



# CIGNA MEDICAL COVERAGE POLICY

The following Coverage Policy applies to all health benefit plans administered by CIGNA Companies including plans formerly administered by Great-West Healthcare, which is now a part of CIGNA

**Subject Stretch Devices for Joint Stiffness and Contractures**

**Effective Date ..... 8/15/2011**  
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**Coverage Policy Number ..... 0135**

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## Hyperlink to Related Coverage Policies

Continuous Passive Motion (CPM) Devices  
Home Traction Devices: Cervical and Lumbar  
Knee Braces  
Lower Limb Orthoses and Shoes  
Physical Therapy  
Plantar Fasciitis Treatments

### INSTRUCTIONS FOR USE

Coverage Policies are intended to provide guidance in interpreting certain **standard** CIGNA HealthCare benefit plans. Please note, the terms of a customer's particular benefit plan document [Group Service Agreement (GSA), Evidence of Coverage, Certificate of Coverage, Summary Plan Description (SPD) or similar plan document] may differ significantly from the standard benefit plans upon which these Coverage Policies are based. For example, a customer's benefit plan document may contain a specific exclusion related to a topic addressed in a Coverage Policy. In the event of a conflict, a customer's benefit plan document **always supercedes** the information in the Coverage Policies. In the absence of a controlling federal or state coverage mandate, benefits are ultimately determined by the terms of the applicable benefit plan document. Coverage determinations in each specific instance require consideration of 1) the terms of the applicable benefit plan document in effect on the date of service; 2) any applicable laws/regulations; 3) any relevant collateral source materials including Coverage Policies and; 4) the specific facts of the particular situation. Coverage Policies relate exclusively to the administration of health benefit plans. Coverage Policies are not recommendations for treatment and should never be used as treatment guidelines. In certain markets, delegated vendor guidelines may be used to support medical necessity and other coverage determinations. Proprietary information of CIGNA. Copyright ©2011 CIGNA

## Coverage Policy

Coverage for stretch devices is subject to the terms, conditions and limitations of the applicable benefit plan's Durable Medical Equipment (DME) benefit and schedule of copayments. Please refer to the applicable benefit plan document to determine benefit availability and the terms, conditions and limitations of coverage. Under many benefit plans, coverage for DME is limited to the lowest-cost alternative.

If coverage for stretch devices is available, the following conditions of coverage apply.

CIGNA covers the use of a low-load prolonged-duration stretch (LLPS) device/dynamic stretch device (e.g., Dynasplint System<sup>®</sup>, Ultraflex, Pro-glide<sup>™</sup> Dynamic ROM, Advance Dynamic ROM<sup>®</sup>) or a static progressive (SP) stretch device (e.g., Joint Active Systems [JAS Static Progressive Stretch]) as medically necessary for the finger, wrist, elbow or knee for a period of time up to four 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

**CIGNA does not cover the use of LLPS devices/dynamic stretch devices or SP stretch devices for any other joint or condition including but not limited to foot (HCPCS codes E1830, E1831), shoulder (HCPCS codes E 1840, E1841) and ankle (HCPCS codes E1815, E 1816) disorders, cerebral palsy, rheumatoid arthritis, or plantar fasciitis because they are considered experimental, investigational or unproven.**

**CIGNA does not cover the use of patient-actuated serial stretch (PASS) devices (e.g., ERMI Knee, MPJ, or Elbow Extensionator<sup>®</sup>, ERMI Knee/Ankle or Shoulder Flexionator<sup>®</sup>) for any indication because they are considered experimental, investigational or unproven.**

**CIGNA does not cover jaw stretch devices (HCPCS codes E1700, E1701, E1702) for any indication because they are considered experimental, investigational or unproven.**

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## General Background

Joint stiffness or contracture may be caused by immobilization following surgery, disease, or trauma. Joint contracture is associated with reduced range of motion (ROM) due to structural changes in non-bony tissues, including muscles, tendons, ligaments and skin. Elastic connective tissue is replaced with inelastic fibrous material that is resistant to stretching, resulting in joint dysfunction. Treatments used to prevent and treat joint stiffness and contractures include manual joint mobilization by a physical therapist, application of casts at regular intervals (serial casting), static splinting, and continuous passive motion (CPM). These techniques involve the mechanical elongation of soft tissues for varying time periods. Stretch induces an immediate, transient increase in joint ROM and reduces resistance to passive joint movement. Although the lasting effects are less well understood, stretch appears to increase joint ROM and soft tissue extensibility. Various types of mechanical stretch devices have been proposed for use in the rehabilitation of numerous joints, including the shoulder, neck, back, elbow, wrist, finger, knee, ankle and toe (ECRI, 2009, Katalinic, 2009).

