

Display Settings: Abstract

Am J Phys Anthropol. 1989 Nov;80(3):379-89.

Sacral curvature and supine posture.

Abitbol MM.

Author information



Abstract

Sacral curvature (SC), represented by the angle between the first and the last sacral vertebrae, is a feature that differentiates the human pelvis from that of other animals. The sacral curvature was measured and studied in 14 cebids, 31 cercopithecids, 17 hylobatids, 85 pongids, 23 normal human children, 15 children with orthopedic handicaps, 49 normal adult human males, and 64 normal adult human females. Sacral curvature was minimal to nil in monkeys (mean 11.5 +/- 6 SD degrees), and moderate in apes (hylobatids, mean 16 +/- 10 SD degrees; pongids, mean 27.2 +/- 16 SD degrees). In human newborns SC is minimal, increasing progressively until adolescence, reaching a mean of 64.7 +/- 29 SD degrees in adult humans. This study investigates the different factors contributing to the formation of the sacral curvature. These factors include 1) the effect of erect posture, which tilts the upper part of the sacrum dorsally and the lower part of the sacrum ventrally, and 2) the influence of supine posture, which affects the development of the lower part of the sacrum. In addition to supine posture the levator ani, which is well developed in Homo sapiens, also affects the lower part of the sacrum and coccyx and influences its ventral orientation. Variation in SC can result from differences in onset and frequency of supine posture. This is the first time that supine posture has been shown to play a role in shaping the human pelvis, although it is as characteristic of H. sapiens as is erect posture.

PMID: 2589477 [PubMed - indexed for MEDLINE]

Publication Types, MeSH Terms



PubMed Commons

[PubMed Commons home](#)

0 comments