

Scoliosis screening for healthcare professionals



Introductions

Overview of scoliosis

- Description and definition



Overview of scoliosis

Myths ☹️

1. Back pain is an indicator for idiopathic scoliosis.
2. Backpacks cause scoliosis.
3. Bad bedding can cause scoliosis.
4. Bad posture causes scoliosis.

Facts 😊

1. Adolescent Idiopathic Scoliosis has few symptoms.
2. 30 percent of families have a history of scoliosis.
3. Scoliosis affects 2 to 3 percent of the adolescent population.
4. Vertebrae changes are multifactorial.



Overview of scoliosis

- Statistics
- Consequences of untreated scoliosis
- Treatments
 - Observation
 - Orthopaedic intervention
 - Orthotics (spinal brace)
 - Surgery

Orthopaedic management related to X-rays

- Curve Checks Reference Guide, Page 3
 - 9 degrees
 - 15 degrees
 - 26 degrees
 - 30/30 degrees
 - 52/30 degrees
 - 85 degrees

Overview of scoliosis

- Types of scoliosis
 - Congenital
 - Neuromuscular
 - Idiopathic
 - Mechanical
 - Other

Conditions associated with scoliosis

- Neurofibromatosis
- Down's syndrome
- History of thoracotomy for esophageal atresia, cardiac and pulmonary disorders
- Prader-Willi syndrome
- Noonan syndrome
- Osteogenesis imperfecta
- Pectus excavatum and pectus carinatum
- Klippel-Feil syndrome
- Sprengel's deformity
- Chiara malformation
- Marfan's syndrome



“Curve Checks” DVD

- What is scoliosis?
- What causes scoliosis?
- Why is screening important?
- How is scoliosis treated?
- What is my role as a screener?
- Screening preparation

Observe a screening

- Normal Screening—Daniella—Chapter 8

5 steps to scoliosis screening

- Receive the screening form from the child
 - Review form
 - Check that demographic information is complete
 - Or
 - Preprinted label is attached

5 steps to scoliosis screening

- Greet the child by name
 - Shoes off for screening
- Ask the child to
 - Step up to the line.
 - Put your feet together, weight equally on both legs.
 - Take a breath in. Let it out and let your arms hang naturally at your sides.

5 steps to scoliosis screening

- Step 1: Anterior view
- Observe for truncal asymmetry:
 - Shoulder height asymmetry at lateral end of clavicle
 - Unequal distance between arms and torso—one arm hangs out from torso more than the other
 - Uneven pelvis—one hip appears higher/more prominent than the other



5 steps to scoliosis screening

- Step 2: Adams Forward Bend Test

Instruct child:

- Put the palms of your hands together, arms out straight.
- Put your chin on your chest. Roll down until hands touch your feet.



5 steps to scoliosis screening

- Step 2: continued
- Observe for torso asymmetry
 - Upper thoracic prominence
 - Lower thoracic prominence
 - Lumbar prominence



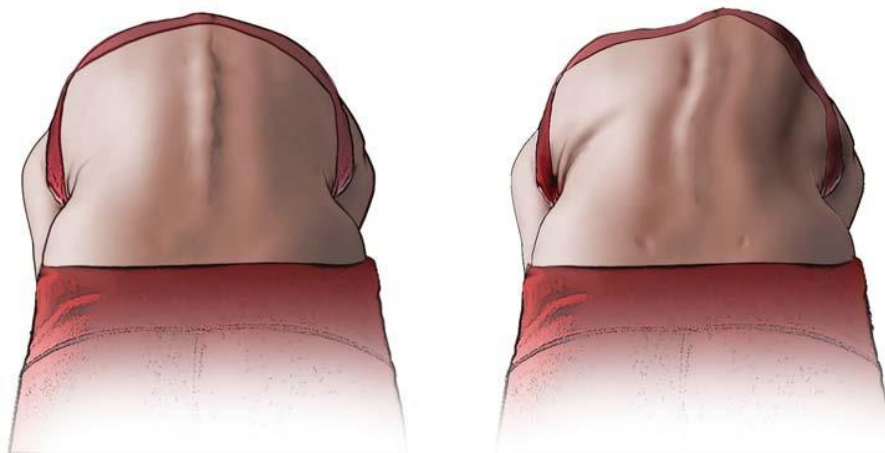
5 steps to scoliosis screening

- Step 3: Posterior view
- Instruct Child: Turn around and put your toes on the line, weight equally on both legs. Take a breath in. Let it out, and let your arms hang at your sides.
- Observe for truncal asymmetry:
 - Asymmetry of shoulders
 - Scapula prominence and/or asymmetry
 - Waist crease asymmetry
 - Unequal distance of arms to torso
 - Spinal curvature



