

## **Pedal Activity at the Piano: A Possible Reason for a Twisted Pelvis? Alexandra Tuerk-Espitalier**

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Many pianists suffer from chronic back pain. This problem occurs mainly because of long hours spent in a sitting position, as well as bad posture and little exercise. Another cause of back pain can be pelvic torsion with functional leg difference. In this case, the spine has to adjust to the asymmetry with lateral flexion, thus putting more intensive strain on all structures and making these more vulnerable.

**Question:** With the right leg doing almost all of the pedal work, pianists show an asymmetric movement pattern in their lower extremities. The purpose of this study was to investigate whether this fact leads to a higher incidence of pelvic torsion among pianists than among the general population.

**Methods:** 42 piano majors from the Hochschule für Musik in Frankfurt, Germany, all of whom had an intense practice schedule, were measured. For each subject, the iliac crest position, amount of torsion, and possible weight shift were determined. Data concerning physical problems, period of piano lessons, and daily practice time were evaluated by questionnaire. The control group consisted of 52 students of the Frankfurt School of Finance and Management. The same data were collected from them, except that these subjects do not play the piano at all. The iliac crest position was measured with a patented device called the *acromiopelvimeter*.