

Knee injury and Osteoarthritis Outcome Score (KOOS) *Patient Reported Measure*

Considerations	
Which type of TJA is it appropriate for?	TKA
What part of the TJA continuum is it appropriate for?	Pre-op Post-acute Active Living
What domain(s) does it measure within the ICF?	Body function, Activity
Who completes it?	Patient
What does it measure?	42-item tool that assesses pain, symptoms, function in daily living (ADL), function in sport and recreation (Sport/Rec) and quality of life (QoL) over the past week. ¹⁻³
What equipment is required?	Paper version: paper copy of KOOS, pen Electronic version: computer with internet access
How long does it take?	~15-20 mins to complete and score ^{4,5}
How do I do it?	Instructions available at www.koos.nu
How good is it?	Validity: Content - good for mild to mod OA treated operatively or non-operatively ⁴ ; Construct – good, correlates with SF-36 subscales ^{5,6} Reliability: Test-retest - good to excellent ^{1,4,6} Responsiveness: Able to detect changes in knee OA ⁵ ; knee-related QoL subscale most responsive at 6 and 12 months post-TKA ⁶ Floor/ceiling effects: No or acceptable floor effects in mild or mod knee OA or ceiling effects in pre-op TKA ⁶ but reports of floor effects in Sport/Rec for severe OA and ceiling effects for pain, Sport/Rec & QoL at 12 months post TKA ^{5,6}
How is it scored?	Paper version: A spreadsheet for scoring is available at www.koos.nu Items scored from 0 to 4. Scores are summarized for each subscale and transformed to 0-100 scale. ⁵ <i>A total score is not recommended.</i> ^{1,5} Electronic version can be scored at: www.orthopaedicscore.com/scorepages/knee_injury_osteopaedic_outcome_score.html
What do the results mean?	Higher score = better. Score of 100 in each subscale = no knee-related problems, 0 = extreme problems ^{1,5} MDC: for knee OA ranges from 13.4 in pain subscale to 21.1 in QoL ⁵ MCID: 8-10 ⁷ however, research is ongoing ¹ Normative data stratified by age and gender: www.biomedcentral.com/1471-2474/7/38/figure/F2
Where can I get it?	Paper version: www.koos.nu/

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	Online version: www.orthopaedicscore.com/scorepages/knee_injury_osteopaedic_outcome_score.html Multiple languages versions available. A 7-item short version is available (KOOS-PS) ¹
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References

1. Website with users guide: www.koos.nu/
2. Roos E, Engelhart L, et al. ICRS Recommendation Document: Patient-reported outcome instruments for use in patients with articular cartilage defects. *Osteoarthritis Cartilage*. 2011; 2(2):122-36.
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4. Rehabilitation Measures Database.
www.rehabmeasures.org/Lists/RehabMeasures/PrintView.aspx?ID=1011
5. Collins NJ, Misra D, et al. Measures of physical performance assessments. *Patient Outcomes in Rheumatology: A Review of Measures*. *Arthritis Care Res*. 2011;63(11):S208.
6. Roos EM, Toksvig-Larsen S. Knee injury and Osteoarthritis Outcome Score (KOOS) - validation and comparison to the WOMAC in total knee replacement. *Health Qual Life Outcomes*. 2003;1:17.
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