

Uitgebreide toelichting van het meetinstrument

Disabilities of the Arm, Shoulder and Hand (DASH)

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1 Algemene gegevens

	Het meetinstrument heeft betrekking op de volgende categorieën
Lichaamsregio	Bovenste extremiteit
Aandoening (ICD)	Bewegingsapparaat
Domein 'Menselijk functioneren' (ICF)	Sensorische functies en pijn; Activiteiten; Maatschappelijk-sociaal leven

- *Korte beschrijving* → De Disabilities of the Arm, Shoulder and Hand (DASH) is een vragenlijst met 30 items, verdeeld over de categorieën symptomen en beperking in activiteiten. Centraal staat hierbij de mate van klachten of beperkingen in de gehele bovenste extremiteit gedurende de afgelopen week. De patiënt beantwoordt de vragen zelf aan de hand van een 5-punts-schaal. De componenten sport, muziek en werk worden in twee optionele modules aangeboden. Hoe hoger een patiënt scoort op de DASH des te groter zijn de klachten/beperkingen.^{1,2}
- *Doelgroep* → patiënten met schouder-, arm- en/of handproblematiek²
- *Auteur:*
 - ✓ *Oorspronkelijke versie* → Hudak PL, et al. (1996)³
 - ✓ *Nederlandse versie* → Palmén CM, van der Meijden E (2004)⁴

2 Doel van het meetinstrument

Combinatie van:

- Evaluatief / effectiviteit
- Inventariserend

3 *Soort / vorm van het meetinstrument*

- Vragenlijst
- *Opbouw* → Origineel: totaal 30 items en 8 optionele items, subcategorieën⁵:
beperking bij activiteiten (25 items); symptomen (5 items)
Optioneel: sport module (4 items); werk module (4 items)

Nederlandse versie: totaal 30 items en 8 optionele items, subcategorieën⁵:
uitvoeren van activiteiten (23 items); ernst van symptomen (7 items)
Optioneel: sport/podiumkunsten module (4 items); werk module (4 items)
- *Invulinstructie* → ja⁵, per categorie wordt uitleg gegeven over het beantwoorden van de vragen
- *Meetniveau* → per item: wijze score (5-punts-schaal); meetniveau ordinaal
- *Meetniveau* → totaalscore: wijze score (0-100); meetniveau interval

4 *Verkrijgbaarheid*

- *Opvraagbaar bij* → www.meetinstrumentenzorg.nl
- *Geschatte kosten* → gratis te downloaden
- *Copyright* → ja, informatie via⁵: <https://dash.iwh.on.ca/>

5 *Methodologische kwaliteit*

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

- Huang H, Grant JA, Miller BS, Mirza FM, Gagnier JJ. A systematic review of the psychometric properties of patient-reported outcome instruments for use in patients with rotator cuff disease. 2015⁶
- Proud EL, Miller KJ, Bilney B, Balachandran S, McGinley JL, Morris ME. Evaluation of measures of upper limb functioning and disability in people with Parkinson disease: a systematic review. 2015⁷
- Kleinlugtenbelt YV, Nienhuis R W, Bhandari M, Goslings JC, Poolman RW, Scholtes VAB. Are validated outcome measures used in distal radial fractures truly valid? A critical assessment using the COnsensus-based Standards for the selection of health Measurement INstruments (COSMIN) checklist. 2016⁸
- Thoomes-de Graaf M, et al. Evaluation of measurement properties of self-administered PROMs aimed at patients with non-specific shoulder pain and "activity limitations": a systematic review. 2016⁹
- St-Pierre C, Desmeules F, Dionne CE, Frémont P, MacDermid JC, Roy JS. Psychometric properties of self-reported questionnaires for the evaluation of symptoms and functional limitations in individuals with rotator cuff disorders: a systematic review. 2016¹⁰
- Mehta P, Claydon LS, Hendrick P, Cook C, Baxter DG. Pain and physical functioning in neuropathic pain: a systematic review of psychometric properties of various outcome measures. 2016¹¹
- Griffiths C, Guest E, White P, Gaskin E, Rumsey N, Pleat J, Harcourt D. A systematic review of patient-reported outcome measures used in adult burn research. 2017¹²
- Alreni ASE, Harrop D, Lowe A, Potia T, Kilner K, McLean SM. Measures of upper limb function for people with neck pain: a systematic review of measurement and practical properties. 2017¹³

