



**Signs of Scoliosis**

- Visible body asymmetry
- Clothes hanging unevenly
- Rib prominences on one side
- Leaning posture
- History of back pain or fatigue

**Cobb Angle**

- Standard X-ray measurement for scoliosis
- Quantifies spinal curvature in degrees:
  - $\geq 10^\circ$ : Mild
  - $> 25^\circ$ : Moderate
  - $> 40 - 50^\circ$ : Severe

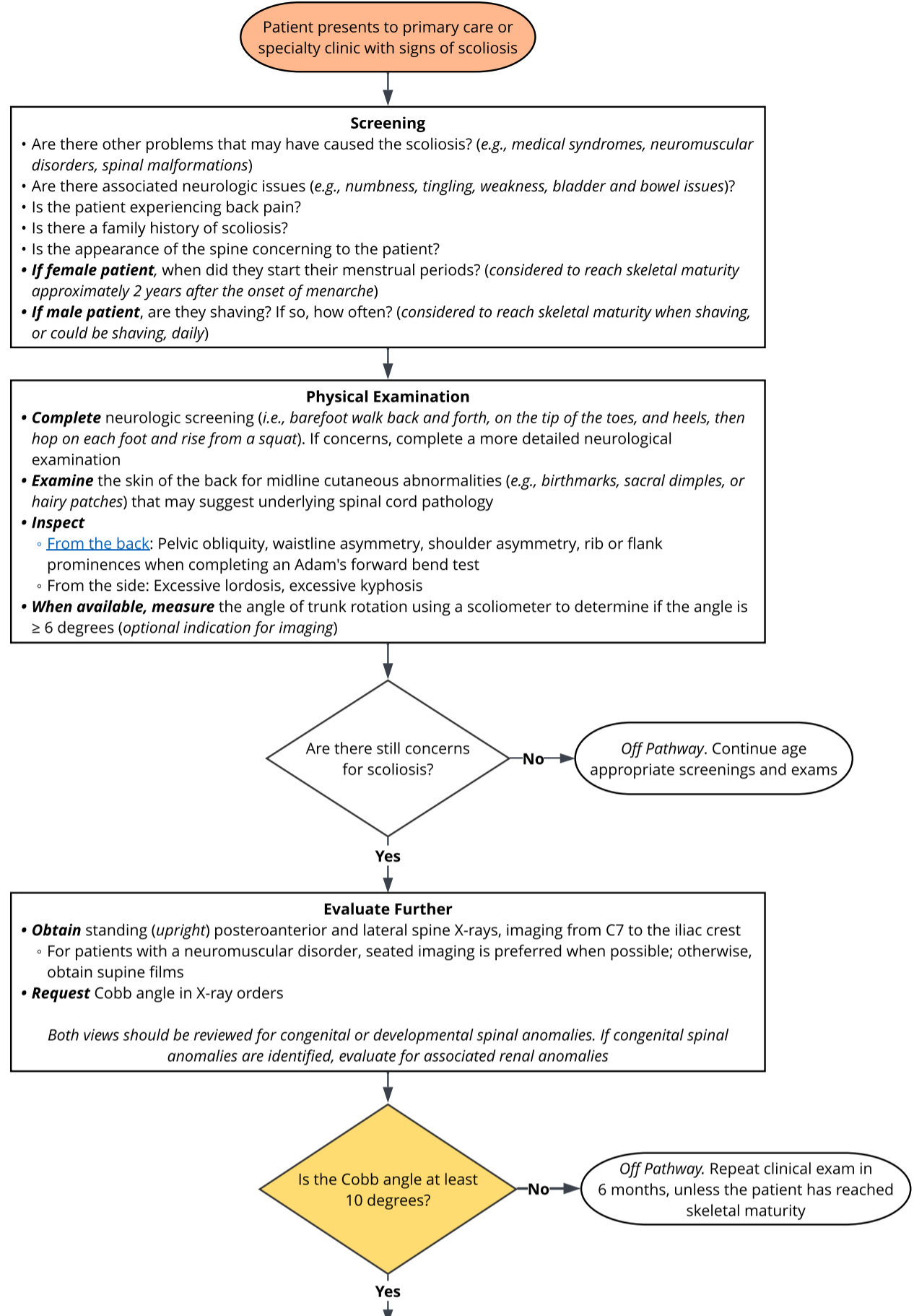
**Red Flags**

- Pain unresponsive to physical therapy
- Double thoracic curves
- Neurofibromatosis
- Connective tissue disorders
- Left thoracic curvature
- Bowel and bladder dysfunction
- Hyperreflexia
- Sustained numbness and tingling
- Asymmetric reflexes
- Foot deformity
- Leg length discrepancy

