

Rationale of The Knee Society Clinical Rating System

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A new total knee rating system has been developed by The Knee Society to provide an up-to-date more stringent evaluation form. The system is subdivided into a knee score that rates only the knee joint itself and a functional score that rates the patient's ability to walk and climb stairs. The dual rating system eliminates the problem of declining knee scores associated with patient infirmity.

The variety of knee rating systems used in the past made it difficult to compare the merits of prostheses (for example, to judge between cruciate-substituting and cruciate-retaining designs). The Hospital for Special Surgery Rating System is perhaps the most widely used, but was compiled many years ago at a time when knee arthroplasty was in its infancy and expectations of the result were lower. Also, because the Hospital for Special Surgery system incorporates a functional component, the score tends to deteriorate as patients get older, although the knee remains unchanged.

MATERIALS AND METHODS

The Knee Society considered all the commonly used existing rating systems. By consensus it was agreed that the knee rating and the functional assessment should be separate. With regard to the knee

assessment, it was decided that only the three main parameters of pain, stability and range of motion should be judged and that flexion contracture, extension lag and misalignment should be dealt with as deductions. Thus, 100 points will be obtained by a well-aligned knee with no pain, 125 degrees of motion, and negligible anteroposterior and mediolateral instability. Patient function considers only walking distance and stair climbing, with deductions for walking aids. The maximum function score, which is also 100, is obtained by a patient who can walk an unlimited distance and go up and down stairs normally.

The form itself is largely self-explanatory: 50 points are allotted for pain, 25 for stability, and 25 for range of motion. Walking ability is expressed in blocks (approximately 100 meters). Stair climbing is considered normal if the patient can ascend and descend stairs without holding a railing (see Table 1).

DISCUSSION

The Knee Society has proposed this new rating system to be simple but more exacting and more objective. The rating is divided into separate knee and patient function scores. Thus, increasing age or a medical condition will not affect the knee score. It is hoped the rating system will become universally accepted and will be adopted by all authors, even if they wish to report results using a customary scoring method as well.

5-10 mm	5
10 mm	0

Mediolateral

<5°	15
6° -9°	10
10° -14°	5
15°	0

Flexion contracture

5° -10°	-2
10° -15°	-5
16° -20°	-10
>20°	-15

Extension lag

<10°	-5
10° -20°	-10
>20°	-15

Alignment

5° -10°	0
0° -4°	3 points each degree
11° -15°	3 points each degree

Functional Scoring

Walking 50

Unlimited	40
>10 blocks	30
5-10 blocks	20
<5 blocks	10
Housebound	0

Stairs

Normal up & down	50
Normal up,down with rail	40
Up & down with rail	30
Up with rail; unable down	15
Unable	0

Functional Deductions

Cane	-5
Two canes	-10
Crutches or walker	-20
Other	20

Knee Score

(If total is a minus number, score is 0)

Addendum

Knee Score (Insall Modification - 1993)

This scoring system is the version of the knee score as modified by Dr. John Insall in 1993. The scoring system combines a relatively objective **Knee Score** that is based on the clinical parameters and a **Functional Score** based on how the patient perceives that the knee functions with specific activities.

The maximum Knee Score is 100 points and the maximum Functional Score is 100 points.

To calculate the two scores the answers to the questions and the findings on the examination are given a value based on the results. To obtain the Knee Score and the Functional Score the result of each question is totaled. Notice that some results are negative to denote that they are deductions to the score.

Knee Findings

Pain 50 (Maximum)

Walking

(Insert the value associated with the results of question 1)

None	35	
Mild or occasional		30
Moderate	15	
Severe	0	

Stairs

(Result of question 2)

None	15	
Mild or occasional		10

Moderate 5
Severe 0

R.O.M. **25 (Maximum)**

(Result of question 9)

8°= 1 point

Stability **25 (Maximum)**

Medial/Lateral

(Result of question 12)

0-5 mm 15
5-10 mm 10
> 10 mm 5

Anterior/Posterior

(Result of question 13)

0-5 mm 10
5-10 mm 8
> 10 mm 5

Deductions

Extension lag

(Result of question 10)

None 0
<4 degrees -2
5-10 degrees -5
>11 degrees -10

Flexion Contracture

(Result of question 11)

< 5 degrees	0
6-10 degrees	-3
11-20 degrees	-5
> 20 degrees	-10

Malalignment

(Result of question 14)

5-10 degrees (5° = -2 points)	0
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Pain at rest

(Result of question 3)

Mild	-5
Moderate	-10
Severe	-15
Symptomatic plus objective	0

(Now, simply total the scores of each of these questions to obtain the total Knee Score for the patient.)

Knee Score _____ **100 (Maximum) =**