.e., up to 24 hours/day)¹. An electrical power unit is used to set the variable range of motion (ROM) and speed. The initial settings for ROM are based on an individual's level of comfort and other factors assessed intraoperatively. The ROM is increased by 3° to 5° per day, as tolerated. The speed and ROM can be varied, depending on joint stability. The use of the device may be initiated in the immediate postoperative period and then continued at home for a variable period of time.

Over time, hospital lengths of stay have progressively shortened, and in some cases surgical repair is done as an outpatient or with a length of stay of one to two days.² As a result, there has been a considerable shift in the rehabilitation regimen, moving range of motion from an intensive in-hospital program to a less intensive outpatient program. Some providers may want individuals to continue CPM in the home setting as a means of duplicating the services offered with a longer (7-day) hospital stay.

The focus of the current policy is to examine the literature on the use of CPM in the home setting as it is currently being prescribed postoperatively. The relevant comparisons are treatment outcomes of CPM when used alone or with physical therapy, compared with physical therapy alone.



Summary of Evidence

For individuals who have TKA who receive CPM in the home setting, the evidence includes randomized controlled trials (RCTs), case series, and systematic reviews. The relevant outcomes are symptoms and functional outcomes. Early trials generally used CPM in the inpatient setting and are less relevant to today's practice patterns of short hospital stays followed by outpatient rehabilitation. Current postoperative rehabilitation protocols differ considerably from when the largest body of evidence was collected, making it difficult to apply available evidence to the present situation. For use of CPM after TKA, recent studies have suggested that institutional and home use of CPM has no benefit compared with standard physical therapy (PT). There were no studies evaluating CPM in individuals who could not perform standard PT. The evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

For individuals who have articular cartilage repair of the knee who receive CPM in the home setting, the evidence includes nonrandomized studies, case series, and studies with nonclinical outcomes (e.g., histology), and systematic reviews of these studies. The relevant outcomes are symptoms and functional outcomes. Systematic reviews of CPM for this indication have cited studies reporting better histologic outcomes in individuals following CPM. A few studies have reported clinical outcomes, but inadequacies of these studies do not permit conclusions on efficacy. The evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

For individuals who have musculoskeletal conditions other than TKA or knee cartilage repair requiring PT who receive CPM in the home setting, the evidence includes systematic reviews and/or RCTs for some conditions and case series for others. The relevant outcomes are symptoms and functional outcomes. Three small RCTs of CPM after rotator cuff surgery showed some evidence that CPM after this shoulder surgery improved short-term pain and ROM; however, the trials were not high quality, and the small differences in outcomes may not be clinically important. Two trials reported short-term improvements in ROM for individuals undergoing CPM, and one reported a short-term reduction in pain. None reported long-term improvements, and there are no reported benefits in functional status. Therefore, the clinical significance of the short-term improvements reported is uncertain. In addition, there is uncertainty about the optimal PT regimen following shoulder surgery such that the optimal treatment comparator for CPM is unclear. A systematic review and two small RCTs compared CPM with conventional PT for treatment of adhesive capsulitis. The systematic review concluded that CPM may be effective in the short-term. One of the trials focused on diabetic individuals



with adhesive capsulitis. Both reported comparable improvements in ROM and functional ability between treatment groups. Although no RCTs of continuous passive motion in the home setting after repair of the anterior cruciate ligament were identified, indirect evidence from RCTs conducted in the inpatient immediate postoperative setting following anterior cruciate ligament repair indicated no additional benefit with continuous passive motion compared to conventional PT. For other musculoskeletal conditions, RCTs do not exist; case series either did not show efficacy of CPM or had important methodologic flaws. The evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

For individuals who have had a stroke requiring PT who receive CPM in the home setting, the evidence includes two small RCTs. The relevant outcomes are symptoms and functional outcomes. These trials reported mixed results; one RCT indicated a non-significant trend toward improvement in shoulder joint stability with continuous passive motion and PT relative to PT alone, while the other indicated significant improvement in functional outcomes related to wrist movement and global upper extremity movement symptoms with continuous passive motion plus conventional therapy relative to conventional therapy alone. Both trials were small, and treatment lasted only 20 days in the shoulder joint study. The evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

Additional Information

2010 Input

For patients unable to tolerate exercise regimens following total knee arthroplasty, continuous passive motion is an alternative modality. However, there is no evidence to support its use in this situation. Clinical input obtained in 2010 supports the use of continuous passive motion under conditions of low postoperative mobility or inability to comply with rehabilitation exercises following a total knee arthroplasty or total knee arthroplasty revision.