5 steps to scoliosis screening

- Step 4: Bending away
- Instruct child: Put the palms of your hands together, arms out straight. Put your chin on your chest. Roll down until your hands touch your feet.
- Observe for truncal asymmetry:
 - Upper thoracic prominence
 - Lower thoracic prominence
 - Lumbar prominence



5 steps to scoliosis screening

- Step 5: Sagittal view
- Instruct child: Turn to the side and put your feet together. Put the palms of your hands together, arms out straight. Put your chin on your chest. Roll down until hands touch your feet.
- Look for sharp angle—
abnormal contour in
lower thoracic area
(kyphosis)



Questions



“Curve Checks” DVD

- Screening children, Chapters 9 through 14
 - Karlena
 - Erin
 - Brittany
 - Christopher
 - Alexis
 - Valentina

- “Curve Checks” DVD quiz

Questions



“Curve Checks” DVD

- Chapter 15, Your Job is Important

Documentation—screener

- Mark abnormal findings on screening form.
 - Anterior view
 - Posterior view
 - Sagittal view
 - Check negative or positive
 - Print name
 - Check category of screener’s credentials
 - Record any concerns

Demonstration and/or practice

- Demonstration of Practicum
- Practicum
- Screening Scenarios

Screening scenarios

Screening #1–Katie

- *In front position:*
 - Shoulders are even
 - Arm hangs out from body more on left
 - Hips appear even
- *As she bends forward:*
 - No rib prominence
 - No lumbar prominence
- *In back position:*
 - Shoulders are even
 - Scapulae are even
 - Waist fold is slightly deeper on left
 - Left arm hangs out from her body
- *As she bends forward:*
 - Slight rib prominence on right
 - No lumbar prominence
- *In side view:* C-shaped curve
- **Is she a positive screen? ___ Yes ___ No**

Screening scenarios

Screening #1–Katie

- *In front position:*
 - Shoulders are even
 - Arm hangs out from body more on left
 - Hips appear even
- *As she bends forward:*
 - No rib prominence
 - No lumbar prominence
- *In back position:*
 - Shoulders are even
 - Scapulae are even
 - Waist fold is slightly deeper on left
 - Left arm hangs out from her body
- *As she bends forward:*
 - Slight rib prominence on right
 - No lumbar prominence
- *In side view:*
 - C-shaped curve
- **Is she a referral?** _____ **Yes** ____ **No**
- **Why or why not?** _____



Screening scenarios

Screening #2–Alonzo

- *In front position:*
 - Shoulders are even
 - Arms hang evenly from body
 - Right hip appear higher than left
 - With hands on hips – right hip appears higher
- *As he bends forward:*
 - Right lumbar prominence
- *In back position:*
 - Difficulty maintaining correct feet position
 - Shoulders are even
 - Scapulae are even
 - Waist folds are even
 - Arms hang evenly at his sides
- *As he bends forward:*
 - No prominence
- *In side view:*
 - C-shaped curve
- **Is he a positive screen? ___Yes___ No**



Screening scenarios

Screening #2–Alonzo

- *In front position:*
 - Shoulders are even
 - Arms hang evenly from body
 - Right hip appear higher than Left
 - With hands on hips – right hip appears higher
- *As he bends forward:*
 - Right lumbar prominence
- *In back position:*
 - Difficulty maintaining correct feet position
 - Shoulders are even
 - Scapulae are even
 - Waist folds are even
 - Arms hang evenly at his sides
- *As he bends forward:*
 - No prominence
- *In side view:*
 - C-shaped curve
- **Is he a referral? ___Yes ___ No**
- **Why or why not? _____**



Screening scenarios

Screening #3–Samantha

- *In front position:*
 - Right shoulder higher than left
 - Arms hang evenly from body
 - Hips appear even
- *As she bends forward:*
 - Right rib prominence
 - Lumbar area is even
- *In back position:*
 - Shoulders are even
 - Right scapula is elevated & more pronounced
 - Waist folds are even
 - Arms hang evenly from body
- *As she bends forward:*
 - Right rib prominence
 - No lumbar prominence
- *In side view:*
 - C-shaped curve
- **Is she a positive screen? ___Yes ___ No**

