

# An Analysis of Sports Knee Evaluation Instruments

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**ABSTRACT:** This study examined four commonly used sports knee evaluation instruments to establish normative data. A total of 91 volunteers who had not sought treatment for knee pain or any other knee complaint at any time in the past underwent a detailed medical history and examination of both of their knees. Three numerical systems (Feagin and Blake Knee Score, Lysholm Knee Score, and the Hospital for Special Surgery Knee Disability Assessment) and one nonnumerical system (the International Knee Documentation Committee Quick Knee Profile) were evaluated.

A significant difference in the proportion of knees with excellent/normal ratings was seen among the four evaluation systems ( $P < .0001$ ): Hospital for

Special Surgery Knee Disability Assessment, 99.5%; Feagin and Blake Knee Score, 84.6%; Lysholm Knee Score, 84.1%; and the International Knee Documentation Committee Quick Knee Profile, 50.5%. Results showed that three objective component scores for the International Knee Documentation Committee Quick Knee Profile were significantly lower than all other component scores ( $P < .05$ ). These components included: overall ligament examination, Lachman, and total AP translation. These data may be useful as a baseline by which investigators studying patients following knee reconstructive procedures have a basis for comparison of their results.

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## INTRODUCTION

Over the past several years, numerous instruments have been designed to assess the preoperative and postoperative status of patients undergoing reconstructive procedures of the knee. Because these instruments are convenient to use, they have enjoyed widespread approval throughout the sports medicine community and have become the gold standard for clinical investigations of knee ligament injuries and their reconstructive procedures.

Recent concerns related to the rising cost of health

care (and the need for cost containment and cost effectiveness) have resulted in widespread interest in outcome studies.<sup>6,9</sup> As a result, the need for validated instruments as a means of measuring outcomes has been emphasized,<sup>10</sup> and the need for normative data as a basis for comparison has been recognized.<sup>2,3</sup>

This investigation examined four commonly used knee evaluation instruments<sup>1,4,8,12,14</sup> to establish normative data and to define the effect, if any, of clinically relevant factors (ie, age, gender, activity level, and relative body weight) on knee scores/categories. A group of subjects with no prior history of knee injury, problems, or surgery served as the study population to eliminate the effects of pathologic conditions or treatments on the outcome measures (instruments).

## MATERIALS AND METHODS

### Study Population

A total of 118 volunteers were recruited without

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