

## **The Lateralization Pattern Has An Influence On The Severity Of Ankle Sprains**

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**Background:** Many risk factors contributing to ankle sprains have been studied in medical literature with coordination and balance being two of the major endogenous factors described. These are influenced by lateralization – a developmental and adaptive ability determined by the asymmetrical construction of the human brain, with cross-laterality referring to mixed limb dominance.

**Methods:** Two hundred forty-four patients with acute ankle sprains (136 men and 108 women) were prospectively evaluated between April 2006 and March 2009. The mean age was 30 (ranging from 18 to 76). Clinical and ultrasonographic examinations were performed on the study subjects. Laterality was then assessed by the Coren questionnaire and the AOFAS score was calculated. Patients with syndesmotic injuries and fractures were excluded from the study. Those qualified were divided into straight and crossed groups, according to their laterality type.

**Results:** One hundred forty-four patients displayed straight lateralization, while cross-laterality was found in 100 subjects. Patients in the crossed group experienced more multi-ligamentous injuries than those in the straight group ( $p = 0.02$ ). Following trauma, a higher AOFAS score was attributed to subjects that displayed a straight lateralization pattern, in comparison to subjects presenting with crossed laterality ( $p = 0.04$ ).

**Conclusion:** Crossed lateralization is associated with higher severity of ligament injuries in ankle sprains and may be considered a risk factor for calcaneofibular ligament injuries.

### **Biography**

Dr. Andrzej Mioduszewski is a distinguished medical professional, holding both an MD and a PhD in Orthopedics. He is renowned for his expertise in the field and has made significant contributions to the world of orthopedic surgery. Dr. Mioduszewski currently practices at the Centre for Specialized Surgery, located at Ul. Modlińska 310/312, in the vibrant city of Warsaw, Poland.