### U.S. Food and Drug Administration (FDA)

Mechanical stretching devices are classified by the FDA as Class I medical devices. Class I devices have the least amount of regulatory control; manufacturers of these devices are exempt from premarket notification procedures and are not required to provide safety and effectiveness data prior to marketing. Numerous mechanical stretch devices have been developed, and are generally categorized as static progressive (SP) stretch devices, low-load, prolonged-duration stretch (LLPS) devices, and actuated serial stretch (PASS) devices. Jaw stretch devices include the Therabite<sup>®</sup> Jaw Motion Rehabilitation System<sup>™</sup> (Atos Medical, West Allis, WI) and the OraStretch<sup>™</sup> Press Jaw Motion Rehab System<sup>™</sup> (CranioRehab, Inc., Denver, CO)

### Literature Review

#### Low-Load Prolonged-Duration Stretch (LLPS) Devices/Dynamic Splinting Systems

LLPS devices permit active and passive motion with elastic traction within a limited range. The devices maintain a set level of tension by incorporated springs.

Available low-load, prolonged-duration stretch (LLPS) devices include:

- Dynasplint System<sup>®</sup> (Dynasplint Systems, Inc., Severna Park, MD)
- Ultraflex (Ultraflex Systems, Pottstown, PA)
- Pro-glide<sup>™</sup> Dynamic ROM devices (DeRoyal<sup>®</sup>, Powell, TN)
- Advance Dynamic ROM<sup>®</sup> devices (Empi, St. Paul, MN)

Berlet et al. (2002) conducted a prospective study of 13 patients with plantar fasciitis to evaluate the effectiveness of the Ankle Dorsiflexion Dynasplint. All patients had plantar fasciitis recalcitrant to first-line treatment of anti-inflammatory medication, Achilles stretching program, and a viscoelastic heel orthoses. VAS pain assessment and the Mayo clinical scoring system for the evaluation of plantar fasciitis were completed pre-splinting and following one month of splint use. Patients used the splint for an average of 95% of weekly sleeping hours. The average pre-splinting VAS pain score was  $44 \pm 20$  and the Mayo score was  $51 \pm 12$ . The

average VAS score at one month post-splinting was  $35 \pm 21$ , and the Mayo score was  $60 \pm 18$ . Pre and post-treatment scores on the selected measurement tools did not reach levels of significance ( $p=.12$ ). At one month, 75% of patients reported improvement in symptoms. At six months, all patients who had achieved improvement maintained their satisfaction with the night splint. Interference with sleep numbness in the toes was reported by 65% and 27% of patients, respectively. The authors stated that a randomized study with a comparison between different dorsiflexion splint designs is warranted to determine if patient compliance and clinical results are related to specific design modifications.

Chester et al. (2002) conducted a prospective, randomized controlled trial to compare the post-surgical impact of two rehabilitation regimens in 54 patients with finger extensor tendon division in zones IV–VIII. Patients were randomized to receive early active mobilization combined with static splinting (Group I,  $n=19$ , 29 injured digits) or to LLPS using the Dynasplint system (Group II,  $n=17$ , 29 injured digits). At four weeks, Total Active Motion (TAM) was significantly improved for Group II (87%) compared to Group I (77%) ( $p=0.02$ ). The median flexion deficit was significantly lower for Group II than for Group I ( $25^\circ$  vs.  $45^\circ$ , respectively,  $p=0.002$ ). These differences were not maintained, however. At three months follow-up, TAM was 100% for Group I and 98% for Group II, and median flexion deficit was  $0^\circ$  for both groups.

Cetin et al. (2001) conducted a prospective uncontrolled study of 37 patients (74 digits) with repaired flexor tendon injuries to determine the functional results following a postoperative regimen of early mobilization using LLPS combined with passive and active early mobilization. LLPS was accomplished by the use of a modified Kleinert splint with a palmar pulley. Outcomes were assessed using the TAM system and the Buck-Gramcko system. Follow-up continued for  $12.9 \pm 5.4$  weeks. Results were reported as excellent in 73%, good in 24%, and fair in 1.5% of fingers.