Screening scenarios

Screening #3–Samantha

- *In front position:*
 - **Right shoulder higher than left**
 - Arms hang evenly from body
 - Hips appear even
- *As she bends forward:*
 - **Right rib prominence**
 - Lumbar area is even
- *In back position:*
 - Shoulders are even
 - **Right scapula is elevated and more pronounced**
 - Waist folds are even
 - Arms hang evenly from body
- *As she bends forward:*
 - **Right rib prominence**
 - No lumbar prominence
- *In side view:*
 - C-shaped curve
- **Is she a referral? _____ Yes ____ No**
- **Why or why not? _____**



Screening scenarios

Screening #4–Nikolas

- *In front position:*
 - Shoulders are even
 - Arms hang evenly from body
 - Hips appear even
- *As he bends forward:*
 - Left rib elevation
 - Left lumbar elevation
- *In back position:*
 - Left shoulder elevation
 - Left scapulae elevation
 - Waist folds are even
 - Arms hang evenly at his sides
- *As he bends forward:*
 - Left rib elevation
 - Then a right rib elevation
 - Then a left lumbar elevation
- *In side view:*
 - C-shaped curve
- **Is he a positive screen? ___ Yes ___ No**



Screening scenarios

Screening #4–Nikolas

- *In front position:*
 - Shoulders are even
 - Arms hang evenly from body
 - Hips appear even
- *As he bends forward:*
 - Left thoracic elevation
 - Left lumbar elevation
- *In back position:*
 - Left shoulder elevation
 - Left scapulae elevation
 - Waist folds are even
 - Arms hang evenly at his sides
- *As he bends forward:*
 - Left thoracic elevation
 - Then a right thoracic elevation
 - Then a left lumbar elevation
- *In side view:*
 - C-shaped curve
- **Is he a referral? _____ Yes _____ No**
- **Why or why not? _____**



Screening scenarios

Screening #5–Madison

- *In front position:*
 - Shoulders are even
 - Arms hang evenly from body
 - Hips appear even
- *As she bends forward:*
 - No rib prominence
 - No lumbar prominence
- *In back position:*
 - Shoulders are even
 - Scapulae are even
 - Waist folds are even
 - Arms hang evenly from body
- *As she bends forward:*
 - No rib elevation
 - No lumbar prominence
- *In side view:*
 - C-shaped curve
- **Is she a positive screen? ___ Yes ___ No**

Screening scenarios

Screening No. 5—Madison

- *In front position:*
 - Shoulders are even
 - Arms hang evenly from body
 - Hips appear even
- *As she bends forward:*
 - No rib prominence
 - No lumbar prominence
- *In back position:*
 - Shoulders are even
 - Scapulae are even
 - Waist folds are even
 - Arms hang evenly from body
- *As she bends forward:*
 - No rib elevation
 - No lumbar prominence
- *In side view:*
 - C-shaped curve
- **Is she a referral?** _____ **Yes** ___ **No**
- **Why or why not?** _____



Screening scenarios

Screening No. 6—Jacob

- *In front position:*
 - Shoulders are even
 - Arms hang evenly from body
 - Hips appear even
- *As he bends forward:*
 - No rib prominence
 - No lumbar prominence
- *In back position:*
 - Shoulders are even
 - Arms hang evenly from body
 - Waist folds are even
 - Arms hang evenly at his sides
- *As he bends forward:*
 - No rib prominence,
 - No lumbar prominence
- *In side view:*
 - Hump in the middle of his back
- **Is he a positive screen? ___Yes___ No**

Screening scenarios

Screening No. 6—Jacob

- *In front position:*
 - Shoulders are even
 - Arms hang evenly from body
 - Hips appear even
- *As he bends forward:*
 - No rib prominence
 - No lumbar prominence
- *In back position:*
 - Shoulders are even
 - Arms hang evenly from body
 - Waist folds are even
 - Arms hang evenly at his sides
- *As he bends forward:*
 - No rib prominence
 - No lumbar prominence
- *In side view:*
 - Prominence in the middle of his back**
- **Is he a referral?** **Yes** **No**
- **Why or why not?** _____



Additional screenings—“Curve Checks” DVD

- Jasmine
- Mahogany

Screenings in our school

- Accommodations related to our school
- Dates of screening

Thank you

- Thank you for coming and learning how to screen adolescents for scoliosis.