Cohere Medical Policy - Vertebral Body Tethering

Clinical Guidelines for Medical Necessity Review

Version: 3
Cohere Health UMC Approval Date: July 10, 2025
Last Annual Review: July 10, 2025
Revision: Not Applicable
Next Annual Review: July 10, 2026

Important Notices

Notices & Disclaimers:

GUIDELINES SOLELY FOR COHERE'S USE IN PERFORMING MEDICAL NECESSITY REVIEWS AND ARE NOT INTENDED TO INFORM OR ALTER CLINICAL DECISION MAKING OF END USERS.

Cohere Health, Inc. ("**Cohere**") has published these clinical guidelines to determine medical necessity of services (the "**Guidelines**") for informational purposes only, and solely for use by Cohere's authorized "**End Users**". These Guidelines (and any attachments or linked third party content) are not intended to be a substitute for medical advice, diagnosis, or treatment directed by an appropriately licensed healthcare professional. These Guidelines are not in any way intended to support clinical decision making of any kind; their sole purpose and intended use is to summarize certain criteria Cohere may use when reviewing the medical necessity of any service requests submitted to Cohere by End Users. Always seek the advice of a qualified healthcare professional regarding any medical questions, treatment decisions, or other clinical guidance. The Guidelines, including any attachments or linked content, are subject to change at any time without notice.

Other Notices:

Fee schedules, relative value units, conversion factors and/or related components are not assigned by the AMA, are not part of CPT, and the AMA is not recommending their use. The AMA does not directly or indirectly practice medicine or dispense medical services. The AMA assumes no liability for data contained or not contained herein.

Guideline Information:

Specialty Area: Musculoskeletal Care
Policy Name: Cohere Medical Policy - Vertebral Body Tethering
Type: [**X**] Adult (18+ yo) | [_] Pediatric (0-17yo)

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Medical Necessity Criteria

Service: Vertebral Body Tethering

Cohere Health takes an evidence-based approach to reviewing imaging and procedure requests, meaning that sufficient clinical information must be provided at the time of submission to determine medical necessity. Documentation must include a recent and detailed history, physical examination related to the onset or change in symptoms, relevant lab results, prior imaging, and details of previous treatments. Advanced imaging or procedures should be requested after a clinical evaluation by the treating provider, which may include referral to a specialist.

- When a specific clinical indication is not explicitly addressed in the Cohere Health medical policy, medical necessity will be determined based on established clinical best practices, as supported by evidence-based literature, peer-reviewed sources, professional society guidelines, and state or national recommendations, unless otherwise directed by the health plan.
- Requests submitted without clinical documentation, or those that do not align with the provided clinical information—such as mismatched procedure, laterality, body part, or CPT code—may be denied for lack of medical necessity due to insufficient or inconsistent clinical information.
- When there are multiple diagnostic or therapeutic procedures requested simultaneously or within the past three months, each will be reviewed independently. Clinical documentation must clearly justify all of the following:
    - The medical necessity of each individual request
    - Why prior imaging or procedures were inconclusive, or why additional/follow-up studies are needed
    - How the results will impact patient management or treatment decisions
- Requests involving adjacent or contiguous body parts may be considered not medically necessary if the documentation demonstrates that the

patient's primary symptoms can be adequately assessed with a single study or procedure.

Description

Vertebral body tethering (VBT) is a minimally invasive surgical procedure to treat growing, skeletally immature children with scoliosis.[1] VTB uses pedicle screws implanted in the vertebral bodies near the curved area of a spine with scoliosis. A cable is attached to the screws and tightened, providing some immediate straightening of the spine and possibly continued correction as the patient grows. VBT operates under the Hueter-Volkmann law, which indicates that greater compression on a growth plate inhibits growth, whereas less compression (or distraction) can promote it.[3] Although the procedure has shown promising results, it lacks the long-term safety and efficacy data to recommend its use robustly.

Medical Necessity Criteria

Indications

Vertebral body tethering is considered appropriate if **ANY** of the following is **TRUE**:

- This procedure is clinically unproven and not medically necessary. There is inconclusive evidence of its effectiveness.

