



## Pupils with Physical Disabilities

### Kyphosis



## Kyphosis



### Classroom-based tips (focus on instructional methods)

1. **Inform the class about the presence of a pupil with kyphosis through age-appropriate means** such as a project, discussion, parental participation, storytelling or the involvement of the child himself/herself.
2. **Provide activities promoting acceptance and support in order to avoid marginalisation**, for instance, discussions on various types of disabilities and specifically on kyphosis.
3. **Plan suitable activities devised to meet the needs of the pupil**, in consultation with the healthcare provider.
4. **Consider activities/exercises which can be realised with less physical effort but maintaining same/similar learning objectives as the other pupils in the class.**  
<http://www.eupd.ro/wp-content/uploads/2011/09/Curriculum.pdf>
5. **Provide a specific set of teaching materials** for example in digital form so that pupils with kyphosis do not have to carry heavy books in and out of school.
6. **Provide copies of teachers' notes or recorded lectures**, as well as digital notes for pupils using technology.
7. **Provide options for tutoring or extra time to make up assignments and complete the tasks.**
8. **Provide options for adapted physical activities after consulting with the pupil's physiotherapist.** Appropriate physical activity is important for pupils with kyphosis. Differentiate goals accordingly; focus on recreation, and not competition or strength building, and modify playing rules and numbers of players in a team, while maintaining some basic rules. All these aspects related to the increase of accessibility of practicing different sports by pupils with kyphosis, fully require the teacher's creativity, and even that of the players. [Reference: Cristea, Ștef, Dragoș, *Adapted Motrical Activities - Theoretical And Methodical Aspects*, Oradea, 2014]
9. **Be aware of safety concerns such as falls, stairs and loss of balance associated with kyphosis** [Reference: Huffman, Fontaine, Price, *Health Problems in the Classroom PreK-6: An A-Z Reference Guide for Educators*, p. 275]
10. **Arrange for the child's safe exit procedures from the classroom in case of an emergency.** [Reference: Huffman, Fontaine, Price, *Health Problems in the Classroom PreK-6: An A-Z Reference Guide for Educators*, p. 275]
11. **Ensure ergonomic sitting and positioning in the classroom for pupils with kyphosis and minimise non-ergonomic movements.** Consult the pupil's physiotherapist for specific seating recommendations.

12. **Ensure ergonomic position in computer labs, and make assistive technology adaptations when necessary.** [Reference: <http://www.eupd.ro/wp-content/uploads/2011/09/Curriculum.pdf>]
13. **Consider activities/exercises which can be realised with less physical effort while maintaining the same or similar learning objectives.** [Reference: <http://www.eupd.ro/wp-content/uploads/2011/09/Curriculum.pdf>]
14. **Discreetly correct pupil's posture when necessary in class.**



## School-based practical tips (focus on instructional methods)

### Community

1. **Provide for special services in or out of school, as appropriate such as school counseling and physiotherapy.** [Reference: Dana Cristea, Mirela Ștef, Paul Dragoș, *Adapted Motrical Activities - Theoretical And Methodical Aspects*, Oradea, 2014. [http://www.fefsoradea.ro/PDF/curs/Dragos/Activitati%20motrice%20adaptate\\_curs.pdf](http://www.fefsoradea.ro/PDF/curs/Dragos/Activitati%20motrice%20adaptate_curs.pdf)]
2. **Find and have available contact details of local and national associations for kyphosis** for further information and support.
3. **Monitor the safety of pupils during their curricular and extra-curricular activities** during their classes, breaks and other types of activities.

### Class Divisions / Arrangements

Ensure appropriate adaptations, accommodations and modifications are made to the instruction given, and other activities, including availability of assistive technology.

### Curricular Adaptations

1. Provide opportunities for individualised support and differentiation of the learning process if needed.
2. **Make the physical education class and sports activities in school accessible by adjustment of playing areas** (dimension, surface); equipment modification (lighter balls, balls with sounds), and modification of net height. (Dana Cristea, Mirela Ștef, Paul Dragoș, *Adapted Motrical Activities - Theoretical And Methodical Aspects*, Oradea, 2014).
3. Ensure appropriate adaptations, accommodations and modifications are made to the instruction given, and other activities, including availability of assistive technology.

## Discipline

**Monitor the safety of pupils during their curricular and extra-curricular activities** during their classes, breaks and other types of activities.

## Parents / Parents/ Associations

1. **Arrange meetings between the parents and the staff and other professionals working with the pupils** such as the physiotherapist, so as to learn as much as possible about the diagnosis, the pupil's current level of ability and possible needs during the course of the school year.
2. Facilitate family support and confidence in parenting a child with kyphosis.

## Safety

1. Provide access and facilities in order to develop inclusive school projects, events and celebrations for all pupils, providing facilities for those with kyphosis to be able to participate, taking into consideration issues like safety conditions, hall accommodation and traffic in the corridors.
2. **Make the physical education class and sports activities in school accessible by adjustment of playing areas** (dimension, surface); equipment modification (lighter balls, balls with sounds), and modification of net height. [Reference: Dana Cristea, Mirela Ștef, Paul Dragoș, *Adapted Motrical Activities - Theoretical And Methodical Aspects*, Oradea, 2014]
3. **Monitor the safety of pupils during their curricular and extra-curricular activities during their classes, breaks and other types of activities.**

## School Celebrations / Events / Activities

Provide access and facilities in order to develop inclusive school projects, events and celebrations for all pupils, providing facilities for those with kyphosis to be able to participate, taking into consideration issues like safety conditions, hall accommodation and traffic in the corridors.