2016 Input

Despite a lack of published evidence, clinical input obtained in 2016 supports the use of continuous passive motion after articular cartilage repair of the knee.



Ongoing and Unpublished Clinical Trials

Some currently ongoing and unpublished trials that might influence this review are listed in [Table 1](#).

Table 1. Summary of Key Trials

NCT No.	Trial Name	Planned Enrollment	Completion Date
Ongoing			
NCT05952622	Comparison of Functional and Patient-reported Outcome Using Continuous Passive Motion in Rehabilitation After Plate Osteosynthesis of Proximal Humerus Fractures	103	Dec 2023
NCT05226988	Effect of Hybrid Robot-assisted Training Using End-effector and Exoskeleton Devices in Distal Upper Extremity After Stroke: Motor Control, Motor and Daily Function, Quality of Life	70	Oct 2025
Unpublished			
NCT01420887	Preservation of Joint Function Using Postoperative Continuous Passive Motion (CPM): A Pilot Study	60	May 2020

NCT: national clinical trial

Clinical Input Range of Motion Physician Specialty Societies and Academic Medical Centers

While the various physician specialty societies and academic medical centers may collaborate with and make recommendations during this process, through the provision of appropriate reviewers, input received does not represent an endorsement or position statement by the physician specialty societies or academic medical centers, unless otherwise noted.

2016 Input

In response to requests, input was received from two physician specialty societies and one academic medical center while this policy was under review in 2016. Input considered CPM



medically necessary as an adjunct to physical therapy during the non-weight-bearing rehabilitation period following articular cartilage repair procedures of the knee. One reviewer referred to the American Academy of Orthopaedic Surgery (2015) guidelines on the surgical management of osteoarthritis of the knee, which concluded that there was strong evidence that CPM after knee arthroplasty does not improve outcomes.

2010 Input

In response to requests, input was received from two physician specialty societies and five academic medical centers while this policy was under review in 2010. Overall, input supported the use of CPM under conditions of low postoperative mobility or inability to comply with rehabilitation exercises after TKA or TKA revision or during the non-weight-bearing rehabilitation period following articular cartilage repair procedures of the knee. Support was limited for use of CPM in joints other than the knee, or in situations or conditions other than those described in this policy.

2008 Input

In response to requests, input was received from one physician specialty society and two academic medical centers while this policy was under review in 2008. The three reviewers interpreted the existing literature supporting the use of CPM for the knee for at least 7 days postoperatively, whether in the hospital or home, and suggested that longer use of CPM would be warranted for special conditions.

Practice Guidelines and Position Statements

The purpose of the following information is to provide reference material. Inclusion does not imply endorsement or alignment with the policy conclusions.

Guidelines or position statements will be considered for inclusion if they were issued by, or jointly by, a US professional society, an international society with US representation, or National Institute for Health and Care Excellence (NICE). Priority will be given to guidelines that are informed by a systematic review, include strength of evidence ratings, and include a description of management of conflict of interest.



American Physical Therapy Association

In 2020, the American Physical Therapy Association (APTA) published a clinical practice guideline on physical therapists' management of patients undergoing total knee arthroplasty.⁵³ The APTA identified four high-quality studies, six moderate-quality studies, and two low-quality studies evaluating the effect of continuous passive motion devices on knee flexion and extension, range of motion, and need for manipulation under anesthesia, with moderate-quality studies indicating benefit with continuous passive motion contradicted by high-quality studies indicating no significant difference. Meta-analyses did not indicate a significant impact of continuous passive motion on function or hospital length of stay. The APTA concluded that "physical therapists should NOT use CPMs [continuous passive motion devices] for patients who have undergone primary, uncomplicated TKA [total knee arthroplasty]."

