The greatest segmental range of motion was found at L2-L3 in moderate motion and at L4-L5 in maximal motion. It shifted gradually from the upper to lower lumbar levels with the increase in total lumbar motion. With an increase in lumbar spine motion, maximum segmental flexion shifted from L2-L3 to L3-L4, then to L4-L5. Segmental extension changed only at L5-S1, increasing with total lumbar spine motion. There was an inverse statistical correlation between lumbosacral motion and relative thickness of the L5 transverse process.

The greatest segmental flexibility induced by the moderate lumbar motion, usually seen with the activities of daily living, occurred more in the upper segments of the lumbar spine, especially in flexion. Further, the iliolumbar ligaments regulate lumbosacral motion especially flexion <sup>1</sup>.

## 1)

Miyasaka K, Ohmori K, Suzuki K, Inoue H. Radiographic analysis of lumbar motion in relation to lumbosacral stability. Investigation of moderate and maximum motion. Spine (Phila Pa 1976). 2000 Mar 15;25(6):732-7. PubMed PMID: 10752107.

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