

Name of Instrument: **Foot and Medial Longitudinal Arch Measurements**

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**Contact Info:**

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**Privacy Use Cost:** \$

**Public Use Cost:** \$

**Year Developed:** 2000

**Where to obtain Instrument:**

- Contact author

**Description of the Instrument**

- To determine which foot measurements (5 foot measurements were taken at 2 stance conditions: 10% of weight bearing and 90% of weight bearing) have the most reliability and validity.
- After establishing the most reliable and valid measure, future studies can focus on differences in mechanical and injury patterns based on high and low arch characteristics.

**Form of instrument:**

- Other: foot measurements

**Method of delivery:**

- In-person interview/assessment

**Relevance to injury/ Percentage of the instrument specific to injury**

- To establish a reference population of feet for future studies.

**Time to administer or complete the instrument**

**Methods of data analyses:**

- Quantitative

**Setting/sample instrument used in:**

- One hundred two feet (both feet of 51 subjects) were measured to establish a reference database.

- From this group, a subset of 20 feet (both feet of 10 subjects) was used to determine intertester and intratester reliability.
- Radiographs of a further subset of 10 feet (right feet of 10 subjects) were used to determine validity.

**Was it pilot tested?** No

**Pilot test sample:**

**Reliability Measures**

- The most reliable and valid method of clinically assessing arch height across 10% and 90% of weight bearing was dividing the dorsum height at 50% of foot length by truncated foot length.
- The intertester reliability (ICC) of Dorsum height at 50% of foot length divided by truncated foot length is .811 in 10% of weight bearing; .ICC =.848 in 90% of weight bearing.
- Intraclass correlation coefficients (ICCs) for intertester and intratester measurements were between .480 and .995.

**Validity Measures**

- The intertester validity (ICC) is .844 in 10% of weight bearing; ICC =.851 in 90% of weight bearing.

**Reference**

Williams, D.S., & McClay, I.S. (2000). Measurement used to characterize the foot and the medial longitudinal arch: reliability and validity. Physical Therapy, 80(9), 864-871.

**Other References**

Presented at the Combined Review Board at the University of Delaware.

**Keywords:** arch, foot, measurement, injury, predisposing factor.