American Academy of Orthopaedic Surgeons

In 2015, the American Academy of Orthopaedic Surgeons (AAOS) published evidence-based guidelines on the surgical management of osteoarthritis of the knee.⁵⁴ The AAOS identified two high-quality studies and five moderate-quality studies that evaluated the use of CPM. In one high-quality study, CPM was used for about two weeks after discharge. The AAOS concluded that, "the combined results provide strong evidence that the surgical outcomes for those who used continuous passive motion are not better than for those who did not use continuous passive motion." The 2022 update to the AAOS guidelines, which replaces the 2015 version, does not address use of continuous passive motion.⁵⁵

Medicare National Coverage

In 2005, the Centers for Medicare & Medicaid Services issued a national coverage determination on durable medical equipment reference, which stated:

Continuous passive motion devices are devices covered for patients who have received a total knee replacement. To qualify for coverage, use of the device must commence within 2 days following surgery. In addition, coverage is limited to that portion of the 3-week period following surgery during which the device is used in the patient's home. There is insufficient evidence to justify coverage of these devices for longer periods of time or for other applications.⁵⁶



Regulatory Status

CPM devices are considered class I devices by the US Food and Drug Administration (FDA) and are exempt from 510(k) requirements. This classification does not require submission of clinical data on efficacy but only notification of the FDA prior to marketing.

FDA product code: BXB.

References

1. O'Driscoll SW, Giori NJ. Continuous passive motion (CPM): theory and principles of clinical application. *J Rehabil Res Dev.* 2000; 37(2): 179-88. PMID 10850824
2. Gholson JJ, Noiseux NO, Otero JE, et al. Patient Factors Systematically Influence Hospital Length of Stay in Common Orthopaedic Procedures. *Iowa Orthop J.* 2017; 37: 233-237. PMID 28852363
3. Blue Cross and Blue Shield Association Technology Evaluation Center (TEC). Continuous Passive Motion as an Adjunct to Physical Therapy for Joint Rehabilitation. *TEC Assessments.* 1997;Volume 12:Tab 20.
4. McInnes J, Larson MG, Daltroy LH, et al. A controlled evaluation of continuous passive motion in patients undergoing total knee arthroplasty. *JAMA.* Sep 16 1992; 268(11): 1423-8. PMID 1512910
5. Milne S, Brosseau L, Robinson V, et al. Continuous passive motion following total knee arthroplasty. *Cochrane Database Syst Rev.* 2003; (2): CD004260. PMID 12804511
6. Brosseau L, Milne S, Wells G, et al. Efficacy of continuous passive motion following total knee arthroplasty: a metaanalysis. *J Rheumatol.* Nov 2004; 31(11): 2251-64. PMID 15517640
7. Harvey LA, Brosseau L, Herbert RD. Continuous passive motion following total knee arthroplasty in people with arthritis. *Cochrane Database Syst Rev.* Feb 06 2014; 2014(2): CD004260. PMID 24500904
8. Harvey LA, Brosseau L, Herbert RD. Continuous passive motion following total knee arthroplasty in people with arthritis. *Cochrane Database Syst Rev.* Mar 17 2010; (3): CD004260. PMID 20238330
9. He ML, Xiao ZM, Lei M, et al. Continuous passive motion for preventing venous thromboembolism after total knee arthroplasty. *Cochrane Database Syst Rev.* Jul 29 2014; 2014(7): CD008207. PMID 25069620
10. Yashar AA, Venn-Watson E, Welsh T, et al. Continuous passive motion with accelerated flexion after total knee arthroplasty. *Clin Orthop Relat Res.* Dec 1997; (345): 38-43. PMID 9418619
11. MacDonald SJ, Bourne RB, Rorabeck CH, et al. Prospective randomized clinical trial of continuous passive motion after total knee arthroplasty. *Clin Orthop Relat Res.* Nov 2000; (380): 30-5. PMID 11064970
12. Pope RO, Corcoran S, McCaul K, et al. Continuous passive motion after primary total knee arthroplasty. Does it offer any benefits?. *J Bone Joint Surg Br.* Nov 1997; 79(6): 914-7. PMID 9393903
13. Kumar PJ, McPherson EJ, Dorr LD, et al. Rehabilitation after total knee arthroplasty: a comparison of 2 rehabilitation techniques. *Clin Orthop Relat Res.* Oct 1996; (331): 93-101. PMID 8895624
14. Bruun-Olsen V, Heiberg KE, Mengshoel AM. Continuous passive motion as an adjunct to active exercises in early rehabilitation following total knee arthroplasty - a randomized controlled trial. *Disabil Rehabil.* 2009; 31(4): 277-83. PMID 18608367



