Medical Policy



Mechanical Stretch Devices for Contractures and Joint Stiffness

Description

Joint stiffness or contracture may be caused by immobilization following surgery, disease, or trauma. Treatments used to prevent and treat joint stiffness and contractures include physical therapy, serial casting, continuous passive motion and stretching devices.

There are three categories of mechanical stretching devices:

- Low-load prolonged duration stretch (LLPS): LLPS devices permit resisted active and passive motion (elastic traction) within a limited range. They maintain a prescribed level of tension by means of incorporated springs. Available low-load, prolonged-duration stretch (LLPS) devices include: Dynasplint System, Ultraflex, Pro-glide dynamic ROM devices and Advance Dynamic ROM devices.
- 2. Static progressive (SP) devices: SP stretch devices hold the joint in a set position, while allowing manual modification of the joint angle, and may allow active motion without resistance (inelastic traction). The device does not exert stress on the tissue unless the angle is set to the joint's limitation. This type of device allows a limited range of passive or active motion, but the motion is free and does not provide elastic traction. Available static progressive (SP) stretch devices include: Joint Active Systems (JAS) Static Progressive Stretch devices and JAS Pronation/Supination device.
- 3. Patient-actuated serial stretch (PASS) devices: Patient-actuated serial stretch (PASS) devices provide a low-to high-level load to the joint using pneumatic (Extensionators or Flexionators) systems that are adjusted by the patient. Examples of PASS devices include: ERMI Knee Extensionator, ERMI Knee/Ankle Flexionator, ERMI Shoulder Flexionator, ERMI MPJ Extensionator and ERMI Elbow Extensionator.

▼Policy

Mechanical stretching devices (LLPS/SP) are considered reasonable and necessary for members meeting the coverage criteria listed below.

▼Policy Guidelines

Coverage Criteria:

- 1. Must be ordered by the member's treating physician.
- 2. Low-load prolonged-duration stretch (LLPS) device/dynamic stretch device (e.g., Dynasplint System) or a static progressive (SP) stretch device (e.g., Joint Active Systems) are considered reasonable and necessary for the knee, elbow, wrist or finger for a period of time up to four (4) months for ANY of the following indications:
 - As part of a structured rehabilitative program for persistent joint stiffness in a subacute injury or following surgery
 - In the acute postoperative period following surgery to improve the range of motion of a previously affected joint
 - As a treatment for loss of motion from a contracture when a formal rehabilitative program is not feasible or has failed to provide benefit

Limitations:

- 1. This device is considered rental.
- 2. The Dynasplint device may be billed twice only when two (2) distinct devices are used (e.g., one for flexion, one for extension).
- 3. Repair of a dynamic splint/Dynasplint/Joint Active System splint will be included in the rental fee.
- The replacement of a dynamic splint/Dynasplint/Joint Active System splint is covered when there is a documented change in the physical condition of the Member.
- 5. For Member owned Dynasplint/Joint Active System, replacement padding will be covered when medically appropriate.

Exclusions

1. The use of LLPS devices/dynamic stretch devices or SP stretch devices is considered not reasonable and necessary for any other joint or condition including but not limited to foot/toe (HCPCS codes E1830, E1831), shoulder (HCPCS codes E1840, E1841) and ankle (HCPCS codes E1815,

- E1816) disorders, cerebral palsy, rheumatoid arthritis, or plantar fasciitis because they are considered experimental, investigational and/or unproven.
- The use of patient-actuated serial stretch (PASS) devices (e.g., ERMI Knee, MPJ, or Elbow Extensionator, ERMI Knee/Ankle or Shoulder Flexionator) is considered not reasonable and necessary for any indication because they are considered experimental, investigational and/or unproven.
- 3. The use of a carpal tunnel stretch system (e.g., Dynasplint or CTRAC Carpal Tunnel Treatment System) is considered experimental and investigational in the management of carpal tunnel syndrome.

▼HCPCS Level II Codes and Description

E1800	Dynamic adjustable e interface material	lbow extension/flexior	n device, includes soft
E1801	Bi-directional static pr motion adjustment, in	•	w device with range of
E1802	Dynamic adjustable for interface material	prearm pronation/supi	nation device, includes soft
E1805	Dynamic adjustable w interface material	rist extension/flexion	device, includes soft
E1806	Bi-directional static pr motion adjustment, in		t device with range of
E1810	Dynamic adjustable k interface material	nee extension/flexion	device, includes soft
E1811	Bi-directional static pr motion adjustment, in		e device with range of
E1812	Dynamic knee, exten	sion/flexion device wit	th active resistance control
E1815	Dynamic adjustable a interface material	nkle extension/flexion	device, includes soft
E1816	Bi-directional static pr motion adjustment, in	•	e device with range of
E1818	Bi-directional static pr device with range of r		arm pronation / supination ludes cuffs
E1820	Replacement soft inte flexion device	rface material, dynam	ic adjustable extension /
E1821	Replacement soft inte progressive stretch de		r bi-directional static
E1825	Dynamic adjustable fi interface material	nger extension/flexion	device, includes soft
E1830	Dynamic adjustable to interface material	oe extension/flexion de	evice, includes soft
DMEDOC C+-	and Madical Dalias	Dama 2 of 0	Confidential and Drawinton.

