Swimming and Spinal Deformities: A Cross-Sectional Study

- Cross-sectional, 112 adolescent competitive swimmers (ACS) compared with 217 students of the same age.
- ACS trained at least 4 (up to 7) times a week for an average of 2-2.5 hours per session.
- Questionnaire on LBP, Scolimeter to screen for scoliosis and plumbline distances for kyphosis and lordosis.
- Swimming was associated with an increased risk of trunk asymmetries (OR, 1.86; P < .05).
- Females in the ACS group had a 2.5-fold higher risk than those in the control group.

- Competitive swimmers (particularly females) have more spinal asymmetries (positive screening for scoliosis) and increased kyphosis compared to the normal population of the same age during adolescents.
- Swimming also increased the risk of LBP, but only in females (OR, 2.10).
- This study suggests that those adolescents that swim regularly (2 hours at least 4 times per week) are more likely to have a scoliosis.

Swimming and AIS

- Becker concluded;

  "The high repetition nature of competitive swimming causes imbalances of musculature in the adolescent athlete. Scoliosis as a musculoskeletal condition of the adolescent can be detected in high incidence among swimmers owing to the training phenomenon."

- 30 male and female swimmers
- "we were able to determine the existence of postural disorders of the spinal column in a greater percentage than expected"