15. Denis M, Moffet H, Caron F, et al. Effectiveness of continuous passive motion and conventional physical therapy after total knee arthroplasty: a randomized clinical trial. *Phys Ther.* Feb 2006; 86(2): 174-85. PMID 16445331
16. Leach W, Reid J, Murphy F. Continuous passive motion following total knee replacement: a prospective randomized trial with follow-up to 1 year. *Knee Surg Sports Traumatol Arthrosc.* Oct 2006; 14(10): 922-6. PMID 16489477
17. Boese CK, Weis M, Phillips T, et al. The efficacy of continuous passive motion after total knee arthroplasty: a comparison of three protocols. *J Arthroplasty.* Jun 2014; 29(6): 1158-62. PMID 24412145
18. Herbold JA, Bonistall K, Blackburn M, et al. Randomized controlled trial of the effectiveness of continuous passive motion after total knee replacement. *Arch Phys Med Rehabil.* Jul 2014; 95(7): 1240-5. PMID 24685389
19. Chen B, Zimmerman JR, Soulen L, et al. Continuous passive motion after total knee arthroplasty: a prospective study. *Am J Phys Med Rehabil.* 2000; 79(5): 421-6. PMID 10994883
20. Herbold JA, Bonistall K, Blackburn M. Effectiveness of continuous passive motion in an inpatient rehabilitation hospital after total knee replacement: a matched cohort study. *PM R.* Oct 2012; 4(10): 719-25. PMID 22959052
21. Worland RL, Arredondo J, Angles F, et al. Home continuous passive motion machine versus professional physical therapy following total knee replacement. *J Arthroplasty.* Oct 1998; 13(7): 784-7. PMID 9802665
22. Lenssen TA, van Steyn MJ, Crijns YH, et al. Effectiveness of prolonged use of continuous passive motion (CPM), as an adjunct to physiotherapy, after total knee arthroplasty. *BMC Musculoskelet Disord.* Apr 29 2008; 9: 60. PMID 18442423
23. Browne JE, Anderson AF, Arciero R, et al. Clinical outcome of autologous chondrocyte implantation at 5 years in US subjects. *Clin Orthop Relat Res.* Jul 2005; (436): 237-45. PMID 15995447
24. Farr J. Autologous chondrocyte implantation improves patellofemoral cartilage treatment outcomes. *Clin Orthop Relat Res.* Oct 2007; 463: 187-94. PMID 17960681
25. Rosenberger RE, Gomoll AH, Bryant T, et al. Repair of large chondral defects of the knee with autologous chondrocyte implantation in patients 45 years or older. *Am J Sports Med.* Dec 2008; 36(12): 2336-44. PMID 18725654
26. Nugent-Derfus GE, Takara T, O'Neill JK, et al. Continuous passive motion applied to whole joints stimulates chondrocyte biosynthesis of PRG4. *Osteoarthritis Cartilage.* May 2007; 15(5): 566-74. PMID 17157538
27. Salter RB. The biologic concept of continuous passive motion of synovial joints. The first 18 years of basic research and its clinical application. *Clin Orthop Relat Res.* May 1989; (242): 12-25. PMID 2650945
28. Fazalare JA, Griesser MJ, Siston RA, et al. The use of continuous passive motion following knee cartilage defect surgery: a systematic review. *Orthopedics.* Dec 01 2010; 33(12): 878. PMID 21162503
29. Howard JS, Mattacola CG, Romine SE, et al. Continuous Passive Motion, Early Weight Bearing, and Active Motion following Knee Articular Cartilage Repair: Evidence for Clinical Practice. *Cartilage.* Oct 2010; 1(4): 276-86. PMID 26069559
30. Hill AD, Palmer MJ, Tanner SL, et al. Use of Continuous Passive Motion in the Postoperative Treatment of Intra-Articular Knee Fractures. *J Bone Joint Surg Am.* Jul 16 2014; 96(14): e118. PMID 25031380
31. Wright RW, Preston E, Fleming BC, et al. A systematic review of anterior cruciate ligament reconstruction rehabilitation: part I: continuous passive motion, early weight bearing, postoperative bracing, and home-based rehabilitation. *J Knee Surg.* Jul 2008; 21(3): 217-24. PMID 18686484
32. Culvenor AG, Girdwood MA, Juhl CB, et al. Rehabilitation after anterior cruciate ligament and meniscal injuries: a best-evidence synthesis of systematic reviews for the OPTIKNEE consensus. *Br J Sports Med.* Dec 2022; 56(24): 1445-1453. PMID 35768181
33. Gatewood CT, Tran AA, Dragoo JL. The efficacy of post-operative devices following knee arthroscopic surgery: a systematic review. *Knee Surg Sports Traumatol Arthrosc.* Feb 2017; 25(2): 501-516. PMID 27695905
34. Friemert B, Bach C, Schwarz W, et al. Benefits of active motion for joint position sense. *Knee Surg Sports Traumatol Arthrosc.* Jun 2006; 14(6): 564-70. PMID 16328464
35. Du Plessis M, Eksteen E, Jenneker A, et al. The effectiveness of continuous passive motion on range of motion, pain and muscle strength following rotator cuff repair: a systematic review. *Clin Rehabil.* Apr 2011; 25(4): 291-302. PMID 20943710



