



Shelbourne Knee Center

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Specialized Care for Knee Injuries

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Intercondylar notch width measurement differences between African-American and Caucasian men and women with intact-ACL knees. Shelbourne KD, Benner RW, Gray T. *Am J Sports Med.* 2007;35:1304 – 1307.

Background: A recent report of professional women's basketball found that white European American female players were 6.5 times more likely to tear their anterior cruciate ligament than their nonwhite European American counterparts. African Americans accounted for 95% of the nonwhite European American group.

Hypothesis: African American men and women have wider intercondylar notches than white men and women.

Study Design: Cohort study (prevalence); Level of evidence, 2.

Methods: We obtained 45° flexed weightbearing posteroanterior radiographs on 517 patients who had knee problems other than an anterior cruciate ligament injury or arthrosis. One experienced observer measured the intercondylar notch width with no knowledge of race or gender, and the measurements were analyzed based on race and gender.

Results: The mean intercondylar notch width was 15.5 mm (SD = 2.8; range, 9-22) for African American women and 14.1 mm (SD = 2.5; range, 8-21) for white women; this difference was statistically significant ($P = .009$). Similarly, the mean intercondylar notch width was 18.0 mm (SD = 3.6; range, 10-27) for African American men and 16.9 mm (SD = 3.1; range, 9-27) for white men; these values were statistically significantly different ($P = .003$).

Conclusion: We conclude that African Americans have statistically significantly wider intercondylar notch widths on 45° flexed weightbearing posteroanterior radiographs than whites of the same gender. This relationship may offer an explanation for the difference between races with regard to risk of anterior cruciate ligament tears.