Clinical Policy: Mechanical Stretching Devices for Joint Stiffness and Contracture

Reference Number: CP.MP.144
Last Review Date: 09/2022

Coding Implications
Revision Log

See Important Reminder at the end of this policy for important regulatory and legal information.

Description

Mechanical stretching devices are used for the prevention and treatment of joint contractures of the extremities, with the goal to maintain or restore range of motion (ROM) to the joint. A variety of mechanical stretching devices are available for extension or flexion of the shoulder, elbow, wrist, fingers, knee, ankle, and toes. These devices are generally used as adjunct treatment to physical therapy and/or exercise.

Policy/Criteria

I. It is the policy of health plans affiliated with Centene Corporation® that the low-load prolonged-duration stretch (LLPS) device /dynamic stretch device is **medically necessary** for rehabilitation of extensor tendon injury of the finger.

II. It is the policy of health plans affiliated with Centene Corporation that the LLPS device for any other indication or any other joint is considered not medically necessary.

III. It is the policy of health plans affiliated with Centene Corporation that static progressive (SP) stretch devices and the patient-actuated serial stretch (PASS) device for any indication are considered not medically necessary.

Background

A joint contracture is characterized by a chronically reduced ROM secondary to structural changes in non-bony tissues, including muscle, tendons, ligaments, and skin. Prolonged immobilization of joints following surgery or trauma is the most common cause of joint contractures. A number of different modalities are used to treat or prevent joint contractures.

Mechanical stretching devices have been investigated for the treatment of joint contractures. The use of these devices is based on the theory that passive motion early in the healing process can promote movement of the synovial fluid, and thus promote lubrication of the joint; stimulate the healing of articular tissues; prevent adhesions and joint stiffness; and reduce edema without interfering with the healing of incisions or wounds over the moving joint.

Several types of devices exist, including low-load prolonged duration stretch devices (also referred to as dynamic splinting), static progressive stretch devices, and patient-actuated serial stretch (PASS) (also known as patient-directed serial stretch) devices. LLPS devices permit resisted active and passive motion (elastic traction) within a limited range. LLPS devices maintain a set level of tension by means of incorporated springs. PASS devices permit resisted active and passive motion within a limited range utilizing pneumatic or hydraulic systems that can be adjusted by the patient. The extensionaters use pneumatic systems while the flexionaters use hydraulic systems. These devices require custom fitting. SP stretch devices hold the joint in

a set position but allow for manual modification of the joint angle and may allow for active motion without resistance (inelastic traction). This type of device itself does not exert a stress on the tissue unless the joint angle is set at the maximum ROM.

Dynamic splinting is commonly used in the post-operative period for the prevention or treatment of motion stiffness/loss in the knee, elbow, wrist or finger. Peer reviewed studies investigating dynamic splinting are limited. The best evidence is available in studies evaluating LLPS following extensor injury. Results from a small, prospective, randomized trial comparing dynamic splinting to static splinting suggest that dynamic splinting of complex lacerations of the extensor tendons in zones V-VII provides improved functional outcomes at 4 and 12 weeks and 6 months when compared with static splinting.[1] Another small, prospective, randomized, controlled study comparing postoperative dynamic- versus static- splinting outcomes of patients following extensor tendon repair reported dynamic splinting of simple, complete lacerations of the extensor tendons in zones V and VI. Dynamic splinting provided improved functional outcomes at 4, 6, and 8 weeks but not by 6 months when compared with static splinting.[2]

Limited evidence suggests that LLPS following surgical extensor injury repair may increase range of motion faster than static splinting. However, the treatment benefit is small and the final outcome is similar to that achieved with static splinting.

There is insufficient evidence in the published medical literature to demonstrate the safety, efficacy, and long-term outcomes on the use of static progressive stretch and patient-actuated serial stretch devices, as well as low-load prolonged stretch devices for other joints, including but not limited to, the hand, wrist, elbow, shoulder, toes, and knee.

Coding Implications

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HCPCS Codes considered medically necessary when meeting policy criteria

HCPCS Codes	Description
E1825	Dynamic adjustable finger extension/flexion device, includes soft interface material

ICD-10-CM Diagnosis Codes that Support Coverage Criteria

ICD-10-CM Code	Description
M24.541 – M24.549	Contracture, hand
M25.641 - M25.649	Stiffness of hand, not elsewhere classified

