

Traction and Other Orthopedic Devices

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Health Equity Consideration

Health equity is the highest level of health for all individuals; health inequity is the avoidable difference in health status or distribution of health resources due to the social conditions in which individuals are born, grow, live, work, and age. Social determinants of health are the conditions in the environment that affect a wide range of health, functioning, and quality of life outcomes and risks. Examples include the following: safe housing, transportation, and neighborhoods; racism, discrimination, and violence; education, job opportunities, and income; access to nutritious foods and physical activity opportunities; access to clean air and water; and language and literacy skills.

Introduction

The guideline addresses traction and other orthopedic devices.

Criteria

Cervical Traction

Cervical traction devices are considered medically necessary when **both** of the following criteria have been met:

- The individual has a musculoskeletal or neurologic condition documented by the treating provider requiring traction equipment
- The individual has been instructed in the proper use of the home cervical traction device and is able to tolerate its use

Pneumatic cervical free-standing stand/frame traction equipment (applying traction force to parts other than mandible) and cervical traction equipment not requiring an additional stand or frame are considered medically necessary when the above criteria have been met as well as **any** of the following:

- The individual has a documented diagnosis of temporomandibular joint (TMJ) dysfunction and has received treatment for the TMJ condition
- The individual has anatomical abnormalities of the lower jaw or neck (e.g., following radical neck dissection) that prevent the use of a chin halter

- The treating practitioner documents and/or prescribes medical necessity for cervical traction exceeding 20 pounds in the home setting

Pelvic Traction

A traction frame for pelvic traction is considered medically necessary when the following criterion has been met:

- The individual has a complex pelvic, acetabular, or lower extremity fracture or deformity requiring traction for **any** of the following:
 - preoperative reduction of displacement
 - temporary stabilization of alignment
 - management of unstable pelvic ring injuries or associated soft tissue conditions

Extremity Traction

A traction frame for extremity traction is considered medically necessary when the following criterion has been met:

- The individual has an acute orthopedic condition of the lower or upper extremity requiring traction, including **any** of the following:
 - long bone fractures (e.g., femur)
 - joint dislocations
 - soft tissue injury requiring immobilization and alignment

Trapeze Equipment

Trapeze equipment is considered medically necessary when **all** of the following criteria have been met:

- The individual is confined to an at-home hospital bed
- The individual needs the device to change body position
- The individual has adequate upper body strength to effectively utilize a trapeze

Not Medically Necessary

A pelvic traction frame is considered not medically necessary when **any** of the following:

- The equipment is requested for chronic pain without structural instability
- There is no documentation of fracture instability

A traction frame for extremity traction is considered not medically necessary when **any** of the following:

- The condition can be managed with splinting, casting, or positioning alone

- The device is requested for chronic pain without fracture or instability
- There is no documentation of:
 - need for traction force **or**
 - failure of less intensive modalities

Experimental, Investigational, or Unproven

A cervical traction device with inflatable air bladder(s) is considered experimental, investigational, or unproven (EIU).

Evidence Discussion

In a 2025 prospective cohort study (Zhou et al.), investigators evaluated 61 individuals with severe rigid spinal deformity who underwent staged halo-pelvic traction followed by posterior spinal fusion over a period from 2020 to 2022. Following traction with a mean duration of 19.2 weeks, the mean coronal Cobb angle improved from $114.2^\circ \pm 38^\circ$ at baseline to 55.3° after traction, representing a 50.6% correction, and further improved to 47.4° after surgical fixation for a total correction of 58.3%. Similarly, the mean kyphosis (MK) angle decreased from $105.8^\circ \pm 34.7^\circ$ to 52.6° after traction, corresponding to a 49.5% correction, and to 38.1° following surgery, representing a 63.4% total correction. The overall complication rate during the traction phase was 16.4%, while surgery-related complications occurred in 18.0% of individuals, and no permanent neurological deficits were observed. The authors concluded that staged halo-pelvic traction was both effective and reasonably safe in reducing deformity severity prior to surgery, which potentially minimized the need for more invasive procedures and reduced operative risk. Study limitations included the single-arm design without a control group, the relatively small sample size, and the observational nature of the study, which limited the ability to establish causality and may have reduced generalizability to broader populations.

In a systematic review and meta-analysis by Feng et al. (2024), investigators evaluated nine randomized controlled trials including a total of 904 individuals with cervical radiculopathy to assess the effectiveness and safety of cervical rotation-traction manipulation. The pooled analysis demonstrated that this intervention significantly reduced pain compared with control treatments, with a weighted mean difference of -1.27 on the Visual Analog Scale ($p < .00001$; $n = 534$), although heterogeneity was moderate. Improvements in cervical range of motion, particularly lateral flexion and rotation, were also observed. However, the quality of this evidence was rated as very low. No statistically significant differences were identified between groups for disability outcomes measured by the Neck Disability Index, neurologic function assessed by the Japanese Orthopaedic Association score, or cervical curvature parameters. No adverse events related to the intervention were reported across the included studies, suggesting a favorable safety profile. The authors concluded that cervical rotation-

traction manipulation may provide modest pain relief and functional improvement, but the overall certainty of evidence was limited due to heterogeneity, small sample sizes, and methodological weaknesses across trials, which restricted confidence in the findings and generalizability.

