## Uitgebreide toelichting van het meetinstrument

# Hip Disability and Osteoarthritis Outcome Score (HOOS)

Januari 2026

Review: 1. Ilse Swinkels-Meewisse
2. Marissa Gerards
Invoer: Marsha Bokhorst

## *1 Algemene gegevens*

| | Het meetinstrument heeft betrekking op de volgende categorieën |
|---|---|
| **Lichaamsregio** | Onderste extremiteit |
| **Aandoening (ICD)** | Bewegingsapparaat (Bot-, gewrichts- en kraakbeenaandoeningen) |
| **Domein 'Menselijk functioneren' (ICF)** | Sensorische functies en pijn; Mobiliteit/ bewegen; Algemene taken en eisen |

- *Korte beschrijving* → De HOOS is een vragenlijst voor het evalueren van symptomen en beperkingen bij patiënten met heupklachten. De vragenlijst bestaat uit 40 items die zijn onderverdeeld in vijf domeinen: symptomen (5 items), pijn (10 items), ADL (17 items), sport/vrije tijd (4 items) en kwaliteit van leven (4 items). De scoring wordt gedaan aan de hand van een 5-punts Likertschaal, waarbij een hogere score minder klachten weerspiegelt.[1,2]

- *Doelgroep* → patiënten met heupklachten vnl. heupartrose[1]

- *Auteur:*
  - ✓ *Oorspronkelijke versie* → Klässbo M (2003)[1]
  - ✓ *Nederlandse versie* → de Groot IB, et al. (2007)[2]

## *2 Doel van het meetinstrument*

Combinatie van:
- Evaluatief / effectiviteit
- Inventariserend

## 3 *Soort / vorm van het meetinstrument*

- Vragenlijst
- *Opbouw* → totaal 40 items, verdeeld over de subcategorieën:
  Symptomen (5 items); Pijn (10 items); ADL (17 items);
  Sport/vrije tijd (4 items); Kwaliteit van leven (4 items)
- *Invulinstructie* → Deze vragenlijst vraagt naar uw mening over uw heup. Beantwoord elke vraag door één hokje aan te kruisen. Wanneer u twijfelt over de beantwoording van een vraag, kruis dan de best mogelijke optie aan.
- *Meetniveau* → per item: wijze score (0-4); meetniveau ordinaal
- *Meetniveau* → per subcategorie:[3] berekening score: http://orthotoolkit.com/hoos/

Tabel 1: Berekening score per subcategorie

| **Schaal** | **Ruwe score (Formule 1)** | **Herberekende score (Formule 2)** |
|---|---|---|
| Pijn | 100 - ((gemiddelde sore P1-P10/4)*100) | 100 - Actueel ruwe score * 100 : Mogelijke ruwe score range |
| Symptomen | 100 - ((gemiddelde sore S1-S5/4)*100) | 100 - Actueel ruwe score * 100 : Mogelijke ruwe score range |
| ADL | 100 - ((gemiddelde sore A1-A17/4)*100) | 100 - Actueel ruwe score * 100 : Mogelijke ruwe score range |
| Sport/Rec | 100 - ((gemiddelde sore SP1-SP4/4)*100) | 100 - Actueel ruwe score * 100 : Mogelijke ruwe score range |
| QvL | 100 - ((gemiddelde sore Q1-Q4/4)*100) | 100 - Actueel ruwe score * 100 : Mogelijke ruwe score range |

- *Meetniveau* → totaalscore: de totaalscore die uit deze berekening volgt wordt tenslotte getransformeerd door het af te trekken van 100 (zie tabel 1, formule 2).