ICD-10-CM Code	Description
M84.441S	Pathological fracture, right hand, sequela
M84.442S	Pathological fracture, left hand, sequela
M84.443S	Pathological fracture, unspecified hand, sequela
M84.444S	Pathological fracture, right finger(s), sequela
M84.445S	Pathological fracture, left finger(s), sequela
M84.446S	Pathological fracture, unspecified finger(s), sequela
S61.001A - S61.459S	Open wound of fingers and hands
S62.201A - S62.92XS	Fracture of hand
S63.101A - S63.106S	Unspecified subluxation and dislocation of thumb
S63.111A - S63.116S	Subluxation and dislocation of metacarpophalangeal joint of thumb
S63.121A - S63.126S	Subluxation and dislocation of unspecified interphalangeal joint of thumb
S63.200A - S63.209S	Unspecified subluxation of other finger
S63.210A - S63.219S	Subluxation of metacarpophalangeal joint of finger
S63.220A - S63.229S	Subluxation of unspecified interphalangeal joint of finger
S63.230A - S63.239S	Subluxation of proximal interphalangeal joint of finger
S63.240A - S63.249S	Subluxation of distal interphalangeal joint of finger
S63.250A - S63.259S	Unspecified dislocation of other finger
S63.260A - S63.269S	Dislocation of metacarpophalangeal joint of finger
S63.270A - S63.279S	Dislocation of unspecified interphalangeal joint of finger
S63.280A - S63.289S	Dislocation of proximal interphalangeal joint of finger
S63.290A - S63.299S	Dislocation of distal interphalangeal joint of finger
S66.001A - S66.009S	Unspecified injury of long flexor muscle, fascia and tendon of thumb at wrist and hand level
S66.011A - S66.019S	Strain of long flexor muscle, fascia, and tendon of thumb at wrist and hand level
S66.021A - S66.029S	Laceration of long flexor muscle, fascia, and tendon of thumb at wrist and hand level
S66.091A - S66.099S	Other specified injury of long flexor muscle, fascia, and tendon of thumb at wrist and hand level
S66.100A - S66.109S	Unspecified injury of flexor muscle, fascia and tendon of right index finger at wrist and hand level
S66.110A - S66.119S	Strain of flexor muscle, fascia, and tendon of other and unspecified finger at wrist and hand level
S66.120A - S66.129S	Laceration of flexor muscle, fascia, and tendon of other and unspecified finger at wrist and hand level
S66.190A – S66.199S	Other injury of flexor muscle, fascia, and tendon of other and unspecified finger at wrist and hand level
S66.201A - S66.209S	Unspecified injury of extensor muscle, fascia and tendon of thumb at wrist and hand level
S66.211A - S66.219S	Strain of extensor muscle, fascia and tendon of thumb at wrist and hand level

ICD-10-CM Code	Description
S66.221A -S66.229S	Laceration of extensor muscle, fascia and tendon of thumb at wrist and hand level
S66.291A - S66.299S	Other specified injury of extensor muscle, fascia and tendon of thumb at wrist and hand level
S66.300A - S66.309S	Unspecified injury of extensor muscle, fascia and tendon of other and unspecified finger at wrist and hand level
S66.310A - S66.319S	Strain of extensor muscle, fascia and tendon of other and unspecified finger at wrist and hand level
S66.320A - S66.329S	Laceration of extensor muscle, fascia and tendon of other and unspecified finger at wrist and hand level
S66.390A - S66.399S	Other injury of extensor muscle, fascia and tendon of other and unspecified finger at wrist and hand level
S66.401A - S66.499S	Injury of intrinsic muscle, fascia and tendon of thumb at wrist and hand level
S66.500A - S66.599S	Injury of intrinsic muscle, fascia and tendon of other and unspecified finger at wrist and hand level
S67.00XA - S67.92XS	Crushing injury of wrist, hand and fingers

HCPCS Codes considered NOT medically necessary per this policy

HCPCS Codes	Description
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
E1830	Dynamic adjustable toe extension/flexion device, includes soft interface material

HCPCS Codes	Description
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

Reviews, Revisions, and Approvals	Date	Approval Date
Policy developed	04/17	04/17
References reviewed and updated. Codes updated.	03/18	03/18

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Important Reminder

This clinical policy has been developed by appropriately experienced and licensed health care professionals based on a review and consideration of currently available generally accepted standards of medical practice; peer-reviewed medical literature; government agency/program approval status; evidence-based guidelines and positions of leading national health professional organizations; views of physicians practicing in relevant clinical areas affected by this clinical policy; and other available clinical information. The Health Plan makes no representations and accepts no liability with respect to the content of any external information used or relied upon in developing this clinical policy. This clinical policy is consistent with standards of medical practice current at the time that this clinical policy was approved. "Health Plan" means a health plan that has adopted this clinical policy and that is operated or administered, in whole or in part, by Centene Management Company, LLC, or any of such health plan's affiliates, as applicable.

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Note: For Medicare members, to ensure consistency with the Medicare National Coverage Determinations (NCD) and Local Coverage Determinations (LCD), all applicable NCDs, LCDs, and Medicare Coverage Articles should be reviewed prior to applying the criteria set forth in this clinical policy. Refer to the CMS website at http://www.cms.gov for additional information.