In a 2024 prospective study (Wang et al.), the authors evaluated 30 individuals with cervical spondylotic radiculopathy to assess the immediate effects of cervical rotation-traction manipulation on paravertebral soft tissue tension using a novel measurement method. Following treatment, soft tissue tension levels were significantly reduced compared to baseline measurements, with a statistically significant difference ($p < .001$). Prior to treatment, tension levels on the symptomatic side were significantly higher than those on the asymptomatic side across the C5 to C7 levels ($p < .001$). However, this asymmetry was no longer present after the intervention ($p = .231$), indicating normalization of tissue tension distribution. The authors concluded that cervical rotation-traction manipulation was associated with immediate reductions in soft tissue tension and improved symmetry, suggesting a potential physiologic mechanism for symptom relief. They also reported that the measurement technology used in the study demonstrated reliability for assessing these changes. Limitations included the small sample size, lack of a control group, short-term follow-up limited to immediate effects, and the observational design, which restricted the ability to determine long-term clinical benefit or causal relationships.

In a 2024 randomized controlled trial (Jellad et al.), the authors evaluated 36 individuals with cervical radiculopathy and cervicogenic headache who received conventional rehabilitation combined with mechanical intermittent cervical traction at varying loads of 2kg, 8kg, and 12kg. Across follow-up periods of one, three, and six months, the group receiving 12kg traction demonstrated the greatest reductions in headache intensity and frequency compared to the lower-load groups, with statistically significant differences observed at all time points (p values ranged from .005 to 0.023). Improvements in radicular pain were also greater in the 8kg and 12kg groups compared to the 2kg group at one month ($p = .05$). Functional outcomes, measured by the Neck Disability Index, and psychological outcomes, including anxiety, showed significantly greater improvement in the 12kg group at three and six months, along with improvements in quality of life domains at six months. These findings indicated that higher traction loads were associated with greater and more sustained clinical benefit. The authors concluded that adding mechanical intermittent cervical traction, particularly at 12kg, to conventional rehabilitation was effective in reducing headache severity and frequency, with benefits persisting up to six months. However, the study was limited by its small sample size, single-center design, short follow-up duration, potential baseline differences between groups, lack of long-term evaluation, and possible confounding from unmonitored additional treatments which restricted generalizability and the ability to draw definitive conclusions.

In a 2025 prospective study, Nasuruddin et al. evaluated 21 individuals with displaced acetabular fractures to determine the effectiveness of gradually increasing skeletal traction for preoperative fracture reduction. Traction achieved successful reduction in 18 of 21 individuals (approximately 86% of cases). The applied traction force ranged from 5% to 33.33% of body weight, and traction initiated within seven days of injury was associated with significantly improved fracture reduction ($p=.025$). The findings suggested that an optimal traction force of approximately 20% of body weight was effective for achieving alignment. Complications occurred in 17.9% of individuals and included pain and pin-tract infection; however, neither traction weight nor duration showed a statistically significant relationship with complication rates. The authors concluded that gradual vector traction was an effective method for improving fracture alignment prior to definitive surgical management. Study limitations included the small sample size, lack of a control group, and limited generalizability due to the single-center design, which restricted the ability to draw definitive conclusions regarding broader clinical application.

Codes Addressed in This Guideline

The inclusion of any code in this table does not imply that the code is under management or requires prior authorization. Refer to the applicable health plan for management details. Prior authorization of a code listed in this table is not a guarantee of payment. The Certificate of Coverage or Evidence of Coverage policy outlines the terms and conditions of the member's health insurance policy.

HCPCS Code	Description
E0849	Traction equipment, cervical, free-standing stand/frame, pneumatic, applying traction force to other than mandible
E0855	Cervical traction equipment not requiring additional stand or frame
E0856	Cervical traction device, with inflatable air bladder(s)
E0860	Traction equipment, over door, cervical
E0870	Traction frame, attached to foot board, extremity traction, (e.g., buck's)
E0880	Traction stand, free standing, extremity traction
E0890	Traction frame, attached to footboard, pelvic traction
E0900	Traction stand, free standing, pelvic traction, (e.g., buck's)

HCP Code	Description
E0910	Trapeze bars, aka patient helper, attached to bed, with grab bar
E0911	Trapeze bar, heavy duty, for patient weight capacity greater than 250 pounds, attached to bed, with grab bar
E0912	Trapeze bar, heavy duty, for patient weight capacity greater than 250 pounds, free standing, complete with grab bar
E0940	Trapeze bar, free standing, complete with grab bar
E0942	Cervical head harness/halter
E0944	Pelvic belt/harness/boot
E0945	Extremity belt/harness
E0947	Fracture frame, attachments for complex pelvic traction
E0948	Fracture frame, attachments for complex cervical traction

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