

Spinal Curvature in Cycling

Swimmers, as noted by Obayashi, Urabe, Yamanaka, and Okuma (2012), may be prone to a hyperkyphotic posture as the types of force generation necessary in their sport may cause degeneration of the intervertebral discs. Professional cyclists (due to the position while bicycling) were also found to exhibit greater thoracic hyperkyphosis in normal standing position as compared to sedentary individuals (Muyor, López-Miñarro, Casimiro, & Alacid, 2012). Over time especially when considering the dedication and commitments of master 40 and master 30 cyclists, this cycling posture may result in spinal adaptations namely of the sagittal spinal angles (Muyor et al., 2012).

Muyor et al. (2012) found that both master 40 and master 30 cyclists exhibited a high frequency of thoracic hyperkyphosis while their lumbar spine curves were more neutral. Other participants of sports that require a trunk flexion posture such as canoeing, wrestling, and cross-country skiing were also found to be more prone towards thoracic hyperkyphosis (Muyor et al., 2012). People with daily desk-bound duties were found to exhibit a similar posture. Thoracic hyperkyphosis and a posterior pelvic tilt may increase spinal load, pressure on intervertebral discs, creep (ligamentous crepitus), and low back pain (Muyor et al., 2012).

References

- Muyor, J. M., López-Miñarro, P. A., Casimiro, A. J., & Alacid, F. (2012). [Sagittal spinal curvatures and pelvic tilt in cyclists: A comparison between two master cyclist categories.](#) *International Sportmed Journal*, 13(3), 122-132.
- Obayashi, H., Urabe, Y., Yamanaka, Y., & Okuma, R. (2012). Effects of respiratory-muscle exercise on spinal curvature. *Journal of Sport Rehabilitation*, 21, 63-68.