

1 **Clinical Practice Guideline: Inversion Therapy**

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3 **Date of Implementation: June 21, 2007**

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5 **Product: Specialty**

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8 **GUIDELINES**

9 American Specialty Health (ASH) considers inversion therapy as unproven (i.e., a form of  
10 traction facilitated by gravity as the patient is either hung or laid upside down typically at  
11 an angle of greater than 45° below the horizontal axis) because there is insufficient  
12 evidence in the literature to establish long-term safety and clinical effectiveness.

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14 For more information, see the *Techniques and Procedures Not Widely Supported as*  
15 *Evidence Based (CPG 133 – S)* clinical practice guideline.

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17 Patients must be informed verbally and in writing of the nature of any procedure or  
18 treatment technique that is considered experimental/investigational or unproven, poses a  
19 significant health and safety risk, and/or is scientifically implausible. If the patient decides  
20 to receive such services, they must sign a *Member Billing Acknowledgment Form* (for  
21 Medicare use *Advance Beneficiary Notice of Non-Coverage form*) indicating they  
22 understand they are assuming financial responsibility for any service-related fees. Further,  
23 the patient must sign an attestation indicating that they understand what is known and  
24 unknown about, and the possible risks associated with such techniques prior to receiving  
25 these services. All procedures, including those considered here, must be documented in the  
26 medical record. Finally, prior to using experimental/investigational or unproven  
27 procedures, those that pose a significant health and safety risk, and/or those considered  
28 scientifically implausible, it is incumbent on the practitioner to confirm that their  
29 professional liability insurance covers the use of these techniques or procedures in the event  
30 of an adverse outcome.

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32 **DESCRIPTION/BACKGROUND**

33 Inversion therapy is a form of traction facilitated by gravity as the patient is either hung or  
34 laid upside down typically at an angle of greater than 45° below the horizontal axis.

35 This therapy is used in the treatment of back pain and is believed to help in the  
36 decompression of the disks and joints. This therapy takes many forms, from gravity boots  
37 to inversion tables the patient lies on before inverting the table.

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39 The use of inversion therapy for back pain can be traced back to Hippocrates when he  
40 found that hanging patients upside down could be therapeutic. The modern use of inversion  
41 therapy for back pain was popularized by a physician in the 1960’s. The popularity of this

1 therapy increased greatly by the 1990's and is still used today. Inversion devices can be  
2 bought for the home and are now often used outside the direct supervision of a physician.

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4 Contraindications to inversion therapy include hernia, glaucoma, retinal detachment,  
5 conjunctivitis, high blood pressure, recent stroke, heart or circulatory disorders, spinal  
6 injury, cerebral sclerosis, swollen joints, osteoporosis, unhealed fractures, surgically  
7 implanted supports, use of anticoagulants, ear infection, and obesity.

## 8 9 **EVIDENCE REVIEW**

10 A review of the literature revealed only a small body of work specific to inversion therapy.  
11 DeVries and Cailliet (1985), Gianakopoulos et al. (1985), Haskvitz and Hanten (1986) and  
12 Nosse et al. (1988) all describe small case control studies evaluating varying aspects of  
13 inversion therapy. DeVries and Cailliet (1985) concluded that inversion had a measurable  
14 effect on neuromuscular tension as measured by EMG. Gianakopoulos et al. (1985) found  
15 that there was some improvement in low back pain in patients who underwent inversion  
16 therapy. Haskvitz and Hanten (1986) found that inversion therapy raised the blood pressure  
17 of patients receiving inversion therapy. Nosse et al. (1988) found that inversion therapy  
18 reduced the depth of low back contour more than sitting. All of these studies are small and  
19 methodologically weak; as such it is difficult to apply their findings to the general  
20 population. However, all four of the papers support the use of inversion therapy.

21  
22 Two RCTs ( $n = 69$ ;  $n = 108$ ) evaluating the effectiveness of inversion therapy combined  
23 with mechanical percussion for treatment of lower pole renal stones after shockwave  
24 lithotripsy (SWL) found positive effects for this therapy compared with observation or  
25 SWL alone (Chiong et al., 2005; Pace et al., 2001). Prasad et al. (2012) sought to study  
26 the feasibility of a randomized controlled trial on the effect of inversion therapy in patients  
27 with single level lumbar discogenic disease, who had been listed for surgery. It was a  
28 prospective randomized controlled trial where patients awaiting surgery for pure lumbar  
29 discogenic disease within the ambit of the prestated inclusion/exclusion criteria were  
30 allocated to either physiotherapy or physiotherapy and intermittent traction with an  
31 inversion device. Post-treatment assessment was made at 6 weeks for various outcome  
32 measures. Avoidance of surgery was considered a treatment success. Twenty-six patients  
33 were enrolled and 24 were randomized [13 to inversion + physiotherapy and 11 to  
34 physiotherapy alone (control)]. Surgery was avoided in 10 patients (76.9%) in the inversion  
35 group, whereas it was averted in only two patients (22.2%) in the control group.  
36 Intermittent traction with an inversion device resulted in a significant reduction in the need  
37 for surgery. Authors suggest that a larger multicentre prospective randomized controlled  
38 trial is justified in patients with sciatica due to single level lumbar disc protrusions.  
39 Inversion may form part of the conservative rehabilitation of patients with single level  
40 unilateral lumbar disc protrusion alongside other forms of physiotherapy.

1 Alternate therapies, such as mechanical traction on a horizontal surface, are more  
 2 commonly practiced possibly due to reduced contraindications and lower risk of adverse  
 3 events compared to inversion therapy. Lerebours et al. (2017) reported bilateral retinal  
 4 detachments with use of an inversion table in a case report. In a case series, Jung et al.  
 5 (2021) describes 3 patients with cervical spinal cord injuries sustained from falls while  
 6 using inversion tables correctly highlighting the potential danger when utilizing these  
 7 devices.

## 9 *References*

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