Adolescent Scoliosis: A Primer

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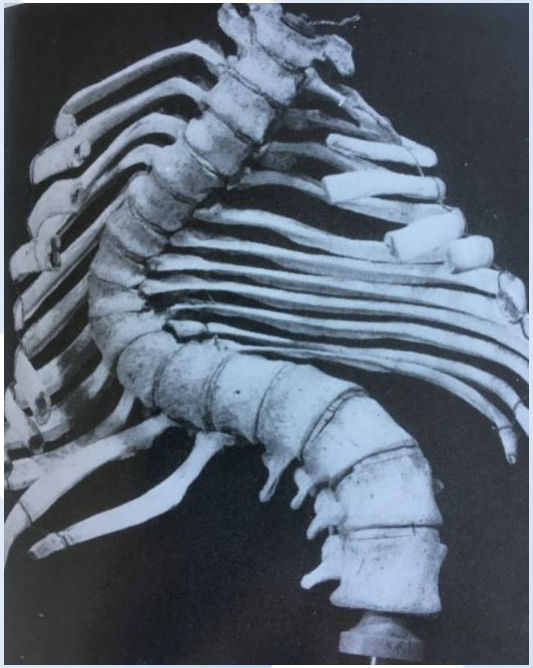
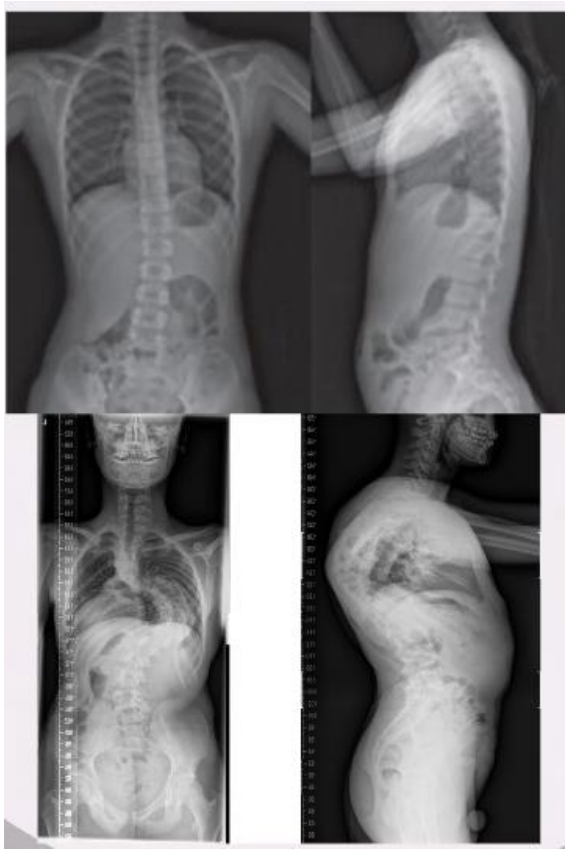
This is Modern Medicine

Overview





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Effect of Adolescence on Spinal Growth

