Nonsurgical Spinal Decompression Therapy

Optum Health Solutions Musculoskeletal (MSK) Utilization Management Policy
Policy Number: 473

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Policy Statement

Optum considers nonsurgical spinal decompression therapy (also known as vertebral axial decompression) to be unproven and not medically necessary due to insufficient scientific evidence of efficacy and safety in the treatment of spine-related disorders. This includes any motorized mechanical traction device that is promoted as providing spinal decompression therapy.

Purpose

This policy has been developed to indicate the position of Optum regarding the use of motorized traction devices for nonsurgical spinal decompression therapy.

Scope

The application of this policy is limited to those services that utilize motorized mechanical traction devices promoted as vertebral axial decompression therapy and viewed as substantially similar to VAX-D. The approach taken is this is a type of therapy not a particular device or brand.

Background

Traction therapy has been utilized in the treatment of low back pain for decades. The most recent incarnation of traction therapy is non-surgical spinal decompression therapy (NSSDT); a type of intermittent, dispersed traction using a specialized table and computer designed to apply distractive tension along the axis of the spine (Gay, 2008; Daniel, 2007). Many NSSDT devices are regulated by the FDA as class II medical devices based on substantial equivalence to existing devices. Examples of NSSDT devices include, but may not be limited to:

- Acua-Spina System utilizing Intervertebral Differential Dynamics (IDD Therapy)
- Decompression Reduction Stabilization (DRS) System
- Axiom DRX, DRX2000, DRX3000, DRX5000, DRX9000
- Dynatron DX2
- Lordex Lumbar Spine System
- NuChoice Medical Healthstar Elite Decompression Therapy
- Alpha-SPINA System
- Saunders 3D ActiveTrac
- MTD 4000 Mettler Traction Decompression System
- Antalgic-Trak
- Spinerx LDM
- Integrity Spinal Care System
- Tru Tac 401
- Cert Health Sciences SpineMED Decompression Table
- VAX-D Spinal Decompression System

Proponents of nonsurgical spinal decompression therapy (NSSDT) assert this form of traction is unique for being able to reduce the relative pressure measured within intervertebral discs (decompression) (Tilaro, 2007). The relationship between negative intradiscal pressures and clinical outcomes has not been established. It is also uncertain if any mechanical changes observed in a prone position will be sustained after a patient resumes an upright, weight-bearing posture (Gay, 2008).

NSSDT is claimed to provide relief for patients with chronic discogenic low back pain with or without leg pain, which has been unresponsive to conventional therapy for a minimum of six to eight weeks (MSAC, 2001). There are no examination findings (clinical, imaging, or laboratory) that have been shown to differentiate patients who are likely to benefit from traction therapies such as NSSDT (Gay, 2008).

NSSDT is not designed to treat low back pain due to soft tissue injury, muscle strain, or progressive inflammatory conditions. Treatment with NSSDT is generally contraindicated for patients with the following conditions: infection, neoplasm, osteoporosis, bilateral pars defect or Grade 2 spondylolisthesis if unstable, fractures, the presence of surgical hardware in the spine and cauda equina syndrome (MSAC, 2001).

Each session of NSSDT is of 25−45 minute's duration. A complete course of NSSDT ranges from 15–24 sessions, typically over an 8-week time period (Vogenitz, 2005; MSAC, 2001). Additional services may be incorporated as part of a standard treatment approach i.e., thermal applications, electrical stimulation, manual therapy, and active therapeutic procedures (Wegner, 2013).

Clinical Evidence

There was consistency in the conclusions of the more comprehensive and higher quality-designed systematic review and governmental reports that the available evidence is too limited in quality and quantity to allow for evidence-informed conclusions regarding the efficacy of NSSDT.

A randomized controlled trial by Amjad et al. (2022) evaluated the efficacy of non-surgical spinal decompression therapy used in conjunction with physical therapy to treat lumbar radiculopathy. The outcome measures that were evaluated included pain, lumbar ROM, level of disability, back muscle endurance, and quality of life. Sixty-eight patients met the authors' selection criteria with 60 willing to participate. These patients were randomized into one group who participated in routine physical therapy alone (n=30) and the other who received non-surgical spinal decompression treatment in addition to routine physical therapy (n=30). The participants were treated with 12 sessions over four weeks. Based on the comparison of outcome measures recorded prior to treatment and again after therapy, it was concluded that the combination therapy was statistically and clinically more effective than routine physical therapy alone. There were limitations to this study which included loss of patient blinding and lack of long term follow-up. The longer therapy time in the combination treatment cohort may also have played a factor on the patient-reported outcome measures.

A qualitative study by Tadano et al. (2019) performed as part of a randomized controlled trial included 95 patients with chronic low back pain. There was one drop-out which reduced the total number of participants to 94. The MINATO Medical Science, ST-2 L/2CL and OG Wellness Technologies, OL-6500/6000 motorized traction devices were utilized on these patients. Evaluation of vibration added to the intermittent traction was also performed. JLEQ scores were used to compare pain, function, and quality of life pre- and post-treatment. These outcomes were measured at 0-week, 1-week and 2-week intervals. The conclusions indicate lumbar traction was able to provide positive effects in pain intensity and functional status. The limitations, however, included a short follow-up period of two weeks and the use of traction as a single physical modality without any adjunctive multidisciplinary rehabilitation.