Khandwala et al. (2000) conducted a randomized controlled trial to evaluate postoperative rehabilitation techniques in patients with complete divisions of the extensor tendons in Verdan's zones five and six. Patients were randomly assigned to postoperative rehabilitation using LLPS and active mobilization (Group 1,  $n=50$ ) or to palmar block SP splinting and active mobilization (Group II,  $n=50$ ). Outcomes were assessed using two evaluation tools; a system proposed by Miller, and the TAM classification of the American Society for Surgery of the Hand [Kleinert and Verdan]. At eight weeks, there was no significant difference in outcomes between the two groups. Excellent TAM was achieved by 50% of the patients in Group I and 49% of the patients in Group II. Good TAM was achieved by 48% and 46% of patients in groups I and II, respectively. Miller's assessment demonstrated good or excellent results in 95% of patients in Group I and 93% of patients in Group II.

Steffan et al. (1995) conducted a nonrandomized comparative study to determine the effectiveness of using LLPS vs. a standard program of passive ROM for the treatment of bilateral knee contractures of  $10^\circ$  or greater in 28 nursing home residents. For each patient, both legs received passive ROM twice each week, and in addition, one leg of each patient received LLPS using the Dynasplint system for three hours per day, five days per week. ROM and torque measurements were assessed monthly for six months to evaluate knee extension. Only 18 patients completed the study. At six months, there was no difference in outcomes between the legs receiving LLPS and those receiving passive ROM and manual stretching alone.

There is insufficient evidence in the published medical literature, however, to support the use of or SP stretch devices or LLPS devices/dynamic splinting for the rehabilitation of other joints (i.e., toes, ankles, shoulders); or for the treatment of chronic conditions (e.g., rheumatoid arthritis, plantar fasciitis) or the treatment of neurological conditions (e.g., cerebral palsy, multiple sclerosis).

### **Static Progressive (SP) Stretch 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. 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 (finger, wrist, elbow, shoulder, knee, ankle) (Joint Active Systems, Inc., Effington, IL)
- JAS Pronation/Supination device

Bonutti et al. (2008) evaluated the use of SP stretch using the JAS Knee device in a series of 41 consecutive patients with refractory knee stiffness. Knee stiffness was defined as a total arc of motion of less than 90° or a flexion contracture that impaired quality of life. All patients had received physical therapy for a mean of 10 weeks (range 6–26 weeks) that included stretching, ROM therapy, strengthening exercises, gait training, and ultrasound. Patients were given instructions in placement of the device and adjustment of the angle until a gentle stretch was felt. After this position was maintained for five minutes, the intensity of the stretch was subjectively assessed, and the angle of the device was adjusted to maintain a gentle stretch. This assessment and readjustment continued every five minutes for 30 minutes. If increases in both flexion and extension were required, 30 minutes were allocated for each movement, for a total of one hour per session. Patients underwent one treatment session per day for the first five days, and increased the frequency as tolerated to a maximum of three sessions per day. At a mean of nine weeks of use (range 3–27 weeks), the total arc of motion increased by a mean of 33° (range 0–85°). Patients gained a mean of 9° of extension (range -14–30°), and a mean of 24° of flexion (range 1–80°). These changes were statistically significant ( $p < 0.001$ ). The mean satisfaction score was 7.6 points (range 0–10). Three patients were dissatisfied with the device.

Doornberg et al. (2006) conducted a retrospective review ( $n=37$ ) to evaluate SP elbow splinting using a JAS splint in patients with elbow stiffness after trauma who were no longer achieving gains in motion with a standard exercise program. Three patients were treated following the injury, 14 were treated following operative treatment of the injury, and 12 were treated after a secondary operative release. Splinting was started on an average of 55 days after injury or operative treatment (range 15–200 days). Patients used the splints for an average of four months (range 1–9 months). The splinting protocol was patient- and therapist-specific and varied substantially; however, the general approach included 30 minutes of splinting in each direction (flexion and extension), three times per day. Prior to splinting, the average flexion was 107° (range 85–150°), average flexion contracture was 35° (range 5–90), and average arc of motion was 71° (range 0–100°). The authors reported statistically significant improvement in flexion, flexion contracture, and arc of motion at an average follow-up of 11 months (range 2–28 months). The average post-treatment arc was 110° (range 20–150°), average flexion was 130° (range 90–155°), and average flexion contracture was 20° (range 0–70°).