Non-Indications

Vertebral body tethering is not considered appropriate if **ANY/ALL** of the following is **TRUE**:

- This is not applicable, as there are no indications.

Level of Care Criteria

None

Procedure Codes (CPT/HCPCS)

CPT/HCPCS Code	Code Description
0656T	Vertebral body tethering, anterior; up to 7 vertebral segments

0657T	Vertebral body tethering, anterior; 8 or more vertebral segments
0790T	Revision (eg, augmentation, division of tether), replacement, or removal of thoracolumbar or lumbar vertebral body tethering, including thoracoscopy, when performed
22836	Anterior thoracic vertebral body tethering, including thoracoscopy, when performed; up to 7 vertebral segments
22837	Anterior thoracic vertebral body tethering, including thoracoscopy, when performed; 8 or more vertebral segments
22838	Revision (eg, augmentation, division of tether), replacement, or removal of thoracic vertebral body tethering, including thoracoscopy, when performed
22899	Unlisted procedure, spine

Medical Evidence

In a recent umbrella review that included 11 relevant systematic reviews and meta-analyses, Lau et al. (2024) attempted to put together a comprehensive and diligent analysis of the current existing evidence of the effectiveness and safety of VBT for the management of adolescent idiopathic scoliosis, putting together the results from various systematic reviews and meta-analyses. They found that VBT has shown promising results for treating adolescent idiopathic scoliosis. However, because VBT is a relatively new procedure, it lacks thorough information on its long-term effects, and the rates of complications remain a significant concern.[5]

In 2019, the United States Food and Drug Administration (FDA) approved the Tether Vertebral Body Tethering System for skeletally immature patients with progressive idiopathic scoliosis after failing or not tolerating brace wear. The approval is under the Humanitarian Device Exemption (HDE). This FDA approval pathway allows marketing specific medical devices for rare diseases or conditions affecting 8,000 or fewer individuals in the U.S. annually.[1] In 2024, the FDA provided a safety update based on the post-market experience using the Tether Vertebral Body Tethering System in pediatric patients since the 2019 approval.[2]

Alasadi et al. (2024) conducted a comprehensive review of VBT for adolescent idiopathic scoliosis, a non-fusion alternative to anterior or posterior spinal fusion. They reviewed the literature and reports on radiographic outcomes, complications, and anesthetic considerations. Their review illustrates the potential benefits as well as the challenges of adolescent idiopathic scoliosis treatment with VBT. In their conclusions, they stress the importance of skeletal maturity concerning complications such as approach and procedure-related issues with pulmonary complications, device breakage, and high reoperation rates.[4]

References

1. Food and Drug Administration (FDA). Summary of safety and probable benefit. The Tether - Vertebral Body Tethering System. August 16, 2019. https://www.accessdata.fda.gov/cdrh_docs/pdf19/H190005B.pdf

2. Food and Drug Administration (FDA) Spring 2024 review by the FDA's Pediatric Advisory Committee. The Tether - Vertebral Body Tethering System. https://www.fda.gov/media/178434/download

3. Bartoníček J, Naňka O. The true history of the Hueter-Volkmann law. *Int Orthop*. 2024 Oct;48(10):2755-2762. doi: 10.1007/s00264-024-06254-w. Epub 2024 Jul 31. PMID: 39083236; PMCID: PMC11422464

4. Alasadi H, Rajjoub R, Alasadi Y, et al. Vertebral body tethering for adolescent idiopathic scoliosis: a review. *Spine Deform*. 2024 May;12(3):561-575. doi: 10.1007/s43390-023-00806-7. Epub 2024 Jan 29. PMID: 38285164

5. Lau KKL, Kwan KYH, Wong TKT, et al. Current status of vertebral body tethering for adolescent idiopathic scoliosis: An umbrella review. *Orthop Res Rev.* 2024 Dec 10;16:305-315. doi: 10.2147/ORR.S502053. PMID: 39679276; PMCID: PMC11645900

Policy Revision History/Information

Original Date: October 6, 2023		
Review History		
Version 2	04/26/2024	Annual review. Policy criteria and medical literature reviewed.
Version 3	07/10/2025	Annual review. New description section. No changes to procedure codes. Literature review - The medical evidence section has been updated.