## 4 *Verkrijgbaarheid*

- *Opvraagbaar bij* → https://eprovide.mapi-trust.org/instruments/hip-disability-and-osteoarthritis-outcome-score
- *Geschatte kosten* → - Na het invullen van een vragenlijst gratis te downloaden voor: studenten, artsen, klinische praktijk, niet-gesubsidieerd onderzoek; maak hiervoor een gratis basisaccount aan via: https://eprovide.mapi-trust.org/register
  - Voor gesubsidieerd onderzoek, zorgorganisaties, commerciële gebruikers en IT bedrijven kunnen er kosten zijn.
- *Copyright* → © Ewa Maria Roos, 2003

## 5 *Methodologische kwaliteit*

Gegevens over de methodologische kwaliteit staan o.a. in de volgende reviews:

- Waddell LM, Musbahi O, Collins JE, et al. Responsiveness of Subjective and Objective Measures of Pain and Function Following Operative Interventions for Musculoskeletal Conditions: A Narrative Review. Arthritis Care Res. 2024[4]
- Queiroga F, Cross M, Thomas MJ, March L, Epstein J, Guillemin F. A scoping review of patient self-report measures of flare in knee and hip osteoarthritis (OA): A report from the OMERACT flares in OA working group. Semin Arthritis Rheum. 2023[5]
- Zhang Y, Ren J, Zang Y, Guo W, Disantis A, Martin RL. Cross-Culturally Adapted Versions of Patient Reported Outcome Measures for the Lower Extremity. Int J Sports Phys Ther. 2023[6]
- Deckey DG, Verhey JT, Christopher ZK, et al. Discordance Abounds in Minimum Clinically Important Differences in THA: A Systematic Review. Clin Orthop Relat Res. 2023[7]
- Tanghe KK, Beiene ZA, McLawhorn AS, MacLean CH, Gausden EB. Metrics of Clinically Important Changes in Total Hip Arthroplasty: A Systematic Review. J Arthroplasty. 2023[8]
- Le CY, Truong LK, Holt CJ, et al. Searching for the Holy Grail: A Systematic Review of Health-Related Quality of Life Measures for Active Youth. J Orthop Sports Phys Ther. 2021[9]
- Darwich A, Schüttler V, Obertacke U, Jawhar A. Outcome Measures to Evaluate Upper and Lower Extremity: Which Scores are Valid?. Z Orthop Unfall. 2020[10]
- Çelik D, Çoban Ö, Kılıçoğlu Ö. Minimal clinically important difference of commonly used hip-, knee-, foot-, and ankle-specific questionnaires: a systematic review. J Clin Epidemiol. 2019[11]
- Goldsmith ES, Taylor BC, Greer N, et al. Focused Evidence Review: Psychometric Properties of Patient-Reported Outcome Measures for Chronic Musculoskeletal Pain. J Gen Intern Med. 2018[12]
- Lundgren-Nilsson Å, Dencker A, Palstam A, et al. Patient-reported outcome measures in osteoarthritis: a systematic search and review of their use and psychometric properties. RMD Open. 2018[13]
- Gagnier JJ, Huang H, Mullins M, Marinac-Dabić D, Ghambaryan A, Eloff B, Mirza F, Bayona M. Measurement properties of patient-reported outcome measures used in patients undergoing total hip arthroplasty: a systematic review. Journal of Joint and Bone Surgery Reviews. 2018[14]
- Harris K, Dawson J, Gibbons E, Lim CR, Beard DJ, Fitzpatrick R, Price AJ. Systematic review of measurement properties of patient-reported outcome measures used in patients undergoing hip and knee arthroplasty. Patient Related Outcome Measures. 2016[15]
- Thorborg K, Tijssen M, Habets B, Bartels EM, Roos EM, Kemp J, Crossley KM, Hölmich P. Patient-Reported Outcome (PRO) questionnaires for young to middle-aged adults with hip and groin disability: a systematic review of the clinimetric evidence. British Journal of Sports Medicine. 2015[16]
- Collins NJ, Roos EM. Patient-Reported outcomes for total hip and knee arthroplasty. Commonly used instruments and attributes of a “good” measure. Clinical Geriatric Medicine. 2012[17]
- Kemp JL, Collins NJ, Roos EM, Crossley KM. Psychometric properties of patient-reported outcome measures for hip arthroscopic surgery. American Journal of Sports Medicine. 2013[18]
- Alviar MJ, Olver J, Brand C, Tropea J, Hale T, Pirpiris M, Khan F. Do patient-reported outcome measures in hip and knee arthroplasty rehabilitation have robust measurement attributes?: a systematic review. Journal of Rehabilitation Medicine. 2011[19]

