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COMPARISON OF SELECTED CLINICAL SACROILIAC  
TESTS IN ELITE FIGURE SKATERS AND CONTROLS:  
A PILOT STUDY

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**PURPOSE:** The purpose of the present study was three-fold: i) to evaluate inter- and intratester reliability of positional and pain provocation tests; ii) to assess and compare SIJ positional findings in elite figure skaters and age-matched healthy controls; and iii) to determine whether there is an association between positional findings and landing leg in skaters. **RELEVANCE:** Dysfunction of the sacroiliac joint (SIJ) as a primary source of low back pain is controversial for physiotherapy clinicians. There is evidence that long-term exposure to high impact force may cause SIJ dysfunction. Figure skating serves as a clinically relevant model to investigate the effect of repetitive unilateral high impact landing on subsequent SIJ dysfunction. **SUBJECTS:** Twenty-five elite figure skaters (15 male, 9 female, mean age: 21, range:16-25,) and forty-five age-matched controls (17 male, 28 female, mean age: 24 years, range:19-30) were voluntarily recruited for the study. **METHODS AND MATERIALS:** A series of twelve positional and three pain provocation tests were carried out on each subject. Subjects were examined on a single occasion, separately and independently by two examiners. Each test was repeated three times by each examiner and data was expressed as an average of the three trials. In addition, demographic data and information regarding level of competition, years of competitive figure skating, landing leg and co-morbidities were collected on the figure skating group. **ANALYSIS:** Results were analyzed using the SPSS software package. Descriptive statistics were used to characterize the sample with respect to demographic data and not subject to further statistical analysis. Agreement between initial and subsequent measurements by the same therapist for all other tests was used to determine intratester reliability. Cohen's

kappa was used to measure intertester reliability on all the remaining tests. Pearson product-moment and intraclass correlation coefficients were used to assess inter and intratester reliability for leg length measurements. Paired t-tests ( $\alpha = 0.05$ ) were used to compare leg length differences between skaters and controls. Chi-squared goodness-of-fit ( $\alpha = 0.05$ ) based on a 2x3 table was used to compare the frequency of positive findings between skaters and controls for each test. **RESULTS:** Intratester reliability reached 70% agreement level on eight of the fifteen tests. A 93.3% intratester reliability was evident for iliac compression, gapping and iliac crest levels. There was 100% agreement on interpretation of findings for straight leg raise (ICC = 0.968). Nine of the fifteen tests had a fair ( $k=0.21-0.40$ ) degree of intertester reliability. The skaters had more positive findings than normal controls, and on the side of their landing leg. **CONCLUSIONS:** This study demonstrated fair intertester and good intratester reliability for a comprehensive battery of SIJ clinical tests. This data confirms that it is useful to utilize these clinical tests in diagnosing SIJ dysfunction. Furthermore, data from the present study demonstrates that SIJ dysfunction exists in elite skaters and positive findings are evident on the landing leg.