REVIEWS **FLEXED POSTURE AND HYPERKYPHOSIS**

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European Journal of Physical and Rehabilitation Medicine 2009 December;45(4):595-603

language: English

Review of rehabilitation and orthopedic conservative approach to sagittal plane diseases during growth: hyperkyphosis, junctional kyphosis, and Scheuermann disease

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An increase of the physiological kyphosis during growth is defined hyperkyphosis (HK) and, according to the level where the apex of the curve can be retrieved, we can distinguish a thoracic HK and a thoraco-lumbar one, also called junctional kyphosis. Since these conditions can cause pain and esthetics impairments, lead in adulthood to an higher incidence of spinal and shoulder pain, and evolve during growth, it is important to manage this deformity. The aim of this paper was to present the state of the art about HK and its treatment. Scheuermann Disease (SCHK) is the better known cause of HK; other causes can be idiopathic or postural, trunk extensor muscles weakness or neurological problems. Despite etiology a specific treatment can be required during growth to prevent evolution and reach a better spinal alignment in adulthood. It is at the base of treatment and allow monitoring. There are some validated methods that can be used in a comprehensive rehabilitation approach. Evidence in this field is scanty, even if there is quite a consensus on possible treatments. They aim at improving posture and esthetics, and abolishing pain; they include: exercises, used mainly in mobile postural/idiopathic HK, and in SCHK without HK; braces (plus exercises, in this case aimed at reducing brace impairments), that in rigid HK and in most of SCHK patients also allow a better vertebral growth; surgery could be used in worst cases, even if it should be carefully considered, because it requires fusion and loss of spinal function.