

### Description

Scoliosis is a physical condition characterized by a sideways curvature of the spine greater than 10 degrees determined by a spinal X-ray.

Most cases are idiopathic, which means the cause is unknown.

AIS accounts for 85 percent of the cases of idiopathic scoliosis. Thus, scoliosis is most often seen in the middle school-age group, when rapid growth is occurring. Girls and boys can be affected.

Scoliosis screening is a clinical process, designed to identify children who have early signs of scoliosis. The goal is to provide timely follow-up and conservative medical treatment before the curve progresses and may require surgery. The American Academy of Orthopaedic Surgeons (AAOS), Scoliosis Research Society (SRS), Pediatric Orthopaedic Society of North America (POSNA) and the American Academy of Pediatrics (AAP) agree that effective clinical scoliosis screening programs provide the opportunity to recognize signs of the condition and make referrals for appropriate medical care.

After scoliosis is identified or suspected, follow-up is essential to measure the degree of curvature and determine treatment options. A spinal X-ray is used to determine the degree of curvature.

Current treatment options consist of medical observation, spinal orthotics (bracing) and corrective surgery. Medical observation includes checkups at designated intervals until the skeleton has reached adult height or skeletal maturity. The goal of orthotic intervention is to keep the curve from progressing until skeletally mature. Corrective surgery is indicated if the curve is progressive and is only needed in severe cases. Current research is focused on understanding the development of idiopathic scoliosis and identifying additional modalities that may provide beneficial treatment options and interventions.

Kyphosis, an accentuated outward curve, or rounding, of the upper back and lordosis, or swayback, may occur independently or in conjunction with scoliosis.

### Establishing a school screening program

The person responsible for the school district's scoliosis screening program will coordinate activities with administration, teachers, parents, nurses and screeners.

- Coordinate with school administration.
  - Provide scoliosis screening background information to school system personnel, including:
    - Administrators
    - School nurses
    - Clinic workers
    - Student representatives
    - Others involved in the screening process
  - If needed, review:
    - The legal requirements for scoliosis screening
    - Scope of the problem
    - Rationale and technique of screening
  - Discuss the grades to be screened and methodology for screening.
    - Individual state law governs parameters for scoliosis screening, including the screening process and which grade levels will be screened and the process. Exact ages and grade levels to screen will vary depending on state law, grade structure

of schools and school preference.

- Identify the grades to be screened and the follow-up plan for positive screenings.
- Verify screeners are trained.
- Arrange for untrained health workers to attend an educational scoliosis screening workshop.
  - You may choose to have two or more adults participate in the screening process for security or liability concerns.
- Assistants can help with student preparation and management.
- Determine screening date and site.
  - Schedule the screening so that there are no conflicts with testing, field trips, etc.
  - Possible class times for screening include P.E. or exploratory periods.

## Notification of parents

Send out a screening letter or consent form (see appendix) two weeks prior to the screening date(s).

- Enclose the scoliosis screening information, Fast Facts About Scoliosis, available in English and Spanish (see appendix). Visit [choa.org/scoliosis](http://choa.org/scoliosis) to download the forms.
- Instruct teachers to collect and save Do Not Screen forms.

Publicize the screening program on the school website, PTA, student groups and a parent letter (see appendix).

## Notification of students

Conduct orientation sessions for each class of students to be screened.

- Show educational "Scoli What?" video on [choa.org/scoliosis](http://choa.org/scoliosis) that explains the importance of scoliosis screening to students.
- Allay any fears the students may have.

## Preparation

Determine the amount of time needed to conduct the screenings based on student enrollment minus written parent requests for exemption from screening.

- With an assistant, an experienced screener should be able to screen 20 to 30 students in an hour.

On the day before the scheduled scoliosis screening, remind the students of the screening's purpose.

- Remind the girls to wear a bathing suit top, halter top or sports bra.
- Speak positively.

Have a roster of students available.

- Students whose parents have submitted a request for exemption are excused from screening.
  - Appropriate personnel should be notified privately concerning these students.

## Designated screening area

- Check the designated screening area at least one week prior to screening to help make sure the cleanliness of the area and that all lights are in working order. Rechecking one day prior is also recommended.
- Provide privacy for individual screening.
  - Use of screens is encouraged.
  - Cover windows.
  - Locate other students in a designated area where they cannot see their peers being screened.
- Place tape on the floor to indicate where student should stand.
- Provide a place for students to place their shirt or top during screening.
- Make sure the room is well-lit.
- Keep the room's temperature comfortable, as students will be removing shirts or tops.
- Provide a chair, small table or clipboard, and pen for screener.
- Consider placing a horizontal masking tape line on the back wall to check for uneven shoulders.
- Check that the floor is free of uneven areas.

## Day of screening

- Student completes demographic section of screening form or the school may provide preprinted labels with required information (see appendix).
- Child should remove shoes during the screening.
- Record the name of each student screened, or use a class roster.
- Note absences on the class roster.

## Recording

- Screener records findings on screening form (see appendix).
- Document reasons for exclusion on school health record.

## Rescreening (if applicable)

State regulations may require rescreening to verify initial screening findings.

- If secondary screeners were not present at the primary screenings, arrange to rescreen positive or abnormal findings within two weeks.
  - Have the child remove shoes for second screening.
  - Document the second screening on the screening form.
  - Document the second screening results on the school health record.
- Arrange to screen those students who missed initial screening at that time.
  - Document the screening results.
  - Rescreen students with positive findings, if applicable.
- If possible, call parents to explain findings as a courtesy.
  - Explain that signs of scoliosis were noted.
  - These signs indicated that the child needs to be checked by his doctor.
  - Assure the parents that although follow-up is needed, only the physician will determine if the child has scoliosis.
  - Children do not usually have pain associated with signs of scoliosis.
  - Written notification is required and will be forthcoming.

## Follow-up activities

- Referral process
  - Provide written notification of a possible spinal deformity to the parent or guardian (see example in the appendix).
    - Written referral letter is the responsibility of the healthcare professional at the screening.
- Maintain the names of children screened and the results.
- Document
  - All findings, positive and negative, should be recorded on the student’s cumulative health record.
  - For positive findings, additional referral information and results of medical evaluations should be recorded.
- Follow-up
  - If parents or guardians do not submit the results of the medical evaluation in writing, the designated health professional shall contact them to ascertain the outcome of the medical evaluation.
    - Discussion of the child-specific signs of scoliosis can be helpful to allay fears and reinforce the need for completing the evaluation process.
- Provide in-school support for those children diagnosed with scoliosis, such as:
  - Adaptation of physical education classes
  - Supervision of brace care
  - Counseling of child and parent or guardian related to prescribed treatment plan
    - Is the child returning for rechecks (observation) at prescribed intervals?
    - Is the child wearing brace as prescribed?
    - Is the child experiencing difficulties?
    - Possible consultation with a physical therapist
  - Education of peers and staff regarding child’s specific needs
- School health professional may develop an individualized healthcare plan (see resources).
- Submit annual report to the designated state agency, as required by state mandates.