



# Scoliosis Screening Guidelines For Schools

2018

The University of the State of New York  
The State Education Department  
Office of Student Support Services



# THE UNIVERSITY OF THE STATE OF NEW YORK

## Regents of The University

BETTY A. ROSA, <i>Chancellor</i> , B.A., M.S. in Ed., M.S. in Ed., M.Ed., Ed.D. ....	Bronx
T. ANDREW BROWN, <i>Vice Chancellor</i> , B.A., J.D. ....	Rochester
ROGER TILLES, B.A., J.D. ....	Great Neck
LESTER W. YOUNG, JR., B.S., M.S., Ed.D. ....	Beechhurst
CHRISTINE D. CEA, B.A., M.A., Ph.D. ....	Staten Island
WADE S. NORWOOD, B.A. ....	Rochester
KATHLEEN M. CASHIN, B.S., M.S., Ed.D. ....	Brooklyn
JAMES E. COTTRELL, B.S., M.D. ....	New York
JOSEPHINE VICTORIA FINN, B.A., J.D. ....	Monticello
JUDITH CHIN, M.S. in Ed. ....	Little Neck
BEVERLY L. OUDERKIRK, B.S. in Ed., M.S. in Ed. ....	Morristown
CATHERINE COLLINS, R.N., N.P., B.S., M.S. in Ed., Ed.D. ....	Buffalo
JUDITH JOHNSON, B.A., M.A., C.A.S. ....	New Hempstead
NAN EILEEN MEAD, B.A. ....	Manhattan
ELIZABETH S. HAKANSON, A.S., M.S., C.A.S. ....	Syracuse
LUIS O. REYES, B.A., M.A., Ph.D. ....	New York
SUSAN W. MITTLER, B.S., M.S. ....	Ithaca

### Commissioner of Education and President of The University

MARYELLEN ELIA

### Executive Deputy Commissioner

ELIZABETH R. BERLIN

### Associate Commissioner of School Operations and Management Services

RENEE L. RIDER

The State Education Department does not discriminate on the basis of age, color, religion, creed, disability, marital status, veteran status, national origin, race, gender, genetic predisposition or carrier status, or sexual orientation in its educational programs, services and activities. Portions of this publication can be made available in a variety of formats, including braille, large print or audio tape, upon request. Inquiries concerning this policy of nondiscrimination should be directed to the Department's Office for Diversity and Access, Room 530, Education Building, Albany, NY 12234.

# Acknowledgements

These guidelines were revised with the assistance of an advisory committee

Carol Bumbolow, MS, BA, RN, NCSN  
Past President New York State Association of School Nurses

Dr. Robert Cheney, MD  
Clinical Professor of Orthopaedic Surgery  
Albany Medical College

Dr. Louis A. Corsaro, MD, FAAP

Cynthia DiLaura Devore, MD, MS, FAAP  
Pediatrician  
Specializing in School Health

Olga Jeanne Dolly MS, FNP-C, SNT  
Medical Director  
Indian River Central School District  
Secretary NYS Association of School Nurses

Karen Hollowood RN, BSN, MSEd  
Associate in School Nursing  
New York State Education Department

Linda Khalil MSEd., BSN, RN, SNT  
Director  
New York State Center for School Health

Dr. Jeffrey Lozman, MD  
Clinical Professor of Orthopaedic Surgery  
Albany Medical College

Dr. Sarah Irons Marques, MD, MSPH  
Physician Consultant  
New York State Center for School Health

Martha Morrissey RN, BS, MS  
Associate in School Nursing  
New York State Education Department

Betsy A. Williams AAS, RN  
President  
New York State Association of School Nurses

Gail Wold BSN, RN  
Health Services Support Specialist  
New York State Center for School Health

# Table of Contents

Foreword.....	5
<b>Purpose of a School Scoliosis Screening Program .....</b>	<b>6</b>
<b>Legislative and Regulatory Background .....</b>	<b>6</b>
<b>Planning the Screening Program .....</b>	<b>8</b>
Who Should be Screened.....	8
Who Should Not be Screened.....	8
Education and Communication .....	9
Equipment and Location .....	9
<b>Conducting the Screening.....</b>	<b>11</b>
Prescreening Steps.....	11
Screening Procedure.....	11
Documentation.....	13
Notification.....	14
<b>Resources .....</b>	<b>15</b>

## **Foreword**

*Scoliosis Screening Guidelines* provide schools with a framework for establishing the scoliosis screening program required under New York State Education Law section 905 and the regulations promulgated thereunder, specifically 8 NYCRR Part 136. These regulations were amended in 2017 effective July 1, 2018. These guidelines will assist schools with understanding the purpose of scoliosis screening in schools and developing an effective scoliosis screening program including planning, implementation, and follow-up procedures. This document is intended for use by administrators and school health personnel. Every attempt has been made to ensure that the information and resources contained in this document reflect best practice in the field of school health. School districts should review these guidelines with their counsel, as necessary to incorporate the guidance with district policy.

