

REHABILITATION AND CORRECTION OF SPINE IN CHILDREN

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ABSTRACT

Introduction: Bone-muscular system in children developing under the influence of internal and external factors is subject to various distortions. Heredity and poor posture, lack of physical activity leads to disruption of the statics of the spine, resulting in the occurrence of deformities. Recent research shows that the back pain that occurs in children is correlated with several factors which are bad posture, improper seating, muscle weakness. Since the occurrence of back pain in children in their childhood is an important deterrent factor, prevention of its prevention is of great importance. Measurements of upright posture in children is a useful tool for the identification and prevention of the development process of the musculoskeletal condition. **Purpose:** this is to show the presence of spinal deformities and distortions that occur in children in early childhood and adolescenskiot period, and the most common deformities that have revealed within 2011do 2014 in the municipality Strumica. **Materiali and methods:** used statistical data on the presence of spinal deformities in children in Strumica, R. Macedonia for the period from 2011 to 2014 and using the standard tools of research as Adam test and interviews in a larger group of subjects exhibited as a group in order to get a clearer and richer review of data necessary for further analysis. **Results** are set on the basis of four years of continuous testing and research on a sensitive and vulnerable category of children that deserve special interest and attention. It validated treatments in deformities of the spine as well as prevention and treatment of dysfunction of locomotor system in young people in the period of growth and development. For four years the number of children is reviewed 585 of which in 2011 were 68 boys, 71 girls, in 2012 a total of 144 children examined, 65 are male and 79 female. In 2013 examined 70 male and 76 female children out of 146 children examined. 2014 analysis examined the children show the results of total 156 children examined, 80 were female and 76 male. **Discussion:** The results and the comparison data relative to the determined parameters. This discussion is a summary of the overall knowledge acquired through research and confirmation of the identified hipotetska framework of research. **Conclusion:** The treatments with deformities of the spine as well as prevention and treatment of dysfunction of locomotor system in children in the period of growth and development is of great significance. Great occurrence of scoliosis, which is most common among girls in adolescence. Seeing the results, and the frequent problem of developing spinal distortions in children - scoliosis, kyphosis and lordosis, which are becoming increasingly common among young people, the need for their correction and rehabilitation or application of Kynesitherapy.

Keywords: *spine, correction, rehabilitation, children Kynesitherapy*

Introduction: The upright position of the human condition is to constantly maintain a balance between the paravertebral muscles and centripetal sila. Za to maintain upright position with the man in the course of evolution, have developed physiological curves seen in the sagittal plane: lordosis in the cervical and lumbar part of ' spine kyphosis and thoracic spine, and vertebral column seen in the frontal plane should be flat vertical line. These curves in physiological limits are the norm, and their increase or decrease is considered pathological.

Backbone (columna vertebralis) build 33-34 short bones or vertebrae (Vertebrae). The vertebrae are divided into:

- 7 neck (vertebrae cervicales),
- 12 cities (vertebrae thoracicae),
- 5 loin (vertebrae lumbales),
- 5krstni (vertebrae sacrales)
- 4-5 trtichki (vertebrae coccygae).

The first 24 vertebrae are free and moving, while the last 9-10 each grown together in the two bones and Cross Bone (os sacrum) and trtichka bone (os coccygis). The bones of the spine between preshlenskite rings and fibrous tissue composed of strong and resistant carrier weight of the body, and very elastic spindle teloto. Kaj adults standing tall spine looks like the letter izdozhena S. Najchesti deformities of the spine is following: scoliosis, kyphosis, lordosis, scoliosis.

Scoliosis is a medical condition where there is a lateral curvature of the spine in the frontal plane, while there torsion of the vertebrae, turning around its axis. Scoliosis is characterized by the appearance of uneven height of the shoulders and the iliac bones, watching the rear, visible curved line preshlenskite sequels (processus spinosus), asymmetry of the blades, grooves, paravetrebralnata rigidity of muscles, the occurrence of hump. Although a complex three-dimensional deformation, if they are seen on X-ray images of the back, the spine of a person with scoliosis may look more like the letter "S" or "C" than a straight line. Deviation of scoliosis can be lev or right, but can also be a compensated scoliosis, where one part of the spinal curvature is lev hand, and in another part of the right strana. Klasifikacija scoliosis according to etiology: strukturalna and nestrukturnalna.

Scoliosis is functional or nestrukturnalni if distortion is lost in the forward bending (bending test) or when the child is in the supine position, and scoliosis disappears by removing the cause. The reason for the phenomenon is disturbed static: a difference in leg length, deformities of the hips, knees and feet, the presence of spasm (contraction) of the muscles on one side of the back, head distorted as a result of torticollis (neck muscle shortened) problems hearing or eyesight.

Organic or structural scoliosis characterized in anatomical changes of the spine, its joints, ligaments or paravertebral muscles.