36. Lastayo PC, Wright T, Jaffe R, et al. Continuous passive motion after repair of the rotator cuff. A prospective outcome study. *J Bone Joint Surg Am.* Jul 1998; 80(7): 1002-11. PMID 9698005
37. Raab MG, Rzeszutko D, O'Connor W, et al. Early results of continuous passive motion after rotator cuff repair: a prospective, randomized, blinded, controlled study. *Am J Orthop (Belle Mead NJ).* Mar 1996; 25(3): 214-20. PMID 8775698
38. Michael JW, König DP, Imhoff AB, et al. [Efficiency of a postoperative treatment after rotator cuff repair with a continuous passive motion device (CPM)]. *Z Orthop Ihre Grenzgeb.* 2005; 143(4): 438-45. PMID 16118760
39. Garofalo R, Conti M, Notarnicola A, et al. Effects of one-month continuous passive motion after arthroscopic rotator cuff repair: results at 1-year follow-up of a prospective randomized study. *Musculoskelet Surg.* May 2010; 94 Suppl 1: S79-83. PMID 20383685
40. Simkin PA, de Lateur BJ, Alquist AD, et al. Continuous passive motion for osteoarthritis of the hip: a pilot study. *J Rheumatol.* Sep 1999; 26(9): 1987-91. PMID 10493681
41. Olasinde AA, Olisa O, Muhumuza J, et al. Early outcome measurement of the effectiveness of conventional physical therapy versus continuous passive motion in knee function following retrograde femoral nailing-a prospective randomized controlled trial. *Int Orthop.* Aug 2023; 47(8): 2085-2093. PMID 37269402
42. Baradaran A, Ebrahimzadeh MH, Sabzevari S, et al. Is there any advantage between using continuous passive motion and conventional physical therapy in patients with primary adhesive capsulitis?: A systematic review and meta-analysis. *J Bodyw Mov Ther.* Oct 2023; 36: 133-141. PMID 37949549
43. Dundar U, Toktas H, Cakir T, et al. Continuous passive motion provides good pain control in patients with adhesive capsulitis. *Int J Rehabil Res.* Sep 2009; 32(3): 193-8. PMID 19011582
44. Ekim AA, İnal EE, Gönüllü E, et al. Continuous passive motion in adhesive capsulitis patients with diabetes mellitus: A randomized controlled trial. *J Back Musculoskelet Rehabil.* Nov 21 2016; 29(4): 779-786. PMID 27002662
45. Lindenhovius AL, van de Luitgaarden K, Ring D, et al. Open elbow contracture release: postoperative management with and without continuous passive motion. *J Hand Surg Am.* 2009; 34(5): 858-65. PMID 19362791
46. Ring D, Simmons BP, Hayes M. Continuous passive motion following metacarpophalangeal joint arthroplasty. *J Hand Surg Am.* May 1998; 23(3): 505-11. PMID 9620192
47. Schwartz DA, Chafetz R. Continuous passive motion after tenolysis in hand therapy patients: a retrospective study. *J Hand Ther.* 2008; 21(3): 261-6; quiz 267. PMID 18652971
48. Zeifang F, Carstens C, Schneider S, et al. Continuous passive motion versus immobilisation in a cast after surgical treatment of idiopathic club foot in infants: a prospective, blinded, randomised, clinical study. *J Bone Joint Surg Br.* Dec 2005; 87(12): 1663-5. PMID 16326882
49. Kasten P, Geiger F, Zeifang F, et al. Compliance with continuous passive movement is low after surgical treatment of idiopathic club foot in infants: a prospective, double-blinded clinical study. *J Bone Joint Surg Br.* Mar 2007; 89(3): 375-7. PMID 17356153
50. Gavish L, Barzilay Y, Koren C, et al. Novel continuous passive motion device for self-treatment of chronic lower back pain: a randomised controlled study. *Physiotherapy.* Mar 2015; 101(1): 75-81. PMID 25280603
51. Lynch D, Ferraro M, Krol J, et al. Continuous passive motion improves shoulder joint integrity following stroke. *Clin Rehabil.* Sep 2005; 19(6): 594-9. PMID 16180594
52. Kuo LC, Yang KC, Lin YC, et al. Internet of Things (IoT) Enables Robot-Assisted Therapy as a Home Program for Training Upper Limb Functions in Chronic Stroke: A Randomized Control Crossover Study. *Arch Phys Med Rehabil.* Mar 2023; 104(3): 363-371. PMID 36122608
53. Jette DU, Hunter SJ, Burkett L, et al. Physical Therapist Management of Total Knee Arthroplasty. *Phys Ther.* Aug 31 2020; 100(9): 1603-1631. PMID 32542403
54. American Academy of Orthopaedic Surgeons. Surgical management of osteoarthritis of the knee: Evidence-based clinical practice guideline. Rosemont, IL: AAOS; 2015.