- Thorborg K, Roos EM, Bartels EM, Petersen J, Hölmich P. Validity, reliability and responsiveness of patient-reported outcome questionnaires when assessing hip and groin disability: a systematic review. British Journal of Sports Medicine. 2009[20]

## 6 *Hanteerbaarheid / feasibility*

- Taal → Engels, Nederlandse vertaling
- *Benodigdheden* → vragenlijst
- *Randvoorwaarden* →
- *Benodigde tijd* → 10 minuten[1]
- *Gebruikershandleiding* → Ja, Engelstalig zie http://www.koos.nu/ → HOOS → User's guide

## 7 *Normgegevens*

- *Interpretatie* → de score op de HOOS varieert van 0 -100, waarbij 0 de grootst mogelijke problemen en 100 geen problemen weergeeft.

## 8 *Overige gegevens*

- Tevens bestaan er meerdere verkorte versies van de HOOS. De Hip Disability and Osteoarthritis Outcome Score Physical function short-form (HOOS-PS) is samengesteld uit de subcategorie ADL-activiteiten en Sport & Recreatie. Onderzoek naar de methodologische kwaliteit is gedaan in het artikel van Davis et al.[21] (zie ook www.meetinstrumentenzorg.nl: HOOS-PS). Andere verkorte versies van de HOOS zijn de HOOS-12[22,23] en de HOOS, JR[24].
- De HOOS wordt ook beschreven in de Database Rehabilitation Measures: https://www.sralab.org/rehabilitation-measures/hip-disability-and-osteoarthritis-outcome-score

## 9 *Literatuurlijst*


1. Klassbo M, Larsson E, Mannevik E. Hip disability and osteoarthritis outcome score. An extension of the Western Ontario and McMaster Universities Osteoarthritis Index. Scandinavian Journal Rheumatology. 2003;32(1):46-51.
2. de Groot I, Reijman M, Terwee CB, et al. Validation of the Dutch version of the Hip disability and Osteoarthritis Outcome Score. Osteoarthritis Cartilage. 2007;15(1):104-109.
3. Nilsdotter AK, Lohmander LS, Klassbo M, Roos EM. Hip disability and osteoarthritis outcome score (HOOS) - validity and responsiveness in total hip replacement. BMC Musculoskeletal Disorders. 2003;4(1):10.
4. Waddell LM, Musbahi O, Collins JE, et al. Responsiveness of Subjective and Objective Measures of Pain and Function Following Operative Interventions for Musculoskeletal Conditions: A Narrative Review. Arthritis Care Res. 2024;76(6):882-888.
5. Queiroga F, Cross M, Thomas MJ, March L, Epstein J, Guillemin F. A scoping review of patient self-report measures of flare in knee and hip osteoarthritis (OA): A report from the OMERACT flares in OA working group. Semin Arthritis Rheum. 2023;63:152281.
6. Zhang Y, Ren J, Zang Y, Guo W, Disantis A, Martin RL. Cross-Culturally Adapted Versions of Patient Reported Outcome Measures for the Lower Extremity. Int J Sports Phys Ther. 2023;18(3):653-686.

