



# Stretch Devices for Joint Stiffness and Contractures

## Clinical Coverage Criteria

### **Overview**

Joint stiffness or contractures are associated with a reduced range of motion caused by diseases, post-surgical issues, or trauma to the joint. Treatment options typically include physical therapy (inclusive of home exercises), manipulation, or further surgical interventions.

Mechanical stretching devices are used to treat joint instabilities and restore range of motion. These devices are intended to be used by a patient in a home setting to either compliment or replace physical therapy by providing frequent and consistent joint mobilization under controlled conditions.

There are three primary types of Mechanical Stretching Devices:

**Low-Load prolonged-duration stretching devices (LLPS):** A device which permits resisted active and passive motion within a limited range. The device can maintain set levels of tension by means of incorporated springs. (Dynasplint System®, Ultraflex)

**Static Progressive splinting devices (SP):** A device which holds the joint in a set position while allowing for manual modification of the joint angle (inelastic traction). This type of device does not exert a stress on the tissue and does not allow for motion (passive or active). (Joint Active Systems (JAS) Static Progressive Stretch devices, Static-Pro® Knee)

**Patient-actuated serial stretch devices (PASS):** A device that provides a low- to high-level load to the joint using pneumatic systems which can be adjusted by the patient. (ERMI Inc.)

### **Policy**

Fallon Health requires Prior Authorization for Stretch Devices as outlined below: Medical records from the primary care physician and other providers who have diagnosed or treated the symptoms prompting this request are also required.

The usage of Low-Load prolonged-duration stretching devices (LLPS) is considered experimental/investigational due to a lack of scientific literature supporting their definitive use. Fallon Health will review these requests on a case by case basis.

All Static Progressive splinting devices (SP) and Patient-actuated serial stretch devices (PASS) are considered experimental/investigational due to a lack of scientific literature supporting their definitive use.

### **Exclusions**

- Any uses of Mechanical stretching devices other than outlined above

## Codes

Code type	Code	Description
HCPCS	E1800	Dynamic adjustable elbow extension/flexion device, includes soft interface material
	E1801	Static progressive stretch elbow device, extension and/or flexion, with or without range of motion adjustment, includes all components and accessories
	E1802	Dynamic adjustable forearm pronation/supination device, includes soft interface material
	E1805	Dynamic adjustable wrist extension/flexion device, includes soft interface material
	E1806	Static progressive stretch wrist device, flexion and/or extension, with or without range of motion adjustment, includes all components and accessories
	E1810	Dynamic adjustable knee extension/flexion device, includes soft interface material
	E1811	Static progressive stretch knee device, extension and/or flexion, with or without range of motion adjustment, includes all components and accessories
	E1812	Dynamic knee, extension/flexion device with active resistance control
	E1815	Dynamic adjustable ankle extension/flexion device, includes soft interface material
	E1816	Static progressive stretch ankle device, flexion and/or extension, with or without range of motion adjustment, includes all components and accessories
	E1818	Static progressive stretch forearm pronation/supination device, with or without range of motion adjustment, includes all components and accessories
	E1825	Dynamic adjustable finger extension/flexion device, includes soft interface material
	E1830	Dynamic adjustable toe extension/flexion device, includes soft interface material
	E1831	Static progressive stretch toe device, extension and/or flexion, with or without range of motion adjustment, includes all components and accessories
	E1840	Dynamic adjustable shoulder flexion/abduction/rotation device, includes soft interface material
	E1841	Static progressive stretch shoulder device, with or without range of motion adjustment, includes all components and accessories

## References

1. Hayes Inc. Hayes Directory: Mechanical Stretching Devices for the Treatment of Joint Contractures of the Extremities. Published May 9, 2018. Annual review completed June 6, 2019
2. 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.

3. Bonutti PM, McGrath MS, Ulrich SD, et al. Static progressive stretch for the treatment of knee stiffness. *Knee*. Aug 2008;15(4):272-276. PMID 18538574
4. Lindenhovius AL, Doornberg JN, Brouwer KM, et al. A prospective randomized controlled trial of dynamic versus static progressive elbow splinting for posttraumatic elbow stiffness. *J Bone Joint Surg Am*. Apr 18 2012;94(8):694-700. PMID 22517385
5. McGrath MS, Ulrich SD, Bonutti PM, et al. Evaluation of static progressive stretch for the treatment of wrist stiffness. *J Hand Surg Am*. Nov 2008;33(9):1498-1504. PMID 18984330
6. Berner SH, Willis FB. Dynamic splinting in wrist extension following distal radius fractures. *J Orthop Surg Res*. 2010;5:53.
7. Furia JP, Willis FB, Shanmugam R, Curran SA. Systematic review of contracture reduction in the lower extremity with dynamic splinting. *Adv Ther*. 2013;30(8):763-70.
8. Ulrich SD, Bonutti PM, Seyler TM, Marker DR, Morrey BF, Mont MA. Restoring range of motion via stress relaxation and static progressive stretch in posttraumatic elbow contractures. *J Shoulder Elbow Surg*. 2010 Mar;19(2):196-201.
9. Willis FB, Fowler B. Longitudinal Outcomes Following a Randomized Controlled Trial of Dynamic Splint Stretching for Carpal Tunnel Syndrome. *Hand (N Y)*. 2016 Sep;11(3):290-294.
10. Harvey LA, Katalinic OM, Herbert RD, et al. Stretch for the treatment and prevention of contractures. *Cochrane Database Syst Rev*. 2017 Jan 9;1:CD007455. doi: 10.1002/14651858.CD007455.pub3.
11. Pace JL, Nasreddine AY, Simoni M, Zurakowski D, Kocher MS. Dynamic Splinting in Children and Adolescents With Stiffness After Knee Surgery. *J Pediatr Orthop*. 2018 Jan;38(1):38-43

## **Policy History**

Origination date: 01/01/2017  
 Approval(s): Technology Assessment Committee: 12/07/2016 (new policy), 12/06/2017 (updated references), 12/05/2018 (updated references), 12/04/2019 (updated references)

*Not all services mentioned in this policy are covered for all products or employer groups. Coverage is based upon the terms of a member's particular benefit plan which may contain its own specific provisions for coverage and exclusions regardless of medical necessity. Please consult the product's Evidence of Coverage for exclusions or other benefit limitations applicable to this service or supply. If there is any discrepancy between this policy and a member's benefit plan, the provisions of the benefit plan will govern. However, applicable state mandates take precedence with respect to fully-insured plans and self-funded non-ERISA (e.g., government, school boards, church) plans. Unless otherwise specifically excluded, federal mandates will apply to all plans. For Medicare and Medicaid members, this policy will apply unless Medicare and Medicaid policies extend coverage beyond this policy.*