*If there are red flags, recommend referral to Orthopedic Surgery within 2-4 weeks*

**High Risk of Progression**

- Females (particularly pre-pubertal)
- Periods of rapid growth
- Thoracic curves
- Double curves
- Greater curve magnitude ( $> 25^\circ$  prior to skeletal maturity)



Growth Potential <small>(Tanner's Staging, also known as Sexual Maturity Rating, see <a href="#">link</a>)</small>	Follow-Up Based on Cobb Angle <small>(assuming red flags are not present)</small>				
	10 - 14 degrees	15 - 19 degrees	20 - 24 degrees	25 - 29 degrees	$\geq 30$ degrees
Age under 10 <small>(Tanner's Stage 1)</small>	• Follow-up: 6 months • Repeat: History and evaluation	• <a href="#">Refer to Orthopedic Surgery</a> ; visit recommended within 1 month*	• <a href="#">Refer to Orthopedic Surgery</a> ; visit recommended within 1 month*	• <a href="#">Refer to Orthopedic Surgery</a> ; visit recommended within 1 month*	• <a href="#">Refer to Orthopedic Surgery</a> ; visit recommended within 1 month*
Age 10 or older, but <b>Pre-pubertal</b> <small>(Tanner's Stage 1)</small>	• Follow-Up: 1 year • Repeat: History and evaluation	• Follow-Up: 3 - 6 months • Repeat: History and evaluation • <a href="#">Refer to Orthopedic Surgery</a> if X-ray progression*	• <a href="#">Refer to Orthopedic Surgery</a> ; visit recommended within 1 month*	• <a href="#">Refer to Orthopedic Surgery</a> ; visit recommended within 1 month*	• <a href="#">Refer to Orthopedic Surgery</a> ; visit recommended within 1 month*
<b>Pubertal</b> Premenarcheal female <b>-or-</b> Tanner's Stage 2 or 3	• Follow-Up: 1 year • Repeat: History and evaluation	• Follow-Up: 3 months • Repeat: History and evaluation • <a href="#">Refer to Orthopedic Surgery</a> if X-ray progression*	• <a href="#">Refer to Orthopedic Surgery</a> ; visit recommended within 1 month*	• <a href="#">Refer to Orthopedic Surgery</a> ; visit recommended within 1 month*	• <a href="#">Refer to Orthopedic Surgery</a> ; visit recommended within 1 month*
<b>Postmenarcheal</b> female <b>-or-</b> Tanner's Stage 4	• Follow-Up: 1 year • Repeat: History and evaluation	• Follow-Up: 6 months • Repeat: History and evaluation • <a href="#">Refer to Orthopedic Surgery</a> if X-ray progression*	• Follow-Up: 6 months • Repeat: X-ray/Cobb angle • <a href="#">Refer to Orthopedic Surgery</a> if X-ray progression*	• Follow-Up: 6 months • Repeat: X-ray/Cobb angle • <a href="#">Refer to Orthopedic Surgery</a> if X-ray progression*	• <a href="#">Refer to Orthopedic Surgery</a> , if Cobb angle $> 45$ degrees*
<b>Skeletally Mature</b> 2 years postmenarche or Tanner's Stage 5	• No treatment • Reassure	• No treatment • Reassure	• Follow-Up: 1 year • Repeat: X-ray/Cobb angle • <a href="#">Refer to Orthopedic Surgery</a> if X-ray progression*	• Follow-Up: 1 year • Repeat: X-ray/Cobb angle • <a href="#">Refer to Orthopedic Surgery</a> if X-ray progression*	• <a href="#">Refer to Orthopedic Surgery</a> , if Cobb angle $> 45$ degrees*
<b>Named Medical Syndromes or Neuromuscular Disorders</b> <small>(e.g., Marfan syndrome, Ehlers-Danlos syndrome, cerebral palsy, spina bifida)</small>	• Follow-up: 6 months • Repeat: History and evaluation	• Follow-up: 6 months • Repeat: History and evaluation	• Follow-up: 6 months • Repeat: History and evaluation	• <a href="#">Refer to Orthopedic Surgery</a> ; visit recommended within 1 month*	• <a href="#">Refer to Orthopedic Surgery</a> ; visit recommended within 1 month*

Note. X-ray progression = An increase in the Cobb angle of 5 degrees or more. \*For [referrals to Orthopedic Surgery](#), please include age, if pre-pubertal or not (for females), and Cobb angle