



**Digital Radiographic Evaluation of Medial Joint Space Narrowing after Partial Meniscectomy of Bucket-Handle Medial Meniscus Tears in ACL-Intact Knees. Shelbourne KD, Dickens JF: *Am J Sports Med* 2006;34:1648 - 1655.**

**ABSTRACT**

**Background:** Few studies exist that evaluate the effect of partial medial meniscectomy in knees with intact anterior cruciate ligaments.

**Hypothesis:** Partial meniscectomy of bucket-handle medial meniscus tears will cause joint space narrowing.

**Methods:** Between 1982 and 2001, 135 patients met the study criteria of a partial medial meniscectomy, intact ligaments, no surgery to the contralateral knee, and no chondromalacia greater than grade II. Seventy-nine patients living within 150 miles of the clinic were asked to return for physical examination. Joint space narrowing was measured from the middle of the femoral condyle to the middle of the tibial plateau using digitally magnified weight bearing 45° flexed posteroanterior and full extension anteroposterior radiographs. Measurements were performed twice with the observer being blinded to the previous measurements. Subjective follow-up was obtained prospectively on an annual basis with International Knee Documentation Committee and modified Noyes knee questionnaires.

**Results:** Forty-nine patients were examined at a mean of 11.8 years postoperatively. Mean medial joint space narrowing was  $1.2 \pm 0.5$  mm on 45° flexed posteroanterior radiograph and  $0.2 \pm 0.9$  mm on full extension anteroposterior radiographs ( $p < .001$ ). Four patients had  $> 2$ mm of joint space narrowing. Subjective surveys obtained from 95 patients showed a mean subjective score of 89.9 points. Subjective scores did not decrease through time and there was no correlation of joint space narrowing to lower subjective scores.

**Conclusions:** Partial medial meniscectomy in stable knees causes only mild joint space narrowing (mean 1.2 mm) at a mean of 12 years follow-up. Digitally magnified 45° flexed posteroanterior radiographs are more likely to demonstrate joint space narrowing than full extension anteroposterior radiographs.

