

## Recommendation Statement

# Screening for Idiopathic Scoliosis in Adolescents

## U.S. Preventive Services Task Force (USPSTF)

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This statement summarizes the current U.S. Preventive Services Task Force (USPSTF) recommendations on screening for idiopathic scoliosis in adolescents and the supporting scientific evidence, and updates the 1996 recommendations contained in the *Guide to Clinical Preventive Services*, second edition.<sup>1</sup>

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### Summary of Recommendation

- **The U.S. Preventive Services Task Force (USPSTF) recommends against the routine screening of asymptomatic adolescents for idiopathic scoliosis.**

**Rating:** [D Recommendation](#).

*Rationale:* The USPSTF did not find good evidence that screening asymptomatic adolescents detects idiopathic scoliosis at an earlier stage than detection without screening. The accuracy of the most common screening test—the forward bending test with or without a scoliometer—in identifying adolescents with idiopathic scoliosis is variable, and there is evidence of poor followup of adolescents with idiopathic scoliosis who are identified in community screening programs.

The USPSTF found fair evidence that treatment of idiopathic scoliosis during adolescence leads to health benefits (decreased pain and disability) in only a small proportion of people. Most cases detected through screening will not progress to a clinically significant form of scoliosis. Scoliosis needing aggressive treatment, such as surgery, is likely to be detected without screening.

The USPSTF found fair evidence that treatment of adolescents with idiopathic scoliosis detected through screening leads to moderate harms, including unnecessary brace wear and unnecessary referral for specialty care. As a result, the USPSTF concluded that the harms of screening adolescents for idiopathic scoliosis exceed the potential benefits.

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## Contents

- ▶ [Background](#)
- ▶ [Clinical Considerations](#)
- ▶ [Cost and Research Considerations](#)
- ▶ [References](#)
- ▶ [Members of the Task Force](#)
- ▶ [Contact the Task Force](#)
- ▶ [Available Products](#)
- ▶ [Copyright and Electronic Dissemination](#)

### Task Force Ratings

Strength of Recommendations and Quality of Evidence

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## Background

In 1996, the Task Force found insufficient evidence to recommend for or against routine screening of asymptomatic adolescents for idiopathic scoliosis (an "I" recommendation).<sup>1</sup> Since then, the Task Force criteria to rate the strength of the evidence have changed. Therefore, the recommendation statement that follows has been updated and revised based on the current Task Force methodology and rating of the strength of the evidence.<sup>2</sup>

[Return to Contents](#)

## Clinical Considerations

- Screening adolescents for idiopathic scoliosis is usually done by visual inspection of the spine to look for asymmetry of the shoulders, scapulae, and hips. A scoliometer can be used to measure the curve. If idiopathic scoliosis is suspected, radiography can be used to confirm the diagnosis and to quantify the degree of curvature.
- The health outcomes of adolescents with idiopathic scoliosis differ from those of adolescents with secondary scoliosis (i.e., congenital, neuromuscular, or early onset idiopathic scoliosis). Idiopathic scoliosis with onset in adolescence may have a milder clinical course.<sup>4</sup>
- Conservative interventions to treat curves detected through screening include spinal orthoses (braces) and exercise therapy, but they may not significantly improve back pain or the quality of life for adolescents diagnosed with idiopathic scoliosis.
- The potential harms of screening and treating adolescents for idiopathic scoliosis include unnecessary followup visits and evaluations due to false positive test results and psychological adverse effects, especially related to brace wear. Although routine screening of adolescents for idiopathic scoliosis is not recommended, clinicians should be prepared to evaluate idiopathic scoliosis when it is discovered incidentally or when the adolescent or parent expresses concern about scoliosis.

[Return to Contents](#)

## Cost and Research Considerations

- Although the USPSTF did not consider costs in making its recommendation and did not find high-quality studies of the cost-effectiveness of screening, the USPSTF concludes that the costs of a screening program would include the time of primary care clinicians, specialty evaluation, treatment with braces, and followup costs.
- Careful surveillance should accompany screening program activities to evaluate the long-term benefits and harms of treating adolescents for idiopathic scoliosis.

[Return to Contents](#)

## References

1. U.S. Preventive Services Task Force. *Guide to Clinical Preventive Services*, 2nd ed. Washington, DC: Office of Disease Prevention and Health Promotion; 1996.
2. Harris RP, Helfand M, Woolf SH, Lohr KN, Mulrow CD, Teutsch SM, Atkins D. Methods Work Group; Third U.S. Preventive Services Task Force. Current methods of the U.S. Preventive Services Task Force: a review of the process. *Am J Prev Med* 2001;20(3S):21-35.
3. Screening for idiopathic scoliosis in adolescents: update of the evidence for the U.S. Preventive Services Task Force. Agency for Healthcare Research and Quality. 2003. Available at <http://www.preventiveservices.ahrq.gov>.

4. Weinstein SL, Dolan LA, Spratt KF, Peterson KK, Spoonamore MJ, Ponseti IV. Health and function of patients with untreated idiopathic scoliosis: a 50-year natural history study. *JAMA* 2003;289(5):559-67.

[Return to Contents](#)

## Members of the Task Force

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\* Member of the USPSTF at the time this recommendation was finalized. For a list of current Task Force members, go to [www.ahrq.gov/clinic/uspstfab.htm](http://www.ahrq.gov/clinic/uspstfab.htm).

[Return to Contents](#)

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[Return to Contents](#)

## Available Products

The complete information on which this statement is based is contained in the brief update "Screening for Idiopathic Scoliosis in Adolescents"<sup>3</sup> at the U. S. Preventive Services Task Force Web site (<http://www.preventiveservices.ahrq.gov>).

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[Return to Contents](#)

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[Return to Contents](#)

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[USPSTF Topic Index](#)

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