Bruner et al. (2003) conducted a retrospective review to evaluate the efficacy of SP splinting as an adjunct to active mobilization following extensor tendon repair in Verdan's zones V to VII ( $n=85$  patients, 87 extensor tendon injuries). On the second post-operative day, a thermoplastic dorsal forearm splint was applied to hold the wrist in 30° extension and the metacarpophalangeal (MCP) joints in 10° hyperextension. The splint allowed active flexion of the MCP joints to 15 or 30°, depending on the intraoperative tension of the tendon repair. The allowed ROM was increased to 90° over the course of five weeks, in defined weekly steps. Active extension of the distal interphalangeal and proximal interphalangeal joints began in the fourth week, and the splint was removed at five weeks. Results were assessed at a mean follow-up of 21 months (range 5–39 months) using three grading systems (Geldmacher, Miller, and Kleinert). Results were considered to be excellent or good in 94% of the patients, and fair in the remainder of patients.

In a prospective, nonrandomized study, Hewitt and Shakespeare (2001) compared the effectiveness of two postoperative rehabilitation regimes following unilateral total knee arthroplasty (TKA). Patients were assigned to a regimen of SP flexion (Group 1,  $n=86$ ) or to a regimen of static extension splinting combined with physical therapist-guided flexion exercises (Group 2,  $n=74$ ). In Group 1, the operative knee was placed in a 90° splint that remained in place overnight. On the first postoperative day, the knee was placed on the 90° splint for ten minutes every two hours, followed by ten minutes of passive extension combined with leg exercises. In Group 2, the operative knee was placed in an immobilizer splint that remained in place overnight. On the first postoperative day, patients participated in three physical therapy treatments in which the knee was flexed as far as possible, and leg exercises were encouraged. At six weeks, the average maximum flexion and ROM were higher in group I than in Group II (104.83° vs. 92.04°,  $p=0.0037$ ; and 99.94° vs. 92.04°,  $p=0.00027$ , respectively). No differences were observed in wound problems, analgesic requirements, or blood loss.

### **Summary: Static Progressive (SP) Stretch Devices and Low-Load Prolonged-Duration Stretch (LLPS) Devices/Dynamic Splinting Systems**

Although evidence from well designed clinical trials on the use of mechanical stretch devices is lacking, SP stretch devices and LLPS devices/dynamic splinting are frequently employed and have gained acceptance as components of the rehabilitation of fingers, wrists, elbows and knees in the postoperative period. Although an active mobilization program combined with LLPS or SP stretch devices may not improve joint mobility beyond

what would be achieved with a standard physical therapy program, the use of these devices may positively influence and possibly shorten the need for prolonged joint rehabilitation in selected patients.

There is insufficient evidence in the published medical literature, however, to support the use of or SP stretch devices or LLPS devices/dynamic splinting for the rehabilitation of other joints (i.e., toes, ankles, shoulders); or for the treatment of chronic conditions (e.g., rheumatoid arthritis, plantar fasciitis) or the treatment of neurological conditions (e.g., cerebral palsy, multiple sclerosis).

### **Patient-Actuated Serial Stretch (PASS) Devices**

PASS devices provide a low-to high-level load to the joint using pneumatic (Extensionators [ERMI] or hydraulic (Flexionators [ERMI] systems that are adjusted by the patient. PASS devices are custom-fitted and are available for the ankle, elbow, knee, and shoulder. A customized treatment protocol and training in use of the device are provided to the patient.

Available patient-actuated serial stretch (PASS) devices include:

- ERMI Knee Extensionator<sup>®</sup>, ERMI Knee/Ankle Flexionator<sup>®</sup>, ERMI Shoulder Flexionator<sup>®</sup>, ERMI MPJ Extensionator<sup>®</sup>, ERMI Elbow Extensionator<sup>®</sup> (ERMI, Inc., Atlanta, GA)

Branch et al. (2003) conducted a prospective uncontrolled study to determine the effectiveness of a PASS rehab regimen using an ERMI Knee/Ankle Flexionator<sup>®</sup> in 34 patients who had failed a six-week regimen of conventional physical therapy. Patients had developed knee contractures following ACL injury (n=14), peripatellar injury (n=7), fracture (n=4) and unspecified causes (n=9). PASS was administered four to eight times each day for 15 minutes. Treatment duration ranged from two to twelve weeks. The authors reported that 74% of patients regained full ROM, and 91.2% of patients regained functional knee ROM.