Kyphosis is a curvature of the spine in sagittal plane Most frequently during found the chest and thoracic-lumbar del. Kifozata, also known under the term hump is the curvature of the upper back. Kyphosis is the curvature of the thoracic group preshljeni. Simptomite of kyphosis include: grbavost, moderate back pain, dorsal stiffness, fatigue. Kyphosis occurs due to: osteoporosis, degenerative arthritis of

spine, ankylosing spondilitistuberkuloza bones, cancer, spina bifida. Normalniot spine as viewed from behind it looks right. However, the spine which has lordosis when observed laterally observed distortion in the lower part of the spine. If the kyphosis has distortion at the top, in this distortion is Lordosis Lower spine. Lordosis is associated with poor posture of the spine, a congenital problem, back surgery or problems kolkovite. Glavna clinical feature of Lordosis hoist, since if Lordosis occur with other defects, such as muscular dystrophy, developer of dysplasia hip or neuromuscular disorders. **Results** are set on the basis of four years of continuous testing and research on a sensitive and vulnerable category of children that deserve special interest and attention. It validated treatments in deformities of the spine as well as prevention and treatment of dysfunction of locomotor system in young people in the period of growth and development. For four years the number of children is reviewed 585 of which in 2011 were 68 boys, 71 girls, in 2012 a total of 144 children examined, 65 are male and 79 female. In 2013 examined 70 male and 76 female children out of 146 children examined. 2014 analysis examined the children show the results of total 156 children examined, 80 were female and 76 male.

Discussion: The results and the comparison data relative to the determined parameters. This discussion is a summary of the overall knowledge acquired through research and confirmation of the identified hipotetska framework of research.

From all this we can conclude that diseases such as deformation of the spine (kyphosis, lordosis, scoliosis) is more common in females than in males.

In any doubt about the curvature of the spinal column is necessary medical specialist, recording X-spine and physical examination and planning further treatment. Whether it is a health problem that can be treated conservatively with physical therapy and some type of physical exercise

or surgery depends on the extent and stage of the disease. Many of the cases are resolved simply by monitoring and physical therapy.

Physical therapy is an important part in the treatment of deformities of the spine, because that is performed continuously over several years- individually or in small groups, with or without a corset. Young responsibility falls on the parents and the educational system, but unfortunately the first questions come once there is a problem or when it will occur curved spine, or other disorders. In any suspicion of curvature of the spinal column is a necessary medical specialist, recording X-spine and physical examination and planning further treatment. Whether it is a health problem that can be treated conservatively with physical therapy and some type of physical exercise or surgery depends on the extent and stage of the disease. Physical therapy is an important part in the treatment of deformities of the spine, because that is performed continuously over several years- individually or in small groups, with or without a corset. Physical activity to get involved in all institutions where children are developing. How to prevent functional curved spine? Is it possible with today's lifestyle. Are heavy bags for school to be burdensome to young? Who advises young people today like to be sitting at their desks, whether to carry the bag on one side or both, how many hours sitting in front of a computer? **Conclusion:** Young responsibility falls on the parents and the educational system, but unfortunately the first questions come once there is a problem or when it will occur curved spine, or other disorders. The spine is the pivot of the whole body, is composed of several segments, such as cervical, city, or lumbar baptized and Seat or gird part. The spinal column normally has few natural curves that are important for its stability and functionality. Neck curvature (cervical naturally curved forward), chest curve (thoracic bends backwards), krsna (lumbar bends forward) and seat-Tailed curvature (spine is curved backwards). The normal spine has a form of the Latin letter C elongated. In certain changes spine may be bent sideways, flanked to the left or right, so called scoliosis. When distortions arising directed forwards called lordosis and kyphosis if backwards. There are several factors that contribute to accommodate the curvature of the spine, such as injuries, tumors, neurological disease, infections and metabolic disorders, which are called structural scoliosis. But most scoliosis is functional and more frequent, and they are the result of poor posture, or taking forced posture because of back pain. Scoliosis is twice more common in girls than in boys. It is often associated with a sharp and rapid growth in height between 9 to 16 years. About 4% of children in this group are visible curvature of the spine. As will be realized in the future, the prognosis depends on several factors, but the rule is: if it occurs in a later age and the lower segment of the spine has a better prognosis. But unfortunately the other way around, if an early age and the higher segment of the spine scoliosis prognosis is difficult. In any doubt about the curvature of the spinal column is necessary medical specialist, recording X-spine and physical examination and planning further treatment. Whether it is a health problem that can be treated conservatively with physical therapy and some type of physical exercise or surgery depends on the extent and stage of the disease. Many of the cases are resolved simply by monitoring and physical therapy. Physical therapy is an important part in the treatment of deformities of the spine, because that is performed continuously over several years- individually or in small groups, with or without a corset. Whether it is a health problem that can be treated conservatively with physical therapy and some type of physical exercise or surgery depends on the extent and stage of the disease. Physical therapy is an important part in the treatment of deformities of the spine, because that is performed continuously over several years- individually or in small groups, with or without a corset. Physical activity to get involved in all institutions where children are developing.

References

1. Kit L. Moore, Arthur F. Is Ann M. R. Agur: Clinically Oriented Anatomy; Skopje Tabernakul 2011
2. Nikolaj Popov: Grbnachen pillar - functional diagnostics and Kynesitherapy; Sofia, NSA - PRESS, 2002

3. Dzhoeil A. Delis, Bruce M. Gans, Nicholas E. Walsh: Physical Medicine and Rehabilitation Principles and Practice; Skopje Tabernakul 2012
4. Mitko Marekov: Fundamentals and tools kineziterapijata; Sofia Vanguard Receives 2006
5. Jandrič S.: Osnovi fizikalne medicine I rehabilitacije; Banjaluka, Grafomark, 2005 6. Dragan Kaluderovič, Slobodan Nikolič: Praktikum iz kineziologije; Beograd, 1986 7. Ž. Zec, N. Konforti,: Ispitivanje snage mišića - Menuelna metoda; Beograd, 1982