

Spinal curvature

Curvature of the spine is common in two forms: **scoliosis** and **kyphosis**.

Scoliosis is a lateral (toward the sides) curvature in the normally straight vertical line of the spine; it may occur in the thoracic or lumbar segment of the spine, and it may or may not include rotation or deformity of the vertebrae. Kyphosis is a curving of the spine that causes a bowing of the back - usually the upper back.

Each regional spine level keeps balance against the global axis of gravity with spinal curvature ¹⁾.

Physiological curvature of the spine, including the normal **cervical lordosis**, **thoracic kyphosis**, and **lumbar lordosis**, has received increasing research attention as it has been proved to be associated with accelerated disc degeneration and low back pain (LBP). Many questions concerning the proper assessment of sagittal balance have been put forward in several published papers ^{2) 3)}.

The **pelvic incidence** appears to be the main axis of the **sagittal balance** of the **spine**. It controls **spinal curvature** in accordance with the adaptability of the other parameters ⁴⁾.

¹⁾

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Boseker EH, Moe JH, Winter RB, et al. Determination of "normal" thoracic kyphosis: A roentgenographic study of 121 "normal" children. J Pediatr Orthop. 2000;20(6):796-98.

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Rose PS, Bridwell KH, Lenke LG, et al. Role of pelvic incidence, thoracic kyphosis, and patient factors on sagittal plane correction following pedicle subtraction osteotomy. Spine (Phila Pa 1976) 2009;34(8):785-91.

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Legaye J, Duval-Beaupère G, Hecquet J, Marty C. Pelvic incidence: a fundamental pelvic parameter for three-dimensional regulation of spinal sagittal curves. Eur Spine J. 1998;7(2):99-103. PubMed PMID: 9629932; PubMed Central PMCID: PMC3611230.

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