



***Title***

**ANTHROPOMETRIC MEASUREMENTS TO DESIGN TOTAL KNEE PROSTHESES  
FOR THE INDIAN POPULATION**

***Authors***

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***Purpose/Premise***

This paper reports on an anthropometric study conducted to determine appropriate femoral component designs for the Indian population and other Asian populations that tend to be of smaller stature.

***Material and Methods***

Computer tomography scans were made of 86 knees, including 47 osteoarthritic Indians (21 men, 26 women). The knees were classified into three groups, based on the A/P dimension of the femur.

***Outcomes***

Available implants were adequate for 86.8 percent of the Indian men. However, 60.4 percent of the women had femoral A/P dimensions that were smaller than the smallest available implant (55mm). Also, among Indian patients, the mediolateral dimension varied by more than 10mm for a constant A/P size, demonstrating a need for two mediolateral dimensions for a given anteroposterior size.

***Conclusion/Recommendation***

The authors suggest that this study can be used to design and manufacture implant sizing schemes that are more appropriate for populations with smaller anthropometric measurements.

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