# **Purpose of a School Scoliosis Screening Program**

The purpose of a scoliosis screening program is to identify students with spinal curvatures that will require further follow up evaluation by a healthcare provider. Scoliosis, a lateral and/or rotational curvature of the spine that may include vertebral rotation, is the most common spine deformity in the pediatric population. The development of this curvature occurs most often between the ages of 10-18 years. The skeletons of youth in this age group grow rapidly, and therefore there is a chance that a curve may worsen as the spine continues to grow. Curve progression occurs at rates 7-8 times higher in girls than boys. Identifying curves as early as possible and before further growth occurs, increases treatment options if needed.

Other less common curvatures of the spine that may be noted during screening include lordosis and kyphosis. Lordosis is an accentuated forward curvature of the lower spine. Kyphosis is an accentuated rounding of the upper spine. Findings indicative of either of these curvatures also warrant an evaluation by a healthcare provider.

## **Legislative and Regulatory Background**

Education Law §902 requires school districts to employ a duly licensed qualified physician, or a nurse practitioner to perform the duties of the director of school health services. The director of school health services is commonly referred to as the medical director.

Education Law §905, requires the director of school health services of public schools to conduct screening examinations of vision, hearing, and scoliosis of all students as defined in Commissioner's Regulations. The results of a screening for scoliosis that is positive must be provided to the parent/guardian in writing within 90 days of the date of the screening. A district may receive a waiver from performing scoliosis screenings from the Commissioner for financial costs, after a public hearing is held in the district regarding such waiver.

Commissioner's Regulation §136.3(e)(1)(i) requires that scoliosis screenings are conducted in school if results of scoliosis screening are not provided to the school on the student's health certificate (the physical exam completed by a private healthcare provider), in grades 5 and 7 for girls, and grade 9 for boys. The screening shall include examination of the unclothed spine (cervical, thoracic, lumbar and sacral vertebral segments) from the front, back and sides under adequate illumination while student is both standing and is bent forward at the waist, and observation of the range of motion of the spine in all directions.

Pursuant to Commissioner's Regulation §136.3(2)(f), scoliosis screening is not required where a student or the parent or person in parental relation to such student objects thereto on the grounds that such examinations conflict with their genuine and sincere religious beliefs. A written and signed statement from the student, parent or person in parental relation to the student that they hold such beliefs must be submitted to the principal or the principal's designee in which case the principal or principal's designee may require supporting documents.

# Planning the Screening Program

Scoliosis screening in school is to be conducted by the district director of school health services, commonly referred to as the medical director. In accordance with Education Law, the medical director may delegate this duty to the school nurse or other **appropriate licensed health professionals** (which includes physician assistants, nurse practitioners, registered professional nurses, and physical therapists - LPNs scope of practice does not include assessment and therefore they are not to conduct scoliosis screenings). If the medical director chooses to delegate this duty, the delegation should be in writing, with specific parameters of screening results or observations that are to be brought to the medical director's attention.

## Who Should be Screened

Girls in grades 5 and 7, and boys in grade 9 who did not have a scoliosis screening noted on their health certificate should be screened. School health personnel should develop systems to track which students will need a screening completed at school when filing the health certificate or appraisal in the individual student's cumulative health record (CHR).

## Who Should Not be Screened

Students who meet one or more of the following are not required to be screened in school:

1. Students with a provider documented diagnosis of scoliosis, kyphosis, lordosis, or other spinal abnormality should not be screened.
2. Students who have a health condition that would prevent them from being able to complete the screening should not be screened, including but not limited to; students with musculoskeletal, respiratory, neurological, or cardiac conditions that will be aggravated by or will prevent them from completing the screening.
3. Students who have an approved religious exemption from school administration for vision screening. A written copy of the approved exemption should be filed in the student's cumulative health record (8 NYCRR §136.3(2)(f)).

When the health professional conducting the screening is uncertain if the student cannot be screened, he/she should consult with the medical director or the student's healthcare provider on whether the student can be safely screened at school. The parent/guardian of students whom the medical director has determined cannot be safely

screened at school should be notified in writing, ideally preceded by a telephone call, that the screening was not on the health certificate or health appraisal and that it cannot be completed at school. The parent/guardian should be instructed to follow up with their provider.

