



- **FACT SHEET No. 5**

Assessing Joint Pain and Function in the Clinic

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Patient-reported questionnaires (PROs) and performance measures are used to assess hip and knee osteoarthritis (OA) pain and function in clinical practice. PROs assess the patient's perspective, while performance measures assess actions such as walking or other standardized maneuvers in a controlled setting. Standardized assessment of patient outcomes allows physicians to measure the success or failure of diagnostics and treatments that OA patients receive.

Joint pain—typically involving the hips and knees—is the predominant complaint of people living with OA. Pain is what drives patients to seek medical care. In particular, research shows that people with hip and knee OA are most distressed by the intensity, quality (aching, burning, knife-like), and predictability of their joint pain, as well as its impact on physical function, sleep, fatigue, and mood. Valid and reliable PROs and performance measures are available to assess these aspects of the pain experience.

A generic pain questionnaire such as the numeric pain rating scale (NRS) is suitable to assess OA pain intensity in clinical practice. However, cumulative data suggest central sensitization may contribute to pain in a subset of people with OA and present with features of neuropathic pain (NP). Thus, in the setting of chronic painful OA, a measure of pain quality may also be useful. Two such measures include the multidimensional McGill Pain Questionnaire (MPQ), which evaluates the sensory, affective, and evaluative aspects of pain and pain intensity in adults with chronic pain, and the painDETECT (PD-Q) questionnaire, which was designed to screen for NP descriptors and distinguish NP from non-NP in people with chronic lower back pain.



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Among the OA-specific pain measures, the Western Ontario McMaster Universities OA Index (WOMAC) pain scale has been most widely used. It evaluates severity of hip and knee OA pain, while performing five activities—standing, walking, stairs, at rest, and at night. To assess OA pain independent of the effect of pain on physical function, the multidimensional Intermittent and Constant Osteoarthritis Pain measure (ICOAP—hip and knee) was developed. ICOAP evaluates the OA pain experience, including pain intensity, frequency, and impact on mood, sleep, and quality of life. It is intended for use alongside a measure of physical function.

The WOMAC physical function scale has been most widely used to assess hip and knee functional limitations. However, it may underestimate functional limitation in highly active younger individuals. For this reason, the Hip Disability and Osteoarthritis Outcome Score (HOOS) and Knee Injury and Osteoarthritis Outcome Score (KOOS) were developed. In addition to the WOMAC physical function items (daily living subscale), HOOS and KOOS include a subscale of higher demand function, sport, and recreational activities (sports and recreational activities subscale). The HOOS and KOOS physical function subscales also are available as short measures.

The limitation of PROs for assessment of activity limitations is that they rely on the patient's assessment of his or her functional ability. When someone no longer engages in an activity, whatever the reason, the self-reported ability to perform that activity may be overestimated or underestimated. For this reason, performance-based measurement may also be useful. For hip and knee OA, the 50-foot (or other distance) walking time, the Timed Chair Stand Test, and the Timed Up and Go (TUG) test are most frequently used. The Timed Chair Stand Test evaluates lower extremity body strength as an indicator of functional status and has been assessed for reliability and validity. The TUG assesses basic mobility skills and has been validated for use in hip and knee OA patients awaiting joint replacement surgery.

References

1. Hawker GA, Davis AM. Chapter 176 - Assessment of the patient with osteoarthritis and measurement of outcomes. In: Rheumatology 5th edition; Hochberg, Silman, Smolen, Weinblatt, Weisman (eds). Roseville: Mosby Elsevier, 2010.
2. Hawker GA, Mian S, Kendzerska T, French M. Measures of adult pain. *Arthritis Care Res (Hoboken)* 2011;63(Suppl 11):S240-52.
3. Hawker G, Davis A. Chapter 8 - Monitoring patient outcomes. In: OARSI Primer on Osteoarthritis; Henrotin Y, Hunter D, Kawaguchi H (eds). Online publication: 3 September 2011 (<http://primer.oarsi.org/content/chapter-8-monitoring-patient-outcomes>)
4. Hawker GA, Stewart L, French MR, Cibere J, Jordan JM, March L, Suarez-Almazor M, Gooberman-Hill R. Understanding the pain experience in hip and knee osteoarthritis – an OARSI/OMERACT initiative. *Osteoarthritis Cartilage* 2008;16(4):415-22.
5. Hochman JR, Gagliese L, Davis AM, Hawker GA. Neuropathic pain symptoms in a community knee OA cohort. *Osteoarthritis Cartilage* 2011;19(6):647-54.
6. Stratford PW, Kennedy DM, Woodhouse LJ. Performance measures provide assessments of pain and function in people with advanced osteoarthritis of the hip or knee. *Phys Ther* 2006;86(11):1489-96.



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