E1840	Dynamic adjustable shoulder flexion/abduction/rotation device, includes soft interface material
E1841	Multi-directional static progressive stretch shoulder device, with range of motion adjustability, includes cuffs

Important Note:

Northwood's Medical Policies are developed to assist Northwood in administering plan benefits and determining whether a particular DMEPOS product or service is reasonable and necessary. Equipment that is used primarily and customarily for a non-medical purpose is not considered durable medical equipment. Coverage determinations are made on a case-by-case basis and are subject to all of the terms, conditions, limitations, and exclusions of the member's contract including medical necessity requirements.

The conclusion that a DMEPOS product or service is reasonable and necessary does not constitute coverage. The member's contract defines which DMEPOS product or service is covered, excluded or limited. The policies provide for clearly written, reasonable and current criteria that have been approved by Northwood's Medical Director.

The clinical criteria and medical policies provide guidelines for determining the medical necessity for specific DMEPOS products or services. In all cases, final benefit determinations are based on the applicable contract language. To the extent there are any conflicts between medical policy guidelines and applicable contract language, the contract language prevails. Medical policy is not intended to override the policy that defines the member's benefits, nor is it intended to dictate to providers how to direct care. Northwood Medical policies shall not be interpreted to limit the benefits afforded to Medicare or Medicaid members by law and regulation and Northwood will use the applicable state requirements to determine required quantity limit guidelines.

Northwood's policies do not constitute medical advice. Northwood does not provide or recommend treatment to members. Members should consult with their treating physician in connection with diagnosis and treatment decisions.

▼References

Cigna: Stretch Devices for Joint Stiffness and Contractures
 <u>http://www.cigna.com/assets/docs/health-care-professionals/coverage_positions/mm_0135_coveragepositioncriteria_joint_stretch_devices.pdf</u>

- 2. Berlet GC, Anderson RB, Davis WH, Kiebzak GM. A Prospective Trial of Night Splinting in the Treatment of Recalcitrant Plantar Fasciitis: The Ankle Dorsiflexion Dynasplint. Orthopedics.2002;25(11): 1273-5.
- 4. Bonutti PM, McGrath MS, Ulrich SD, McKenzie SA, Seyler TM, Mont MA. Static progressive stretch for the treatment of knee stiffness. Knee. 2008 Aug;15(4):272-6. Epub 2008 Jun 5.
- 3. Branch TP, Karsch RE, Mills TJ, Palmer MT. Mechanical therapy for loss of knee flexion. Am J Orthop. 2003;32(4):195-200.
- 4. Bruner A, Whittemann A, Jester A, Blumenthal K, Germann G. Dynamic splinting after extensor tendon repair in zones V to VII. J Hand Surg (Br). 2003;28B(3):224-7.
- 5. Canale & Beaty: Campbell's Operative Orthopedics, 11th ed. Mosby, an imprint of Elsevier; 2007.
- Cetin A, Dincer F, Kecik A, Cetin M. Rehabilitation of flexor tendon injuries by use of a combined regimen of modified Kleinert and modified Duran techniques. Am J Phys Med Rehabil. 2001 Oct;80(10):721-8.
- 7. Doornberg JN, Ring D, Jupiter JB. Static Progressive Splinting for Posttraumatic Elbow Stiffness. J Orthop Trauma. 2006 Jul;20(6):400-4.
- 8. ECRI Institute Hotline Response [database online]. Plymouth Meeting (PA): ECRI Institute;. Mechanical stretching devices (ERMI Flexionaters and Extensionaters) for contracture and joint stiffness. 2011 Mar 22. Available at URL address: http://www.ecri.org
- 9. Farmer SE, Woollam PJ, Patrick JH, Roberts AP, Bromwich W. Dynamic orthoses in the management of joint contracture. J Bone Joint Surg Br. 2005 Mar;87(3):291-5.
- 10. Germann G, Wagner H, Blome-Eberwein S, Karle B, Wittemann. Early dynamic motion versus postoperative immobilization in patients with extensor indicis proprius transfer to restore thumb extension: a prospective randomized study. J Hand Surg Am. 2001 Nov;26(6):1111-5.
- 11. Greer MA, Miklos-Essenberg ME. Early Mobilization Using Dynamic Splinting with Acute Triceps Tendon Avulsion. J Hand Ther. 2005;18:365-71.
- 12. HAYES Medical Technology Directory, "mechanical stretching devices and continuous passive motion for joints of the extremities," HAYES inc.:

- Lansdale, PA, July 7, 2005, last updated August 7, 2008; updated 7/21/09; archived 8/7/10, HAYES rating of C.
- 13. Harvey L, Herbert R, Crosbie. Does stretching induce lasting increases in joint ROM? A systematic review. Physiother Res Int. 2002;7(1):1-13.
- 14. Henrichs J, Stone D. Shoulder Impingement Syndrome. Prim Care Clin Office Pract. 2004;31:789-805.
- 15. Hewitt B, Shakespeare D. Flexion vs. extension: a comparison of postoperative total knee arthroplasty mobilisation regimes. Knee. 2001 Dec;8(4):305-9.
- Katalinic OM, Harvey LA, Herbert RD, Moseley AM, Lannin NA, Schurr K. Stretch interventions for contractures (protocol). Cochrane Database of Systematic Reviews 2008, Issue 4, Art. No.: CD007455. DOI: 10.1002/14651858.CDC007455.
- 17. Khandwala AR, Blair J, Harris SB, Foster AJ, Elliott D. Immediate repair and early mobilization of the extensor pollicis longus tendon in zones 1 to 4. J Hand Surg. (Br) 2004;29B(3):250-8.
- 18. Khandwala AR, Webb J, Harris B, Foster AJ, Elliot D. comparison of dynamic extension splinting and controlled active mobilization of complete divisions of extensor tendons in zones 5 and 6. J Hand Surg [Br]. 2000 Apr;25(2):140-6.
- 19. Michelotti A, De Wijer A, Steenks M, Farella M. Home-exercise regimes for the management of non-specific temporomandibular disorders. J Oral Rehabil. 2005 Nov;32(11):779-85.
- 20. Mowlavi A, Burns M, Brown RE. Dynamic versus Static Splinting for Simple Zone V and Zone VI Extensor Tendon Repairs: A Prospective, Randomized, Controlled Study. Plast Recontr Surg. 2005;115:482-7.
- 21. Ring D, Hotchkiss RN, Guss D, Jupiter JB. Hinged Elbow External Fixation for Severe Elbow Contracture. J Bone Joint Surg Am. 2005 Jun;87(6):1293-6.
- 22. Roos E, Engström, Söderberg B. Foot Orthoses for the Treatment of Plantar Fasciitis. Foot & Ankle International. 2006;27(8):606-11.
- 23. Sciubba JJ, Goldenberg D. Oral complications of radiotherapy. Lancet Oncol. 2006 Feb;7(2):175-83.

- 24. Sheridan L, Lopez A, Perez A, John MM, Willis FB, Shanmugam R. Plantar fasciopathy treated with dynamic splinting: a randomized controlled trial. J Am Podiatr Med Assoc. 2010 May-Jun;100(3):161-5.
- 25. Sideras K, Loprinzi CL, Foote RL. Oral complications. In: Abeloff: Abeloff's clilnical oncology, 4th ed. Chruchill Livingstone, an imprint of Elsevier; 2008.
- 26. Steffan TM, Mollinger LA. Low-Load, Prolonged Stretch in the Treatment of Knee Flexion Contractures in Nursing Home Residents. Phys Ther. 1995; 75:886-97.
- 27. Thomas JL, Christensen JC, Kravitz SR, Mendicino RW, Schuberth JM, Vanore JV, Weil LS Sr, Zlotoff HJ, Bouché R, Baker J; American College of Foot and Ankle Surgeons heel pain committee. The diagnosis and treatment of heel pain: a clinical practice guideline-revision 2010. J Foot Ankle Surg. 2010 May-Jun;49(3 Suppl):S1-19.
- 28. Yasukawa A, Malas BS, Gaebler-Spira DJ. Efficacy of maintenance of elbow range of motion of two types of orthotic devices: a case series. J Prosthetics & Orthotics. 2003;15(2):72-7.

Applicable URAC Standard

Core 8	Staff operational tools and support
--------	-------------------------------------

Change/Authorization History

Revision Number	Date	Description of Change	Prepared/Reviewed by	Approved by	Review Date:
A	Nov.2006	Initial Release	Rosanne Brugnoni	Ken Fasse	n/a
01		Annual Review-no changes	Susan Glomb	Ken Fasse	Dec. 2008
02	12-22-09	Annual Review- No changes	Susan Glomb	Ken Fasse	Dec.2009
03	12-01-10	Annual Review – No changes	Susan Glomb	Ken Fasse	Dec.2010
04	02-18-11	Policy updated to reflect current practice	Susan Glomb	Ken Fasse	
05	07-20-11	Added Important Note to all Medical Policies	Susan Glomb	Dr. B. Almasri	

06	12-15-11	Annual Review. Changed name to Mechanical Stretch Devices for Joint Stiffness and Contractures. Added References to Policy.	Susan Glomb	Dr. B. Almasri	Dec. 2011
07	04-04-12	Added reference to NH Medicaid	Susan Glomb	Dr. B. Almasri	
08	12-4-12	Annual Review – No changes	Susan Glomb	Dr. B. Almasri	Dec 12
09	12-11-13	Annual review. No changes	Susan Glomb	Dr. B. Almasri	
10	11-24-14	Annual Review. No changes	Susan Glomb	Dr. B. Almasri	
11	12-14-15	Annual Review. No changes	Susan Glomb	Dr. B. Almasri	12-14-15