55. American Academy of Orthopaedic Surgeons. Surgical Management of Osteoarthritis of the Knee Evidence Based Clinical Practice Guideline. Published December 2, 2022. Accessed January 29, 2024.
56. Center for Medicare & Medicaid. National Coverage Decision (NCD) for Durable Medical Equipment Reference List (280.1). 2023; <https://www.cms.gov/medicare-coverage-database/view/ncd.aspx?ncdid=190&ncdver=3&bc=0>. Accessed April 10, 2024.

History

Date	Comments
08/11/15	New Policy. Add to Durable Medical Equipment section. In the Policy Guidelines, plan specific language allows using the device for up to 21 days. Literature current through June 3, 2015.
06/01/16	Annual Review, approved May 10, 2016. References 27 and 42 added. Policy statements unchanged.
10/01/16	Interim Update, approved September 13, 2016. Clinical input reviewed; reference 43 added. Policy statements unchanged.
03/24/17	Policy moved into new format; no change to policy statements.
06/01/17	Annual Review, approved May 2, 2017. Policy updated with literature review through January 25, 2017; reference 36 added. Removed HCPCS code E1399. Policy statements unchanged.
07/01/17	Interim Review, approved June 22, 2017. The word "intra-" removed from the second bullet point of the first policy statement and from the text. Policy statements otherwise unchanged; rewritten for improved clarity.
05/01/18	Annual Review, approved April 18, 2018. Policy updated with literature review through January 2018; reference 33 added. Policy statements unchanged.
06/01/19	Annual Review, approved May 7, 2019. Policy updated with literature review through January 2019; no references added. Policy statements unchanged.
04/01/20	Delete policy, approved March 10, 2020. This policy will be deleted effective July 2, 2020, and replaced with InterQual criteria for dates of service on or after July 2, 2020.
07/02/20	Delete policy.
11/01/20	Policy reinstated effective February 5, 2021; approved October 13, 2020. Policy updated with literature review through January, 2020; no references added. Policy statements unchanged.
06/01/21	Annual Review, approved May 4, 2021. Policy updated with literature review through December 13, 2020; no references added.
06/01/22	Annual Review, approved May 9, 2022. Policy updated with literature review through December 20, 2021; no references added. Policy statements unchanged.