There is insufficient evidence in the published medical literature to demonstrate the safety, efficacy, and long-term outcomes of the use of patient-actuated serial stretch (PASS) for the treatment of joint stiffness or contractures or to determine whether the use of these devices results in outcomes comparable to those achieved with established rehabilitation methods.

### **Jaw Stretch Devices**

Cohen et al. (2005) evaluated the use of Therabite in the early postoperative management of trismus in seven patients who underwent resection and reconstruction for head and neck cancer. Patients were given a Therabite device, instructed in its proper use, and began using the device within six weeks following surgery. All patients were instructed to perform six repetitions holding the mouth open for six seconds each time, six times daily. Maximum interincisor opening was measured by a gauge provided with the device at the start of use and at the most recent postoperative visit. Follow-up ranged from 12 to 48 weeks after surgery. The average maximum interincisor opening was 30 mm (range 21–38 mm) at the last visit, with an average gain of 10 mm (range 1–21 mm). Two patients were lost to follow-up. Four of five patients reported minimal or no limitation on overall quality of life relative to jaw opening. The authors concluded that the Therabite mechanical stretching device is effective and safe for the management of trismus in a select group of patients. These results cannot be generalized, however, due to the study design and small number of patients.

Maloney et al. (2002) conducted a randomized controlled trial that included 46 patients with TMJ disease. This study evaluated the use of Therabite and an intraoral appliance (n=17), the use of tongue depressors in conjunction with an intraoral appliance (n=12), and an intraoral appliance only (n=17). The Therabite group showed increased jaw mobility and decreased pain compared to the group using intraoral appliances alone. The use of tongue depressors had little effect. This trial was also very small, with unblinded evaluations and a follow-up period of only four weeks.

A systematic review of the effectiveness of physical therapy interventions for TMJ disorders concluded that the results of the review support the use of active and passive oral exercises as effective interventions to reduce symptoms, but more information on the exercise prescription is necessary to allow for replication in clinical settings. The authors advised that findings must be interpreted with caution, since most studies were of poor methodological quality. The Therabite system is described in the review as a mechanical aid that provides passive stretch to the TMJ, but no recommendation for use of the device is made (McNeely, et al., 2006).

Published studies evaluating the use of the OraStretch System are lacking.

### **Systematic Review**

Harvey and Crosbie (2002) conducted a systematic review to determine whether stretching, either self-administered, administered manually by therapists, or by external devices such as splints, produces lasting increases in the mobility of joints not directly affected by surgery, trauma or disease process. The 13 included studies evaluated the use of stretching, with a median of eight stretch sessions, in patients without functionally significant contractures. Four studies were rated as moderate quality, and four were rated as poor quality. The studies rated as moderate suggested that regular stretching increases joint ROM (mean increase in ROM=8°, 95% CI 6°–9°) for at least one day after stretching cessation, and that the effects of stretching may be greater in muscle groups with limited extensibility. The authors stated that these findings require verification with high-quality studies, and that the lasting effects of intensive stretching programs or of stretching in people with functionally significant contracture have not yet been investigated with randomized studies.

### **Professional Societies/Organizations**

A clinical practice guideline on the diagnosis and treatment of heel pain published by the American College of Foot and Ankle Surgeons includes a stepwise approach to treatment of plantar heel pain associated with plantar fasciitis, heel spur syndrome or plantar fasciosis. Recommendations for tier one treatment for a period of six weeks include foot padding and strapping, therapeutic orthotic insoles, cortisone injections, and Achilles and plantar fascia stretching. The second tier treatment options include continuation of tier one treatments, with consideration for additional therapies, including the use of night splints to maintain an extended length of the plantar fascia and gastroc-soleus complex. These are considered to be Grade B recommendations, indicating that these treatment options are supported by fair evidence (Thomas et al., 2010).

There are no published professional society positions that specifically address the use of SP stretch devices, LLPS devices, PASS devices, or jaw stretch devices.