## School Projects

Provide opportunities for individualised support and differentiation of the learning process if needed.

## Pupil Support

1. **Provide for special services in or out of school, as appropriate such as school counseling and physiotherapy.** [Reference: Dana Cristea, Mirela Ștef, Paul Dragoș, *Adapted Motrical Activities - Theoretical And Methodical Aspects*, Oradea, 2014.  
[http://www.fefsoradea.ro/PDF/curs/Dragos/Activitati%20motrice%20adaptate\\_curs.pdf](http://www.fefsoradea.ro/PDF/curs/Dragos/Activitati%20motrice%20adaptate_curs.pdf)]

2. **Arrange meetings between the parents and the staff and other professionals working with the pupils** such as the physiotherapist, so as to learn as much as possible about the diagnosis, the pupil's current level of ability and possible needs during the course of the school year.
3. Facilitate family support and confidence in parenting a child with kyphosis.
4. Provide opportunities for individualised support and differentiation of the learning process if needed.
5. **Allow time and space for pupils with kyphosis** that may temporarily use splints or other similar devices, to adjust and adapt.
6. **Provide individual support for pupils with kyphosis** that may have missed school for therapies or medical operations.
7. **Find and have available contact details of local and national associations** for kyphosis for further information and support.

## Technology

Ensure appropriate adaptations, accommodations and modifications are made to the instruction given, and other activities, including availability of assistive technology.

## Supportive Literature

Definition: In general terms, kyphosis is a condition that involves an exaggerated rounding of the back. According to a specialised definition, "structural kyphosis is a posterior convex deformity of the spine that may appear in childhood then worsen with growth, most notably during the pubertal growth spurt. The abnormal curvature may be smooth, defining round kyphosis, or may display a sharp angular pattern. [...] Angular kyphosis is the most severe of the two forms. The main causes of round kyphosis are postural kyphosis and Scheuermann's disease. The spontaneous outcome is favorable, and round kyphosis is well tolerated in adulthood. [...] Surgery is reserved for severe rigid kyphosis in older children and for kyphosis responsible for refractory pain or neurological deficits. Many conditions may cause angular kyphosis, whose greater severity is related to a greater potential for progression and neurological impairment." (*Kyphosis: New Insights for the Healthcare Professional*, Atlanta, Scholarly Editions, 2013)

**Degrees of deformity:** "There is a high incidence of thoracolumbar scoliosis, kyphosis and kyphoscoliosis in many dysplasias, particularly including spondyloepiphyseal dysplasia congenital, spondylometaphyseal dysplasia, spondyloepimetaphyseal dysplasia, diastrophic dysplasia, Kniest syndrome, Morquio's disease, metatropic dwarfism, and pseudo-achondroplasia. These deformities in the skeletal dysplasias have a marked tendency to occur much earlier, progress more quickly, and be more rigid than those in idiopathic conditions." ([Frederic Shapiro](#), *Pediatric Orthopedic Deformities*, Gulf Professional Publishing, 2002, p.782)

## Websites and EU Reports

British Scoliosis Society <http://www.britscoliosissoc.org.uk/>

National Scoliosis Foundation <http://www.scoliosis.org/>

Scoliosis Association (UK) - <http://www.sauk.org.uk/>

Asociația îmbunătățirea vieții - <http://www.imparte.ro/Fundatii/Buzau/ASOCIATIA-IMBUNATATIREA-VIETII-429>

Federația Română a Asociațiilor de Fizioterapie – FRAF - <http://rofizioterapie.ro/>

Societatea de Fizioterapie dr. Nicolae Robănescu - <http://societaterobanescu.ro/>

Asociația profesională a fizioterapeuților Muntenia - <https://www.kinetoterapia.ro/>

The Scheuermann's Disease Fund, a fund of The Pittsburgh Foundation, <https://www.diseasemaps.org/scheuermanns-kyphosis/organization/102>

National Report on Children and Young Adults Health in Romania, 2015  
<http://insp.gov.ro/sites/cnepss/wp-content/uploads/2016/01/Raport-National-de-Sanatate-a-Copiiil-or-si-Tinerilor-din-Romania-2015.pdf>

EU Accessibility Act - [http://www.europarl.europa.eu/RegData/etudes/IDAN/2016/571382/IPOL\\_IDA\(2016\)571382\\_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/IDAN/2016/571382/IPOL_IDA(2016)571382_EN.pdf)

## References

[http://www.fefsoradea.ro/PDF/curs/Dragoș/Activitati%20motrice%20adaptate\\_curs.pdf](http://www.fefsoradea.ro/PDF/curs/Dragoș/Activitati%20motrice%20adaptate_curs.pdf)

*Cristea, Dana, Ștef, Mirela, Dragoș, Paul, 2014, Adapted Motrical Activities - Theoretical and Methodical Aspects, Oradea*

*Shapiro, Frederic, 2002, Pediatric Orthopedic Deformities, Gulf Professional Publishing*

*\*\*\*, 2013, Kyphosis: New Insights for the Healthcare Professional, Atlanta, Scholarly Editions*

*Cristea, Dana, Ștef, Mirela, Dragoș (2014), Paul Adapted Motrical Activities - Theoretical And Methodical Aspects, Oradea*

*Huffman, Dolores M., Fontaine, Karen Lee, Price, Bernadette K. (2003), Health Problems in the Classroom PreK-6: An A-Z Reference Guide for Educators, Corwin Press*

*Shapiro, Frederic (2002), Pediatric Orthopedic Deformities, Gulf Professional Publishing, p.782*

*Kyphosis: New Insights for the Healthcare Professional, Atlanta, Scholarly Editions, 2013*

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