## Education and Communication

A few weeks or days before the screening exams are to be conducted, school health personnel should instruct students on what the screening exam is for, what an exam for scoliosis entails, and when it will be conducted. Students are to be instructed on what they can wear during the screening. This can be accomplished during a class, small group, assembly, webinar or other multimedia presentation.

Written information on the upcoming scoliosis screening should be posted on the school website, in a newsletter, or in a written notice provided to parents/guardians. This should inform parents/guardians that a screening is performed when the information is not included on the physical exam form submitted to the school, or the physical examination was completed at school. Information should include when screenings will be completed.

## Equipment and Location

School health personnel will need to ensure they have the necessary equipment to conduct a scoliosis screening. Recommended equipment includes but is not limited to:

- Privacy screens
- Disposable exam gowns
- Scoliometer (device and use approved by medical director)
- Directed light source such as a floor lamp as fluorescent ceiling lights may not provide sufficient light to see all abnormalities.
- Tape for marking floor

Screening locations should be located where students can change in privacy, such as the school health office, locker room, or gymnasium. Movable privacy screens may be used to create a private examination area. Care should be taken to ensure other students or staff cannot overhear discussions between the examiner and the student being examined. The room, temperature, and lighting should be adjusted for the comfort of both examiner and examinee. The place where the student will stand for the examination should be marked on the floor with tape to ensure consistency. The

examiner may need a desk and chair to use to conduct the exam and document results in each student's CHR.

# Conducting the Screening

Best practice would be that another adult is with the examiner. Schools are encouraged to check with their insurance carrier to see if the presence of two adults is required.

## Prescreening Steps

Since scoliosis screenings require that the examiner observes the unclothed spine, care should be taken to protect the student's privacy. This is particularly important for the required age group who tend to be self-conscious and sensitive about their changing bodies. Measures to ensure this include:

- Students should be separately and individually examined;
- All students should be given the option of wearing an exam gown that opens in the back;
- Female students should be examined while wearing a bra or bikini top. Tank tops, full leotards or bathing suits are not acceptable as they do not permit examiner to observe spine unclothed; and
- Students should be permitted to keep clothing on lower body, unless it obscures the spine or top portion of the hips, in which case student can be instructed to remove the clothing that is obstructing view of the spine while keeping undergarments on. Students should be given the option of wearing shorts or sweat/yoga pants (e.g. gym attire) during the examination.

## Screening Procedure

1. The student should be instructed to remove their shoes.
2. The student should stand on the tape mark, with their back facing the examiner. The student should be instructed to stand straight naturally, keeping their knees straight (but not locked) and feet together flat on the floor, while distributing weight equally on both feet.
3. With the spine exposed (student may need to lower clothing on lower body in the back to expose the gluteal cleft), examiner standing approximately 5-7 feet from the student- and views the student from behind noting the following:

<b><i>Normal Findings</i></b>	<b><i>Findings Indicating a Curvature</i></b>
The head is centered over the mid buttocks (gluteal cleft)	Head not centered directly above the mid buttocks (gluteal cleft)
The shoulders are level	One shoulder higher than the other
The shoulder blades are level and equally prominent	One shoulder blade higher or more prominent than the other
Ribs are symmetrical	One side of ribs more prominent than the other
Arms are equally distant from the body	Space between arms and body greater on one side
Spine appears straight and midline	Spine C shaped or S shaped, vertebrae appear to rotate to one side, or student appears to be leaning to one side.
Hips are level and symmetrical	One hip higher than the other
Skin folds are symmetrical	Skin folds are asymmetrical
Thoracic and lumbar curvatures are not exaggerated	Thoracic (rounded upper back) or lumbar curvatures (sway back) are exaggerated

Any findings indicating a curvature require that the parent/guardian is informed in writing and that they should follow up with their private healthcare provider for further evaluation. Such findings should not be discussed with the student to avoid alarming him/her.

3. While the student is standing, the examiner should view the student from both the right and left sides and from the front. The examiner should note if there is any sign of a grossly accentuated thoracic or lumbar curvature.
4. Adams Forward Bend Test: Instruct the student to bend forward at the waist until their back is horizontal, keeping their knees straight and allowing their arms to hang down loosely.
5. The examiner should view the student from behind. The examiner should view the spine while seated in a chair, or while bending or squatting to be able to view the spine at approximately the same level as the student's hips, noting the following:

<b><i>Normal Findings</i></b>	<b><i>Findings indicating a Curvature</i></b>
Both sides of the upper back are symmetrical	One side of upper back is more prominent or higher than the other
Both sides of the lower back and/or hips are symmetrical	One side of the lower back and/or hip is more prominent or higher than the other
Arm length is symmetrical	One arm hangs lower than the other

Any findings indicating a curvature require that the parent/guardian is informed in writing and that they should follow up with their private healthcare provider for further evaluation. Such findings should not be discussed with the student to avoid alarming him/her.