### **Summary**

Although evidence from well designed clinical trials on the use of mechanical stretch devices is lacking, SP stretch devices and LLPS devices/dynamic splinting are frequently employed and have gained acceptance as components of the postoperative rehabilitation of fingers, wrists, elbows and knees. These devices may also be considered in the rehabilitation of these joints following subacute injury, or for contracture when a formal rehabilitation program is not feasible or has failed to provide benefit. The use of these devices may positively influence and possibly shorten the need for prolonged joint rehabilitation in selected patients. There is insufficient evidence in the published medical literature to support the use of SP stretch devices or LLPS/dynamic splinting devices for other joints (i.e., shoulder, neck, back, ankle, toe), for chronic conditions (e.g., rheumatoid arthritis, plantar fasciitis) or in the treatment of cerebral palsy.

There is insufficient evidence in the published medical literature to demonstrate the safety, efficacy, and long-term outcomes of the use patient-actuated serial stretch (PASS) for any indication. There are no well designed clinical trials that evaluate these devices; it is not possible to determine based on the available evidence whether the addition of these devices when used alone or as an adjunct to a physical therapy program provide improved patient outcomes.

There are very few published studies that evaluate the use of jaw stretch device or of passive rehabilitation of the TMJ using any device. There is insufficient evidence in the peer-reviewed clinical literature to demonstrate the safety and efficacy of jaw stretch devices to provide passive rehabilitation as compared to traditional methods of treating jaw hypomobility.

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## **Coding/Billing Information**

**Note:** This list of codes may not be all-inclusive.

**Low-load prolonged-duration stretch (LLPS) device/dynamic stretch device (e.g., Dynasplint System<sup>®</sup>, Ultraflex, Pro-glide<sup>™</sup>, Dynamic ROM, Advance Dynamic ROM<sup>®</sup> for the finger, wrist, elbow or knee**

**Covered when medically necessary:**

<b>HCPSC Codes</b>	<b>Description</b>
E1800	Dynamic adjustable elbow extension/flexion device, includes soft interface material
E1802	Dynamic adjustable forearm pronation/supination device, includes soft interface material
E1805	Dynamic adjustable wrist extension/flexion device, includes soft interface material
E1810	Dynamic adjustable knee extension/flexion device includes soft interface material
E1812	Dynamic knee, extension/flexion device with active resistance control
E1820	Replacement soft interface material, dynamic adjustable extension/flexion device
E1825	Dynamic adjustable finger extension/flexion device, includes soft interface material

<b>ICD-9-CM Diagnosis Codes</b>	<b>Description</b>
715.12	Primary localized osteoarthritis, upper arm
715.13	Primary localized osteoarthritis, forearm
715.14	Primary localized osteoarthritis, hand
715.16	Primary localized osteoarthritis, lower leg
715.22	Secondary localized osteoarthritis, upper arm
715.23	Secondary localized osteoarthritis, forearm
715.24	Secondary localized osteoarthritis, hand
715.26	Secondary localized osteoarthritis, lower leg
715.96	Osteoarthritis, unspecified whether generalized or localized, lower leg
716.12	Traumatic arthropathy, upper arm
716.13	Traumatic arthropathy, forearm
716.14	Traumatic arthropathy, hand
716.16	Traumatic arthropathy, lower leg
717.0-717.9	Internal derangement of knee
718.02	Articular cartilage disorder, upper arm
718.03	Articular cartilage disorder, upper arm
718.04	Articular cartilage disorder, hand
718.06	Articular cartilage disorder, lower leg
718.42	Contracture of joint, upper arm
718.43	Contracture of joint, forearm
718.44	Contracture of joint, hand
718.46	Contracture of joint, lower leg
719.52	Stiffness of joint, not elsewhere classified, upper arm
719.53	Stiffness of joint, not elsewhere classified, forearm
719.54	Stiffness of joint, not elsewhere classified, hand
719.56	Stiffness of joint, not elsewhere classified, lower leg
813.00-813.93	Fracture of radius and ulna
814.00-814.19	Fracture of carpal bone(s)
815.00-815.19	Fracture of metacarpal bones
816.00-816.13	Fracture of one or more phalanges of hand
817.0-817.1	Multiple fractures of hand bones
822.0-822.1	Fracture of patella

832.00-832.19	Dislocation of elbow
833.00-833.19	Dislocation of wrist
834.00-834.12	Dislocation of finger
836.0-836.69	Dislocation of knee
841.0-841.8	Sprains and strains of elbow and forearm
842.0-842-19	Sprains and strains of wrist and hand
844.0-844.9	Sprains and strains of knee and leg
905.2	Late effect of fracture of upper extremities
905.4	Late effect of fracture of lower extremities
V43.65	Organ or tissue replaced by other means, joint, knee