Date	Comments
06/01/23	Policy renumbered, approved May 9, 2023, from 1.01.10 Continuous Passive Motion in the Home Setting to 1.01.540 Continuous Passive Motion in the Home Setting. Policy updated with literature review through January 10, 2023; references added. Minor editorial refinements to policy statements; intent unchanged. Changed the wording from "patient" to "individual" throughout the policy for standardization.
06/01/24	Annual Review, approved May 13, 2024. Policy updated with literature review through January 17, 2024; references added. Policy statements unchanged.

Disclaimer: This medical policy is a guide in evaluating the medical necessity of a particular service or treatment. The Company adopts policies after careful review of published peer-reviewed scientific literature, national guidelines and local standards of practice. Since medical technology is constantly changing, the Company reserves the right to review and update policies as appropriate. Member contracts differ in their benefits. Always consult the member benefit booklet or contact a member service representative to determine coverage for a specific medical service or supply. CPT codes, descriptions and materials are copyrighted by the American Medical Association (AMA). ©2024 Premera All Rights Reserved.

Scope: Medical policies are systematically developed guidelines that serve as a resource for Company staff when determining coverage for specific medical procedures, drugs or devices. Coverage for medical services is subject to the limits and conditions of the member benefit plan. Members and their providers should consult the member benefit booklet or contact a customer service representative to determine whether there are any benefit limitations applicable to this service or supply. This medical policy does not apply to Medicare Advantage.





Discrimination is Against the Law

LifeWise Health Plan of Washington (LifeWise) complies with applicable Federal and Washington state civil rights laws and does not discriminate on the basis of race, color, national origin, age, disability, sex, gender identity, or sexual orientation. LifeWise does not exclude people or treat them differently because of race, color, national origin, age, disability, sex, gender identity, or sexual orientation. LifeWise provides free aids and services to people with disabilities to communicate effectively with us, such as qualified sign language interpreters and written information in other formats (large print, audio, accessible electronic formats, other formats). LifeWise provides free language services to people whose primary language is not English, such as qualified interpreters and information written in other languages. If you need these services, contact the Civil Rights Coordinator. If you believe that LifeWise has failed to provide these services or discriminated in another way on the basis of race, color, national origin, age, disability, sex, gender identity, or sexual orientation, you can file a grievance with: Civil Rights Coordinator — Complaints and Appeals, PO Box 91102, Seattle, WA 98111, Toll free: 855-332-6396, Fax: 425-918-5592, TTY: 711, Email AppealsDepartmentInquiries@LifeWiseHealth.com. You can file a grievance in person or by mail, fax, or email. If you need help filing a grievance, the Civil Rights Coordinator is available to help you. You can also file a civil rights complaint with the U.S. Department of Health and Human Services, Office for Civil Rights, electronically through the Office for Civil Rights Complaint Portal, available at <https://ocrportal.hhs.gov/ocr/portal/lobby.jsf>, or by mail or phone at: U.S. Department of Health and Human Services, 200 Independence Ave SW, Room 509F, HHH Building, Washington, D.C. 20201, 1-800-368-1019, 800-537-7697 (TDD). Complaint forms are available at <http://www.hhs.gov/ocr/office/file/index.html>. You can also file a civil rights complaint with the Washington State Office of the Insurance Commissioner, electronically through the Office of the Insurance Commissioner Complaint Portal available at <https://www.insurance.wa.gov/file-complaint-or-check-your-complaint-status>, or by phone at 800-562-6900, 360-586-0241 (TDD). Complaint forms are available at <https://fortress.wa.gov/oic/onlineservices/cc/pub/complaintinformation.aspx>.

Language Assistance

ATENCIÓN: si habla español, tiene a su disposición servicios gratuitos de asistencia lingüística. Llame al 800-817-3056 (TTY: 711).

注意: 如果您使用繁體中文，您可以免費獲得語言援助服務。請致電 800-817-3056 (TTY: 711)。

CHÚ Ý: Nếu bạn nói Tiếng Việt, có các dịch vụ hỗ trợ ngôn ngữ miễn phí dành cho bạn. Gọi số 800-817-3056 (TTY: 711).