- Hong I, Bonilha HS. Psychometric properties of upper extremity outcome measures validated by Rasch analysis: a systematic review. 2017¹⁴
- Resnik L, Borgia M, Silver B, Cancio J. Systematic review of measures of impairment and activity limitation for persons with upper limb trauma and amputation. 2017¹⁵
- de Cássia Registro Fonseca M, et al. Functional, motor, and sensory assessment instruments upon nerve repair in adult hands: systematic review of psychometric properties. 2018¹⁶
- Png K, et al. Measurement properties of patient reported outcome measures for spondyloarthritis: a systematic review. 2018¹⁷
- Lundgren-Nilsson A, et al. Patient-reported outcome measures in osteoarthritis: a systematic search and review of their use and psychometric properties. 2018¹⁸
- Nowak LL, Davis AM, Mamdani M, Beaton D, Kennedy C, Schemitsch EH. A systematic review and standardized comparison of available evidence for outcome measures used to evaluate proximal humerus fracture patients. 2019¹⁹
- Lemeunier N, et al. Reliability and validity of self-reported questionnaires to measure pain and disability in adults with neck pain and its associated disorders: part 3-a systematic review from the CADRE Collaboration. 2019²⁰
- Whittle JH, Peters SE, Manzanero S, Duke PF. A systematic review of patient-reported outcome measures used in shoulder instability research. 2020²¹
- Darwich A, Schüttler V, Obertacke U, Jawhar A. Outcome measures to evaluate upper and lower extremity: which scores are valid? 2020²²
- Mc Kittrick A, Gustafsson L, Marshall K. A systematic review to investigate outcome tools currently in use for those with hand burns, and mapping psychometric properties of outcome measures. 2021²³
- Itakussu EY, Morita AA, Kakitsuka EE, Pitta F, Cavalheri V, Hernandez NA. Instruments to assess function or functionality in adults after a burn injury: a systematic review. 2021²⁴
- Küçükdeveci AA, et al. Use and detailed metric properties of patient-reported outcome measures for rheumatoid arthritis: a systematic review covering two decades. 2021²⁵
- Cronin KJ, Magnuson JA, Murphy ML, Unger RZ, Jacobs CA, Blake MH. Responsiveness of patient-reported outcomes in shoulder arthroplasty: what are we actually measuring? 2021²⁶
- Jamshidi F, Farzad M, MacDermid JC, Varahra A, Hosseini SA, Asgarabad MH. Assessing the content based on ICF and quality based on COSMIN criteria of patient-reported outcome measures of functioning in breast cancer survivors: a systematic review. 2022²⁷
- Wiitavaara B, Florin J. Content and psychometric evaluations of questionnaires for assessing physical function in people with arm-shoulder-hand disorders: a systematic review of the literature. 2022²⁸
- Bradet-Levesque I, Audet J, Roy J, Flamand VH. Measuring functional outcome in Dupuytren's disease: A systematic review of patient-reported outcome measures. 2022²⁹
- Roos M, Dagenais M, Pflieger S, Roy JS. Patient-reported outcome measures of musculoskeletal symptoms and psychosocial factors in musicians: a systematic review of psychometric properties. 2022³⁰
- Furtado R, Bobos P, Ziebart C, Vincent J, MacDermid J. Patient-reported outcome measures used for shoulder disorders: an overview of systematic reviews. 2022³¹
- Dabbagh A, Saeidi S, MacDermid JC. Psychometric properties of the patient-reported outcome measures for people with ulnar nerve entrapment at the elbow: a systematic review. 2022³²
- Abbot S, Proudman S, Sim YP, Williams N. Psychometric properties of patient-reported outcomes measures used to assess upper limb pathology: a systematic review. 2022³³
- Alhasani R, Auger C, Azevedo MP, Ahmed S. Quality of mobility measures among individuals with acquired brain injury: an umbrella review. 2022³⁴

6 *Hanteerbaarheid / feasibility*

- *Taal* → origineel Engels, Nederlands en diverse vertalingen⁵
- *Benodigdheden* → invulformulier
- *Randvoorwaarden* → voor gebruik van de vragenlijst is een licentie vereist via:⁵
<https://dash.iwh.on.ca/licences>
- *Benodigde tijd* → invullen: 3-5 minuten, administratie: 6-10 minuten
- *Gebruikershandleiding* → ja, Engelse versie via:⁵ <https://dash.iwh.on.ca/dash-manual>

7 *Normgegevens*

- *Uitkomstklassen en normgegevens* →
Normgegevens: gemiddelde score bij gezonden = 10,10³⁵

8 *Overige gegevens*

- Van de DASH is middels itemreductie technieken een verkorte versie gemaakt, de QuickDASH.^{36,37} Deze bestaat uit 11 items en de beide optionele modules. Mintken et al. (2009)³⁸ vonden een test-retest reliability van 0.90 en een minimal clinically important difference (MCID) van 8.0 punten. De Nederlandse QuickDASH is apart opgenomen in de database www.meetinstrumentenzorg.nl.
- Er is ook een DASH Outcome Measure App (iPad Applicatie) beschikbaar via:⁵
<https://dash.iwh.on.ca/app>.
- Via <https://dash.iwh.on.ca/dash-e-bulletin> is ook een DASH e-Bulletin beschikbaar, waar men zich voor kan aanmelden. Hier worden research updates en antwoorden op vragen omtrent de DASH en QuickDASH geplaatst.
- Gabel et al. (2009)³⁹ ontwikkelden een verkorte versie van de QuickDASH, namelijk de QuickDASH-9, waarbij de 11 items zijn teruggebracht naar 9 items.

9 *Literatuurlijst*

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