6. While the student is bending forward, the examiner should view the student from both the right and left sides and from the front. This may be accomplished by the examiner moving to each vantage point around the student or instructing the student to turn to each side and front, each time repeating the Adams forward bend test. At each vantage point the examiner should note if there is any sign of thoracic or lumbar prominence as noted in above chart. Any signs of prominence or asymmetry may indicate a curvature and the student should be referred to their private provider for further evaluation. Such findings should not be discussed with the student to avoid alarming him/her.
7. If a scoliometer is available and the examiner is trained in the use of the meter, a measurement should be taken of students showing signs of a curvature. Examiner should follow the manufacturer's instructions on using the meter.
8. Observe student's range of motion by having the student complete movements through all planes while standing: Flexion (may use information gained in observing previous steps), extension, side bends and rotation at the waist. Movements should be fluid and done with ease. Students should not force the movement or move more than what is comfortable for them. Note if there is hesitation, shaking or catching, use of momentum to reach full range, use of hands to return to upright position, or complaints of pain- ask when pain occurs and where it is located. Any students with difficulty completing any of the range of motion movements require that the parent/guardian is informed in writing and that they should follow up with their private healthcare provider for further evaluation.
9. Students with abnormal findings should be rescreened (by a different examiner if possible) to avoid unnecessary referrals. This second screening may be done on the same day.

## Documentation

Pursuant to Rules of the Board of Regents, Part 29 §29.2(3), licensed health professionals must maintain a record for each patient which accurately reflects the evaluation and treatment of the patient. Documentation in the individual student's CHR should include the date the screening was completed, the observations made by the health professional, any related statements by the student, scoliometer reading if taken, special circumstances related to the examination, and any communication with the provider and/or parent/guardian. The documentation must be completed and signed by

the health professional conducting the exam pursuant to Commissioner's Regulations §136.3(e)(iii)(2).

The results of the screening are recorded on the student's cumulative health record (CHR) and signed by the health professional who completed the screening. The records of individual student screenings recorded in the cumulative health record are to be kept as long as the minimum retention period, which is until the student reaches age 27. See records retention requirements [NYSED Records Retention Schedule for School Health Records](#).

## Notification

As stated earlier, Commissioner's Regulations require that the results of a screening for scoliosis that is positive for the potential presence of a curvature or spine problem must be provided to the parent/guardian in writing within 90 days of the screening. School health personnel may precede this with a telephone call, and/or through a parent- conference regarding screening results. To avoid unnecessarily alarming the student, such written notification should not be sent home with the student.

**Please Note:** *School scoliosis screenings are not diagnostic, and should not state that a student has scoliosis, but instead should state that findings indicate a possible curvature that requires a more thorough evaluation by a healthcare provider.*

Such notification should be in the parent/guardian's primary language and must state the findings of the examiner completing the screenings along with referring the parent/guardian to have their child examined by their healthcare provider. This notification should also include an evaluation form for the parent/guardian to take to the appointment with their private provider, and then return the completed evaluation form to school. A sample form is available at [New York Center for School Health- Screening Guidelines and Resources](#).

The information on the form provides an opportunity for the provider to order any activity restrictions or accommodations that need to be made. The completed form should be filed in the student's CHR. Schools should develop and implement a system for follow-up of referrals to ensure they track that parent/guardians have followed through on referrals.

Schools should develop a system to follow up on referrals to ensure they track that the parent/guardian has followed through on the referral. If the parent/guardian has not followed up on the referral, school personnel should explore the reason(s) why and provide assistance and/or resources. Schools should develop procedures for documenting all communication, along with efforts undertaken by school personnel to assist the parent/guardian in finding low cost or free health care and/or health insurance options as necessary.

# **Resources**

[American Academy of Orthopaedic Surgeons](#)

[American Academy of Pediatrics- Statement of Endorsement Screening for Idiopathic Scoliosis in Adolescents](#)

[New York State Center for School Health](#)

[NYSED Office of Student Support Services-School Health Services](#)

[Pediatric Orthopaedic Society of North America](#)

[Position Statement- Screening for the Early Detection for Idiopathic Scoliosis in Adolescents](#)

[Scoliosis Research Society](#)