Postural Screening Program

Area School Resource
Updated March 2014
To provide more background information for you when viewing this presentation, we have placed notes at the bottom of the slides. If you print a handout with notes, you will be able to read the self instruction text.
Scoliosis

- Side to Side Curvature
- Rotation
Scoliosis

Kyphosis (Round Back)

Lordosis (Sway Back)
Scoliosis

Normal vs Kyphosis
Scoliosis - Causes

- Idiopathic (Unknown Cause) – 80%
- Congenital (Abnormal Formation of Vertebrae)
Congenital Scoliosis

Hemivertebrae
Scoliosis - Causes

- Neuromuscular (Muscle Weakness)
- Severe Injury (Paraplegia)
- Genetics
- Leg Length Discrepancy
Causes - Myths
Causes - Myths
5% (1 in 20) Adolescents
5% With Scoliosis Need Tx
Boys = Girls
20% Family History
Long Term Effects

- Cosmetics
- Pulmonary
- Cardiac
- Functional Disability
Screening Procedure

- Have Child Stand With Feet Together
- Knees Straight
- Arms at Side
- Facing Forward
- With Palms Together, Bend Forward
Normal Standing

- Head above buttocks
- Shoulders level
- Waistline symmetrical
Normal – Bending Forward

Both sides Symmetrical
Normal – Lateral

- Shoulders above hips, knees and ankles
- No increase Kyphosis
- No increase Lordosis
Normal Bend – Side

Smooth arch of thoracic spine
Possible Signs of Scoliosis

- Head is Not Centered Over the Buttocks
- A Shoulder or Shoulder Blade Higher
- A Curve in the Spine or Midline
- An Increase Space Between One Arm and Body (Uneven Waistline)
- Uneven Hips
- On Forward Bending a "Rib Hump” or Hump in the Back Area
Scoliosis

One shoulder higher

Asymmetry of hips

Unequal distance between arms & body
Scoliosis – Forward Bend

Asymmetry on forward bend
Possible Signs of Kyphosis

- Shoulders Hunch Forward Excessively
- Increase Rounding Of Spine in Thoracic Region
- Rounding is More Prominent On Forward Bending
- Increase Swayback
Kyphosis

Head forward from body

Increase rounding

Increase lordosis
Rounding prominent on Forward Bend
Hands on, Clothes on Screen

- Look At and Feel With Your Hands
- Place Hands On Both Shoulders
- Place Thumbs Under The Shoulder Blades
- Place Hands On Both Sides Of Waistline
- Assist Child to Place Palms Together and Bend Forward
Boys and Girls Can Be Screened at the Same Time
Decrease Anxiety with the Kids
Screeners Feel More Confident With Results
Place Hands on Shoulders

Look at your hands

Feel with your hands

Is one hand higher?
Hands under Shoulder Blades

Is one hand looking more prominent?

Is one hand higher than the other?

Are thumbs pointing to each other?
Hands on Waistline

Is one hip higher than the other?
Scoliosis?

Head above buttocks?
Shoulders level?
Scapula symmetrical?
Waistline even?

Scoliosis suspected?
Scoliosis

Rib hump confirms scoliosis
Scoliosis?

Shoulders level?

Scapula symmetrical?

Waistline even?

Scoliosis suspected?
Scoliosis?

Rib hump
Confirms scoliosis
Scoliosis?

Shoulders level?
Scapula symmetrical?
Waistline even?
Scoliosis suspected?
Scoliosis

Rib hump
Confirms scoliosis
Scoliosis?

Shoulders level?
Scapula symmetrical?
Waistline even?
Scoliosis suspected?
No Scoliosis

No rib hump
No scoliosis
Kyphosis?
Kyphosis

Bending forward Confirms kyphosis
What About Obese Children?
Screening

Look at each person individually
Screening

Scoliosis?
Screening Handicapped Children

- Sit child in chair to level the pelvis
- Bend forward with arms between legs
If patient *ONLY* has an elevated shoulder, do not refer
Pain is usually *NOT* associated with scoliosis.

There may be *Discomfort* with Kyphosis in the mid-thoracic spine.
Screening Organization

- Names By Grades (or Classes) in Alphabetical Order
- 3 Persons (2 Volunteers)
  - One To Screen
  - One To Document
  - One To Line Up Children
- Pass, Refer, Recheck, Absent
Places to Screen

- Protect Privacy…..
- End of Lockers in Locker Room
- End of Bookshelves in a Library
- Nurses Office
- Hallway Outside Classroom
- Other
Spinal Growth Females

- 11 yr - Spurts Begins (before breast and pubic hair)
- 12 yr – Peak
- 13 yr – Menarche (2/3 growth spurt over)
- 14yr – Spurt Over
Spinal Growth Males

- Two years behind
Observation/Exercise

- Mild Curves (10-25 Degrees)
- Clinical Examination Periodically Until End of Growth
- Exercise Alone Does *Not* Affect The Curve
Bracing

- Moderate Curvatures (25-45 degrees)
- Purpose – To Prevent Moderate Curves From Growing Worse While the Child is Still Growing
- Does Not Improve The Curve
- 70% Effective
Milwaukee Brace
Lumbar Sacral Orthosis - LSO
Nighttime Bending Brace
- Large Curves (>45 degrees)
- Recommended When No Other Treatment Can Prevent The Curve From Getting Worse
Purpose

- To Stop The Curve From Getting Worse
- Straight vs Straighter
- Balance
We’ve Come a Long Way
Pre-Op – Scoliosis
What Grades Should You Screen?

Depends on Availability of Resources

- 4 Grades – 5th, 6th, 7th, 8th
- 3 Grades – 5th, 6th, 7th
- 2 Grades – 6th, 7th
- 1 Grade – 7th
Resources

- National Scoliosis Foundation
  www.scoliosis.org
  1-800-673-6922
  “Growing Straighter and Stronger”

- Scoliosis Association, Inc
  www.scoliosis-assoc.org
  1-800-800-0669
Resources

- Scoliosis Research Society
  www.srs.org
  414-289-9107
- American Academy of Orthopaedic Surgeons
  The Orthopaedic connection
  www.aaos.org
Resources

University Hospitals Rainbow Babies & Children’s Hospital
Division of Pediatric Orthopaedics
Connie Poe-Kochert CNP
216-844-5420