**Experimental/Investigational/Unproven/Not Covered:**

ICD-9-CM Diagnosis Codes	Description
343.0 - 343.9	Infantile cerebral palsy
714.0	Rheumatoid arthritis
714.30 - 714.33	Juvenile chronic polyarthritis
	All other codes

**Static progressive (SP) stretch device (e.g., Joint Active Systems [JAS Static Progressive Stretch]) for the finger, wrist, elbow or knee**

HCPCS Codes	Description
E1801	Static progressive stretch elbow device, extension and/or flexion, with or without range of motion adjustment, includes all components and accessories
E1806	Static progressive stretch wrist device, flexion and/or extension, with or without range of motion adjustment, includes all components and accessories
E1811	Static progressive stretch knee device, extension and/or flexion, 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
E1821	Replacement soft interface material/cuffs for bi-directional static progressive stretch device

ICD-9-CM Diagnosis Codes	Description
715.12	Primary localized osteoarthritis, upper arm
715.13	Primary localized osteoarthritis, forearm
715.14	Primary localized osteoarthritis, hand
715.16	Primary localized osteoarthritis, lower leg
715.22	Secondary localized osteoarthritis, upper arm
715.23	Secondary localized osteoarthritis, forearm
715.24	Secondary localized osteoarthritis, hand
715.26	Secondary localized osteoarthritis, lower leg
715.96	Osteoarthritis, unspecified whether generalized or localized, lower leg
716.12	Traumatic arthropathy, upper arm
716.13	Traumatic arthropathy, forearm
716.14	Traumatic arthropathy, hand

716.16	Traumatic arthropathy, lower leg
717.0-717.9	Internal derangement of knee
718.02	Articular cartilage disorder, upper arm
718.03	Articular cartilage disorder, upper arm
718.04	Articular cartilage disorder, hand
718.06	Articular cartilage disorder, lower leg
718.42	Contracture of joint, upper arm
718.43	Contracture of joint, forearm
718.44	Contracture of joint, hand
718.46	Contracture of joint, lower leg
719.52	Stiffness of joint, not elsewhere classified, upper arm
719.53	Stiffness of joint, not elsewhere classified, forearm
719.54	Stiffness of joint, not elsewhere classified, hand
719.56	Stiffness of joint, not elsewhere classified, lower leg
813.00-813.93	Fracture of radius and ulna
814.00-814.19	Fracture of carpal bone(s)
815.00-815.19	Fracture of metacarpal bones
816.00-816.13	Fracture of one or more phalanges of hand
817.0-817.1	Multiple fractures of hand bones
822.0-822.1	Fracture of patella
832.00-832.19	Dislocation of elbow
833.00-833.19	Dislocation of wrist
834.00-834.12	Dislocation of finger
836.0-836.69	Dislocation of knee
841.0-841.8	Sprains and strains of elbow and forearm
842.0-842-19	Sprains and strains of wrist and hand
844.0-844.9	Sprains and strains of knee and leg
905.2	Late effect of fracture of upper extremities
905.4	Late effect of fracture of lower extremities
V43.65	Organ or tissue replaced by other means, joint, knee

**Experimental/Investigational/Unproven/Not Covered:**

ICD-9-CM Diagnosis Codes	Description
343.0 - 343.9	Infantile cerebral palsy
714.0	Rheumatoid arthritis
714.30 - 714.33	Juvenile chronic polyarthritis
	All other codes

**Low-load prolonged-duration stretch (LLPS) device/dynamic stretch device or static progressive (SP) stretch device for joint other than the finger, wrist, elbow or knee**

**Experimental/Investigational/Unproven/Not Covered:**

HCPCS Codes	Description

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
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 (New code effective 01/01/2011)
E1840	Dynamic adjustable shoulder flexion/abduction/rotation device, includes soft interface material
E1841	Static progressive stretch shoulder device, with range of motion adjustment, includes all components and accessories

ICD-9-CM Diagnosis Codes	Description
718.47	Contracture of joint, ankle, and foot
726.0	Adhesive capsulitis of shoulder
726.1-726.19	Rotator cuff syndrome of shoulder and other disorders
728.71	Plantar fascial fibromatosis
	All other codes