An AHRQ Comparative Effectiveness Review on noninvasive treatments of low back pain by Chou et al. (2016) evaluated 156 studies and compared the benefits and harms for acute, subacute, and chronic low back pain. A low strength of evidence was noted for traction versus physiotherapy and other nonpharmacological interventions on low back pain. The follow-up outcomes were measured at up to six months.

A Cochrane Review by Wegner et al. (2013) concluded, "…traction either alone or in combination with other treatments, has little or no impact on pain intensity, functional status, global improvement and return to work among people with LBP. There is only limited-quality evidence from studies with small sample sizes and moderate to high risk of bias. The effects shown by these studies are small and are not clinically relevant."

An earlier systematic review determined the efficacy of spinal decompression achieved with motorized traction for chronic discogenic low back pain remains unproved (Macario, 2006). The authors commented on the need for more rigorous studies with better randomization, more complete control groups, uniform selection criteria, evidence-based diagnostic measures, and standardized outcome measures are needed to identify the best responders to this conservative intervention.

A 2007 evidence synthesis by the Agency for Healthcare Research and Quality (AHRQ) found the body of evidence for NSSDT for chronic low back pain was insufficient to answer questions on its effectiveness: 1) when compared to

other commonly used therapies, 2) with different patient characteristics, 3) on work disability, and 4) pain relief (magnitude of effect and durability) (Jurecki-Tiller, 2007).

The Australian Medical Services Advisory Committee (MSAC) published a technology assessment on a NSSDT (VAX-D) for low back pain in 2001. This report concluded there was only limited evidence of the effectiveness of VAX-D therapy in one patient group (patients with radiculopathy or radicular pain associated with herniated disc). There is no good quality evidence of the effectiveness of VAX-D therapy in other patient groups (degenerative discogenic radiculopathy and nonspecific low back pain). Overall, it appears that VAX-D therapy provides short-term symptomatic relief from nerve root compression for patients with radiculopathy or radicular pain associated with herniated disc. There is no evidence, however, that VAX-D therapy provides longer term relief or cure of nerve root compression for patients with radiculopathy or radicular pain associated with herniated disc.

A double-blind randomized controlled trial that was not included in any of the appraised evidence syntheses investigated the effectiveness of NSSDT as a treatment for individuals diagnosed with lumbar disc herniation (Demirel, 2017). After 15 sessions of NSSDT, there were no significant differences compared to an active control group in patient-reported outcomes (pain and function) or changes in disc morphology (thickness of herniation, disc height). This trial was judged to have a high risk of bias (attrition and selection bias).

Coding Information

Note: The Current Procedural Terminology (CPT) codes listed in this policy may not be all inclusive and are for reference purposes only. The listing of a service code in this policy does not imply that the service described by the code is a covered or non-covered health service. Coverage is determined by the member's benefit document.

CPT® Code	Description
S9090	Vertebral axial decompression, per session
64722	Decompression, unspecified nerve(s) (specify)
97012	Application of a modality to one or more areas; traction, mechanical

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Review and Approval History

Date	Description
10/11/2007	Original effective date
04/10/2008	Annual review and approval completed
11/11/2008	Policy updated: re-branded - OptumHealth Care Solutions – Physical Health; renumbered (462 to 473)
01/15/2009	Policy reformatted
04/30/2009	Annual review and approval completed
04/08/2009	Annual review and approval completed
10/26/2010	Policy rebranded to “OptumHealth Care Solutions, Inc. (OptumHealth)”
04/07/2011	Annual review and approval completed
04/19/2012	Annual review and approval completed
04/18/2013	Annual review and approval completed
04/17/2014	Annual review and approval completed; Policy rebranded “Optum* by OptumHealth Care Solutions, Inc.”
04/16/2015	Annual review and approval completed
04/21/2016	Annual review and approval completed
04/20/2017	Annual review and approval completed; Legal entity name changed from “OptumHealth Care Solutions, Inc.” to “OptumHealth Care Solutions, LLC.”
04/26/2018	Annual review and approval completed; Policy Background, Evidence Review and References were revised
04/25/2019	Annual review and approval completed; Evidence Review and References were updated
04/23/2020	Annual review and approval completed; No new evidence was identified that supports a change to the policy statement
04/22/2021	Annual review and approval completed; No new evidence was identified that supports a change to the policy statement
05/03/2022	Annual review and approval completed; No new evidence was identified that supports a change to the policy statement
06/29/2022	Updated legal entity name “OptumHealth Care Solutions, LLC.” to *Optum™ Physical Health (“Optum”) includes OptumHealth Care Solutions, LLC; ACN Group IPA of New York, Inc.; ACN Group IPA of California, Inc. d/b/a OptumHealth Physical Health of California; Managed Physical Network, Inc.; and OrthoNet Holdings, Inc. which includes OrthoNet New York IPA, Inc., OrthoNet West, Inc., OrthoNet, LLC, OrthoNet of the South, Inc.
04/27/2023	Annual review and approval completed; no significant changes made to the document. Updated contact email from policy.inquiry@optumhealth.com to phpolicy_inquiry@optum.com.

03/06/2024	Annual review completed. Document content transitioned to new policy template. No substantive changes to clinical content. Literature updated. Approved by Optum Guideline Advisory Committee.
04/25/2024	Annual review and approval by Optum Quality Improvement Committee.
02/12/2025	Annual review. No substantive changes. Approved by Optum Clinical Guideline Advisory Committee.
04/24/2025	Approved by Optum Quality Improvement Committee.