주의: 한국어를 사용하시는 경우, 언어 지원 서비스를 무료로 이용하실 수 있습니다. 800-817-3056 (TTY: 711) 번으로 전화해 주십시오.

ВНИМАНИЕ: Если вы говорите на русском языке, то вам доступны бесплатные услуги перевода. Звоните 800-817-3056 (телетайп: 711).

PAUNAWA: Kung nagsasalita ka ng Tagalog, maaari kang gumamit ng mga serbisyo ng tulong sa wika nang walang bayad. Tumawag sa 800-817-3056 (TTY: 711).

УВАГА! Якщо ви розмовляєте українською мовою, ви можете звернутися до безкоштовної служби мовної підтримки.

Телефонуйте за номером 800-817-3056 (телетайп: 711).

ប្រយ័ត្ន: បើសិនជាអ្នកនិយាយ ភាសាខ្មែរ, សេវាជំនួយផ្នែកភាសា ដោយមិនគិតលុយ គឺអាចមានសំរាប់អ្នក។ ចូរ ទូរស័ព្ទ 800-817-3056 (TTY: 711)។

注意事項: 日本語を話される場合、無料の言語支援をご利用いただけます。800-817-3056 (TTY:711) まで、お電話にてご連絡ください。

ማስታወሻ: የሚናገሩት ቋንቋ አማርኛ ከሆነ የትርጉም እርዳታ ድርጅቶች፣ በነጻ ሊያገዝዎት ተዘጋጅተዋል። ወደ ሚከተለው ቁጥር ይደውሉ 800-817-3056 (መስማት ለተሳናቸው: 711)።

XIYYEEFFANNA: Afaan dubbattu Oroomiffa, tajaajila gargaarsa afaanii, kanfaltiidhaan ala, ni argama. Bilbilaa 800-817-3056 (TTY: 711).

(ملحوظة: إذا كنت تتحدث اذكر اللغة، فإن خدمات المساعدة اللغوية تتوافر لك بالمجان. اتصل برقم 800-817-3056 (رقم هاتف الصم والبكم: 711).)

ਧਿਆਨ ਦਿਓ: ਜੇ ਤੁਸੀਂ ਪੰਜਾਬੀ ਬੋਲਦੇ ਹੋ, ਤਾਂ ਭਾਸ਼ਾ ਵਿੱਚ ਸਹਾਇਤਾ ਸੇਵਾ ਤੁਹਾਡੇ ਲਈ ਮੁਫਤ ਉਪਲਬਧ ਹੈ। 800-817-3056 (TTY: 711) 'ਤੇ ਕਾਲ ਕਰੋ।

ACHTUNG: Wenn Sie Deutsch sprechen, stehen Ihnen kostenlos sprachliche Hilfsdienstleistungen zur Verfügung. Rufnummer: 800-817-3056 (TTY: 711).

ໂປດອຸບ: ຖ້າວ່າ ທ່ານເວົ້າພາສາ ລາວ, ການບໍລິການຊ່ວຍເຫຼືອດ້ານພາສາ, ໂດຍບໍ່ຄ່າສ່ຽງຄ່າ, ຄວນມີພ້ອມໃຫ້ທ່ານ. ໂທ 800-817-3056 (TTY: 711).

ATANSYON: Si w pale Kreyòl Ayisyen, gen sévis èd pou lang ki disponib gratis pou ou. Rele 800-817-3056 (TTY: 711).

ATTENTION: Si vous parlez français, des services d'aide linguistique vous sont proposés gratuitement. Appelez le 800-817-3056 (ATS : 711).

UWAGA: Jeżeli mówisz po polsku, możesz skorzystać z bezpłatnej pomocy językowej. Zadzwoń pod numer 800-817-3056 (TTY: 711).

ATENÇÃO: Se fala português, encontram-se disponíveis serviços linguísticos, grátis. Ligue para 800-817-3056 (TTY: 711).

ATTENZIONE: In caso la lingua parlata sia l'italiano, sono disponibili servizi di assistenza linguistica gratuiti. Chiamare il numero 800-817-3056 (TTY: 711).

توجه: اگر به زبان فارسی گفتگو می کنید، تسهیلات زبانی بصورت رایگان برای شما فراهم می باشد. با 800-817-3056 (TTY: 711) تماس بگیرید.