**Patient actuated serial stretch (PASS) device (e.g., ERMI Knee, MPJ, or Elbow Extensionator<sup>®</sup>, ERMI Knee, Ankle or Shoulder Flexionator<sup>®</sup>) for any joint**

**Experimental/Investigational/Unproven/Not Covered:**

HCPCS Codes	Description
E1399	Durable medical equipment, miscellaneous

ICD-9-CM Diagnosis Codes	Description
343.0 - 343.9	Infantile cerebral palsy
714.0	Rheumatoid arthritis
714.30 - 714.33	Juvenile chronic polyarthritis
715.12	Primary localized osteoarthritis, upper arm
715.13	Primary localized osteoarthritis, forearm
715.14	Primary localized osteoarthritis, hand
715.16	Primary localized osteoarthritis, lower leg
715.22	Secondary localized osteoarthritis, upper arm
715.23	Secondary localized osteoarthritis, forearm
715.24	Secondary localized osteoarthritis, hand
715.26	Secondary localized osteoarthritis, lower leg
715.96	Osteoarthritis, unspecified whether generalized or localized, lower leg
716.12	Traumatic arthropathy, upper arm
716.13	Traumatic arthropathy, forearm
716.14	Traumatic arthropathy, hand
716.16	Traumatic arthropathy, lower leg
717.0-717.9	Internal derangement of knee
718.02	Articular cartilage disorder, upper arm
718.03	Articular cartilage disorder, upper arm
718.04	Articular cartilage disorder, hand
718.06	Articular cartilage disorder, lower leg

718.42	Contracture of joint, upper arm
718.43	Contracture of joint, forearm
718.44	Contracture of joint, hand
718.46	Contracture of joint, lower leg
718.47	Contracture of joint, ankle, and foot
719.52	Stiffness of joint, not elsewhere classified, upper arm
719.53	Stiffness of joint, not elsewhere classified, forearm
719.54	Stiffness of joint, not elsewhere classified, hand
719.56	Stiffness of joint, not elsewhere classified, lower leg
726.0	Adhesive capsulitis of shoulder
726.1-726.19	Rotator cuff syndrome of shoulder and other disorders
728.71	Plantar fascial fibromatosis
813.00-813.93	Fracture of radius and ulna
814.00-814.19	Fracture of carpal bone(s)
815.00-815.19	Fracture of metacarpal bones
816.00-816.13	Fracture of one or more phalanges of hand
817.0-817.1	Multiple fractures of hand bones
822.0-822.1	Fracture of patella
832.00-832.19	Dislocation of elbow
833.00-833.19	Dislocation of wrist
834.00-834.12	Dislocation of finger
836.0-836.69	Dislocation of knee
841.0-841.8	Sprains and strains of elbow and forearm
842.0-842.19	Sprains and strains of wrist and hand
844.0-844.9	Sprains and strains of knee and leg
905.2	Late effect of fracture of upper extremities
905.4	Late effect of fracture of lower extremities
V43.65	Organ or tissue replaced by other means, joint, knee

**Jaw stretch device**

**Experimental/Investigational/Unproven/Not Covered:**

<b>HCPSC Codes</b>	<b>Description</b>
E1700	Jaw motion rehabilitation system
E1701	Replacement cushions for jaw motion rehabilitation system, pkg. of 6
E1702	Replacement measuring scales for jaw motion rehabilitation system, pkg. of 200

<b>ICD-9-CM Diagnosis Codes</b>	<b>Description</b>
	All codes

**\*Current Procedural Terminology (CPT®) © 2010 American Medical Association: Chicago, IL.**

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## Policy History

<b>Pre-Merger Organizations</b>	<b>Last Review Date</b>	<b>Policy Number</b>	<b>Title</b>
CIGNA HealthCare	08/15/2008	0135	Stretch Devices for Joint Stiffness and Contracture
Great-West Healthcare	03/12/2007 11/20/2006	05.278.02 04.268.02	Dynamic Splinting Devices Static Splinting Devices

<b>Pre-Merger Organizations</b>	<b>Last Review Date</b>	<b>Policy Number</b>	<b>Title</b>
CIGNA HealthCare	07/15/2008	0186	Therabite <sup>®</sup> Jaw Motion Rehabilitation System <sup>™</sup>

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