7. Deckey DG, Verhey JT, Christopher ZK, et al. Discordance Abounds in Minimum Clinically Important Differences in THA: A Systematic Review. Clin Orthop Relat Res. 2023;481(4):702-714.
8. Tanghe KK, Beiene ZA, McLawhorn AS, MacLean CH, Gausden EB. Metrics of Clinically Important Changes in Total Hip Arthroplasty: A Systematic Review. J Arthroplasty. 2023;38(2):383-388.
9. Le CY, Truong LK, Holt CJ, et al. Searching for the Holy Grail: A Systematic Review of Health-Related Quality of Life Measures for Active Youth. J Orthop Sports Phys Ther. 2021;51(10):478-491.
10. Darwich A, Schüttler V, Obertacke U, Jawhar A. Outcome Measures to Evaluate Upper and Lower Extremity: Which Scores are Valid?. Z Orthop Unfall. 2020;158(1):90-103.
11. Çelik D, Çoban Ö, Kılıçoğlu Ö. Minimal clinically important difference of commonly used hip-, knee-, foot-, and ankle-specific questionnaires: a systematic review. J Clin Epidemiol. 2019;113:44-57.
12. Goldsmith ES, Taylor BC, Greer N, et al. Focused Evidence Review: Psychometric Properties of Patient-Reported Outcome Measures for Chronic Musculoskeletal Pain. J Gen Intern Med. 2018;33(Suppl 1):61-70.
13. Lundgren-Nilsson Å, Dencker A, Palstam A, et al. Patient-reported outcome measures in osteoarthritis: a systematic search and review of their use and psychometric properties. RMD Open. 2018;4(2):e000715.
14. Gagnier JJ, Huang H, Mullins M, et al. Measurement properties of patient-reported outcome measures used in patients undergoing total hip arthroplasty: a systematic review. Journal of Joint and Bone Surgery Reviews. 2018;6(1):e2.
15. Harris K, Dawson J, Gibbons E, et al. Systematic review of measurement properties of patient-reported outcome measures used in patients undergoing hip and knee arthroplasty. Patient Related Outcome Measures. 2016;7:101-108.
16. Thorborg K, Tijssen M, Habets B, et al. Patient-Reported Outcome (PRO) questionnaires for young to middle-aged adults with hip and groin disability: a systematic review of the clinimetric evidence. British Journal of Sports Medicine. 2015;49(12):812.
17. Collins NJ, Roos EM. Patient-reported outcomes for total hip and knee arthroplasty: commonly used instruments and attributes of a "good" measure. Clinical Geriatric Medicine. 2012;28(3):367-394.
18. Kemp JL, Collins NJ, Roos EM, Crossley KM. Psychometric properties of patient-reported outcome measures for hip arthroscopic surgery. American Journal of Sports Medicine. 2013;41(9):2065-2073.
19. Alviar MJ, Olver J, Brand C, et al. Do patient-reported outcome measures in hip and knee arthroplasty rehabilitation have robust measurement attributes?: a systematic review. Journal of Rehabilitation Medicine. 2011;43(7):572-583.
20. Thorborg K, Roos EM, Bartels EM, Petersen J, Holmich P. Validity, reliability and responsiveness of patient-reported outcome questionnaires when assessing hip and groin disability: a systematic review. British Journal of Sports Medicine 2010; 44(16):1186-1196.
21. Davis AM, Perruccio AV, Canizares M, et al. Comparative, validity and responsiveness of the HOOS-PS and KOOS-PS to the WOMAC physical function subscale in total joint replacement for osteoarthritis. Osteoarthritis Cartilage. 2009;17(7):843-847.
22. Gandek B, Roos EM, Franklin PD, Ware JE Jr. Item selection for 12-item short forms of the Knee injury and Osteoarthritis Outcome Score (KOOS-12) and Hip disability and Osteoarthritis Outcome Score (HOOS-12). Osteoarthritis Cartilage. 2019;27(5):746-753.
23. Gandek B, Roos EM, Franklin PD, Ware JE Jr. A 12-item short form of the Hip disability and Osteoarthritis Outcome Score (HOOS-12): tests of reliability, validity and responsiveness. Osteoarthritis Cartilage. 2019;27(5):754-761.
24. Lyman S, Lee YY, Franklin PD, Li W, Mayman DJ, Padgett DE. Validation of the HOOS, JR: A Short-form Hip Replacement Survey. Clin Orthop Relat Res. 2016;474(6):1472-82.