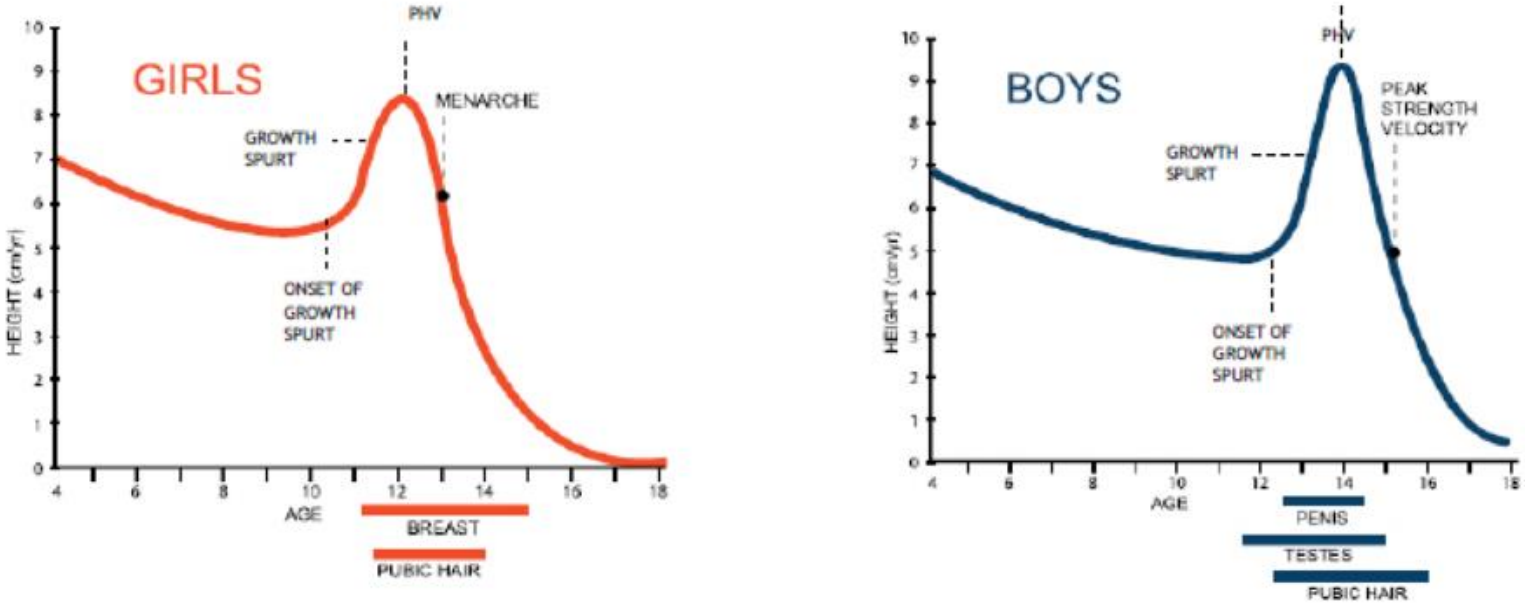

Figure 1. The adolescent growth spurt, and PHV for girls (left) and boys (right). Taken from Canadian Sport for Life (Balyi & Way, 2005)

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Natural History and Risk of Progression

SUPPLEMENT

The Natural History of Adolescent Idiopathic Scoliosis

Stuart L. Weinstein, MD

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TABLE 1. Major Curve Magnitude Average Cobb Angle at Final Follow Up[9]

Cobb Angeles (Mean) (deg.)	
Thoracic	85 (23-156)
Thoracolumbar	90 (50-155)
Lumbar	49 (15-90)
Double major	
Thoracic	79 (30-104)
Lumbar	76 (32-110)

				Age at Detection	
Curve Magnitude					
degrees			10-12 years	13-15 years	16 years
<19			25%	10%	0%
20-29			60	40	10
30-39			90	70	30
>40			100	90	70

FIGURE 2. Probabilities of major curve progression: (skeletally immature patients).

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Clinical Assessment

Atypical Presentations

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Management

- History and Physical Examination
- Appropriate Investigations and Counselling
    - Observation for Progression
    - Bracing in the Skeletally Immature
    - Non-Operative
    - Operative Intervention
- Early referral

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ORIGINAL ARTICLE

Effects of Bracing in Adolescents with Idiopathic Scoliosis

Stuart L. Weinstein, M.D., Lori A. Dolan, Ph.D., James G. Wright, M.D., M.P.H., and Matthew B. Dobbs, M.D.

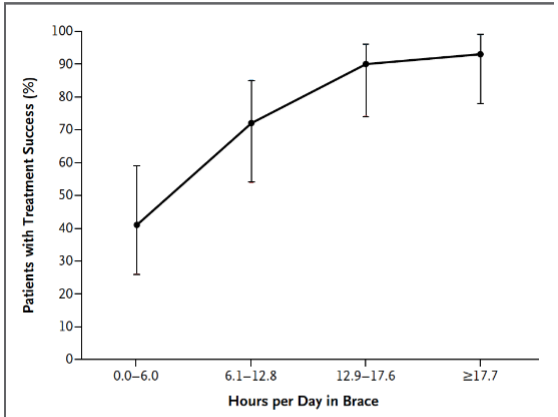

Figure 2. Rate of Treatment Success According to Average Hours of Daily Brace Wear.

During the first 6 months, patients wore the brace for a mean (±SD) of 12.1±6.6 hours per day (range, 0 to 23.0). Duration of brace wear was positively associated with the rate of success ($P<0.001$ by the chi-square test). The lowest quartile of wear (mean hours per day, 0 to 6.0) was associated with a success rate of 42%, whereas brace wear for an average of at least 12.9 hours per day was associated with success rates of 90 to 93%. I bars indicate 95% confidence intervals.

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Management

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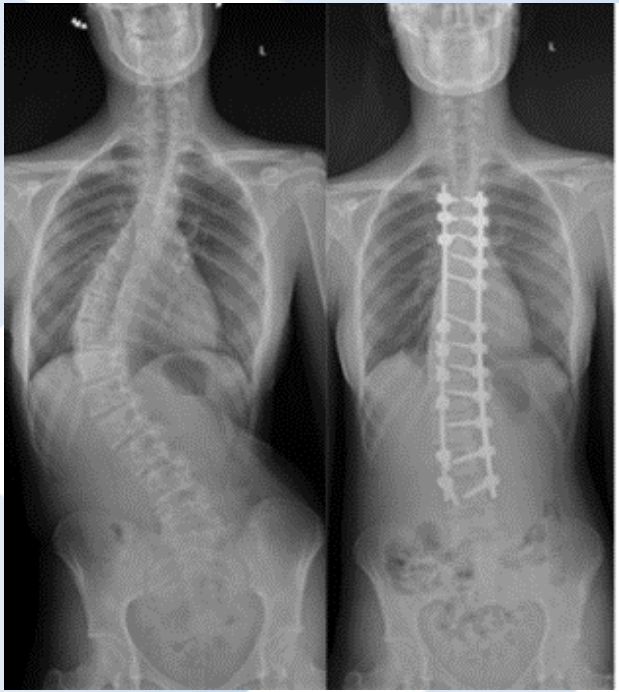

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Easy referral pathway

Rapid Access to Specialist

Explanation of the condition and understanding what to expect

Comprehensive care

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