Policy: Mechanical Splinting Devices for Treatment of Joint Stiffness and Contractures

Description of Procedure or Service

Mechanical stretch devices (also known as **dynamic splinting systems**) can assist in restoring or improving range of motion (ROM) and the treatment of joint stiffness due to immobilization by elongating the connective tissue surrounding the joint. Joint stiffness or contracture may occur following surgery, fracture, dislocation or other additional non-traumatic disorders.

These devices are used as an adjunct to physical therapy (PT) and in some cases are intended to replace some physical therapist directed sessions by providing frequent and consistent joint mobilization under controlled conditions in a hospital setting or in the individual's home (Hayes, 2018).

There are several types of mechanical stretching devices available:

Dynamic splints: Also known as low-load prolonged stretch (LLPS) devices. These are adjustable-tension spring-loaded devices designed to provide LLPS while individuals are asleep or at rest. In the post-operative period dynamic splints are used for the prevention of motion stiffness in the knee, elbow, wrist or finger. They are not used in such joints as the hip, ankle or foot. Dynamic splinting systems include, but are not limited to, such products as Advance Dynamic ROM, Dynasplint, EMPI Advance Dynamic ROM, LMB Pro-glide, Pro-glide Dynamic ROM, SaeboFlex, SaeboReach, Stat-A-Dyne, and Ultraflex. They are used between 6 and 12 hours daily.

Static progressive stretch (SPS) splint devices: Bi-directional SPS devices hold the joint in a set position but allow for manual modification of the joint angle. The stretch is increased every few minutes by the patient to increase ROM during the period of brace utilization. Sessions usually last for 30 minutes and are completed several times a day. Examples of static progressive stretch and stress relaxation devices include Joint Active Systems (JAS splints) and Air Cast.

Patient-actuated serial stretch (PASS) devices: Patient-actuated serial stretch (PASS) devices provide a low- to high-level load to the joint using pneumatic (Extensionaters, ERMI Inc.) or hydraulic (Flexionaters, ERMI Inc.) systems that can be adjusted by the patient. They are custom-fitted and used for the ankle, elbow, knee and shoulder. These devices allow resisted active and passive motion within a limited range. They are typically used in 15-minute increments, 4-8 times per day.

Medical necessity criteria

Dynamic splinting devices for the knee, elbow, wrist, finger, or toe are considered to be medically necessary durable medical equipment (DME) if **one** of the following selection criteria is met:

1. As an adjunct to physical therapy in members with documented signs and symptoms of significant motion stiffness/loss in the sub-acute injury or post-operative period (at least three (3) weeks but less than four (4) months after injury or surgery); **or**

2. In the acute post-operative period for members who have a prior documented history of motion stiffness/loss in a joint and are having additional surgery or procedures done to improve motion to that joint; **or**

3. The member is unable to perform and/or benefit from standard physical therapy modalities because of an inability to exercise or participate in the treatment program. In this instance, use of a dynamic device for as long as four (4) months with documented improvement, and then for as long as improvement can continue to be documented would be considered medically necessary.

The use of dynamic splinting devices **does not** meet the definition of medical necessity for the following medical indications:

- there is no significant improvement (i.e. documentation of progression toward goals, increased range of motion, advancing ability to perform activities of daily living (ADLs) or return to prior ability to perform ADLs) after four (4) months of use.
- members are unable to benefit from standard physical therapy modalities because of an inability to exercise or participate in the treatment plan after documentation of no improvement despite use for four (4) months.
- used in the management of chronic contractures (no significant change in motion for a four (4) month period) for chronic joint stiffness due to:

    - burns
    - cerebral palsy
    - foot drop secondary to neuromuscular disease
    - fractures
    - head and spinal cord injuries,
    - multiple sclerosis

- muscular dystrophy
- rheumatoid arthritis
- stroke
- trismus

The use of dynamic splinting devices on the knee, elbow, wrist or finger when the above patient selection criteria are not met is considered **investigational**. **Note:** *Coverage is **not** available for **investigational** medical treatments or procedures, drugs, devices or biological products.*

Based on review of available data, **static progressive stretch (SPS)** devices and **patient-actuated serial stretch (PASS)** devices (flexionators and extensionators) are considered to be **investigational** for all indications.

Centers for Medicare & Medicaid Services (CMS)

CMS does not have a National Coverage Determination (NCD) for the use of mechanical stretching devices for the treatment of joint contractures.

Billing/Coding/Physician Documentation

HCPCS Code	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 **(investigational)**
E1802	Dynamic adjustable forearm pronation/supination device, includes soft interface material **(investigational)**
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 **(investigational)**
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 **(investigational)**
E1812	Dynamic knee, extension/flexion device with active resistance control
E1815	Dynamic adjustable ankle extension/flexion, 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 **(investigational)**
E1818	Static progressive stretch forearm pronation/supination device, with or without range of motion adjustment, includes all components and accessories **(investigational)**

HCPCS Code	Description
E1820	Replacement soft interface material, dynamic adjustable extension/flexion device
E1821	Replacement soft interface material/cuffs for bi-directional static progressive stretch device **(investigational)**
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 **(investigational)**
E1840	Dynamic adjustable shoulder flexion/abduction/rotation device, includes soft interface material **(investigational)**
E1841	Static progressive stretch shoulder device, with or without range of motion adjustment, includes all components and accessories **(investigational)**
E1818	Static progressive stretch forearm pronation/supination device, with or without range of motion adjustment, includes all components and accessories **(investigational)**
E1820	Replacement soft interface material, dynamic adjustable extension/flexion device

ICD-10 Codes Supporting Medical Necessity

ICD-10 Code	Description
M12.521 – M12.529	Traumatic arthropathy, elbow
M12.531 – M12.539	Traumatic arthropathy, wrist
M12.541 – M12.549	Traumatic arthropathy, hand
M12.561 – M12.569	Traumatic arthropathy, knee
M17.10 – M17.5	Osteoarthritis of knee
M18.0 – M18.9	Osteoarthritis of first carpometacarpal joint
M19.021 – M19.029	Primary osteoarthritis, elbow
M19.031 – M19.039	Primary osteoarthritis, wrist
M19.041 – M19.049	Primary osteoarthritis, hand
M19.221 – M19.229	Secondary osteoarthritis, elbow
M19.231 – M19.239	Secondary osteoarthritis, wrist
M19.241 – M19.249	Secondary osteoarthritis, hand
M22.2X1 – M22.92	Disorder of patella
M23.00 – M23.92	Internal derangement of knee
M24.121 – M24.129	Other articular cartilage disorders, elbow
M24.131 – M24.139	Other articular cartilage disorders, wrist
M24.141 – M24.149	Other articular cartilage disorders, hand
M24.521 – M24.529	Contracture, elbow
M24.531 – M24.539	Contracture, wrist
M24.541 – M24.549	Contracture, hand
M24.561 – M24.569	Contracture, knee
M25.621 – M25.629	Stiffness of unspecified elbow, not elsewhere classified

ICD-10 Code	Description
M25.631 – M25.639	Stiffness of unspecified wrist, not elsewhere classified
M25.641 – M25.649	Stiffness of unspecified hand, not elsewhere classified
M25.661 – M25.669	Stiffness of unspecified knee, not elsewhere classified
S52.001A – S52.099S	Fracture of upper end of ulna
M24.131 – M24.139	Other articular cartilage disorders, wrist
M24.141 – M24.149	Other articular cartilage disorders, hand
S52.101A – S52.189S	Fracture of upper end of radius
S52.201A – S52.299S	Fracture of shaft of ulna
S52.301A – S52.399S	Fracture of shaft of radius
S52.501A – S52.599S	Fracture of the lower end of radius
S52.601A – S52.699S	Fracture of lower end of ulna
S53.001A – S53.096S	Subluxation and dislocation of radial head
S53.101A – S53.196S	Subluxation and dislocation of ulnohumeral joint
S53.401A – S53.499S	Sprain of elbow
S56.001A – S56.499S	Injury of flexor muscle, fascia and tendon of finger
S62.001A – S62.92xS	Fracture at wrist and hand level
S63.001A – S63.92xS	Dislocation and sprain of joints and ligaments at wrist and hand level
S66.001 – S66.999S	Injury of muscle, fascia and tendon at wrist and hand level
S83.101A – S83.92xS	Dislocation and sprain of joints and ligaments of knee
S92.401A – S92.919S	Fracture of toe
S93.10A – S93.149S	Subluxation and dislocation of toe

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VERSION HISTORY:

Version #	Date	Author	Purpose/Summary of Major Changes
01	09/11/2019	Bob Brault	Original Issue