

## Sport and Exercise Medicine

# Seven Tests and Treatments to Question in Sport and Exercise Medicine

by  
Canadian Academy of Sport and Exercise Medicine  
Last updated: November 2024

### 1 Don't order an MRI for suspected degenerative meniscal tears or osteoarthritis (OA).

Degenerate meniscal tears and osteoarthritis (OA) are extremely common in the general population. Early degenerative changes in the meniscus can be found in many subjects under the age of 30. By 50 to 60 years of age, full degenerative meniscal tears are commonly found in 33-50% of subjects. Unless associated with the presence of osteoarthritis (OA), these degenerative meniscal tears are most often asymptomatic. Magnetic resonance imaging (MRI) is not recommended for degenerative meniscal tears unless there are mechanical symptoms (e.g., locking) or lack of improvement with conservative treatment (exercise/therapy, weight loss, bracing, topical or oral analgesia, intra-articular injections). MRI is not recommended for the diagnosis or management of OA. Weight-bearing X-rays should be ordered instead.

### 2 Don't prescribe opioids as first line treatment for acute or chronic non-cancer musculoskeletal pain

Tendinopathy is a broad term encompassing painful conditions occurring in and around tendons in response to overuse. Although acute inflammatory tendinopathies (i.e., tendinitis) exist, most patients seen in primary care will have chronic symptoms (tendinosis). Multimodality options (e.g., relative rest, activity modifications, physical or athletic therapy, etc.) should be considered as the first line treatment of tendinopathies. Opiates should not be used in the initial phase of treatment.

### 3 Don't order orthotics for asymptomatic children with pes planus (flat feet).

Pes planus is common in children. Although it rarely leads to disability, it is still a major concern for parents and is a common cause of clinic visits for pediatric foot problems. Most pediatric pes planus cases are characterized by a normal arch during non-weight bearing, and a flattening of the arch on standing. They are often painless, non-problematic, and resolve by adolescence. The current evidence suggests that it is safe and appropriate to simply observe an asymptomatic child with flexible pes planus.

#### **4 Don't order an MRI as an initial investigation for suspected rotator cuff tendinopathy.**

Initial management of rotator cuff tendinopathy includes relative rest, modification of painful activities, and an exercise program guided by a physical therapist or athletic therapist to regain motion and strength. The addition of subacromial cortisone/local anesthetic injections may be helpful. Should conservative management fail to relieve pain and restore function of the shoulder, consider plain radiographs to rule out bony or joint pathology, and ultrasound to assess for rotator cuff and bursal pathology. MRI or MRA (MR arthrogram) should be considered if symptoms don't resolve with conservative therapy, if there is a concern of labral pathology AND if there are no signs of osteoarthritis on x-ray.

#### **5 Don't immobilize ankle inversion sprains with no evidence of bony or syndesmotic injury.**

Ankle sprains are among the most common injuries seen in the ER or physician clinics. Ankle sprains cause a high incidence of absenteeism in professional and physical activities with important economic consequences. There is good evidence to show that functional bracing of the ankle instead of rigid immobilization is associated with improved and earlier functional improvement and an overall shorter recovery period. For ankle inversion sprains with no associated bony or syndesmotic injury, early mobilization using a functional ankle brace and physiotherapy/athletic therapy should be considered instead of rigid immobilization.

#### **6 Don't use single-use vials of anesthetic agents such as xylocaine to prepare injections for patients.**

Multi-dose vials (MDVs) that contain anesthetics like lidocaine or bupivacaine can be used safely when following manufacturer's guidelines. Vials should be marked with first entry date, disinfected with a 70% alcohol swab and allowed to dry, only be penetrated by a new needle and syringe, kept in a secure area, and stored at room temperature. The vials should be discarded according to the manufacturer's instructions (usually within 28 days) or within provincial guidelines whichever is shorter in duration.

#### **7 Don't recommend strict rest until symptom resolution after an acute sports-related concussion.**

The best available evidence outlined in the latest consensus statement on concussion in sport indicates that strict rest until the complete resolution of symptoms following sports-related concussion (SRC) is not beneficial. Instead, patients should be counselled to take relative rest for up to the first two days after injury, which includes activities of daily living and reduced screen time. After 24-48 hours, an early and gradual return to cognitive and physical activity is encouraged as tolerated, as long as symptoms are not more than mildly exacerbated. Exercise intensity should be increased gradually based on symptom response.


#### **How the list was created**

The Canadian Academy of Sport and Exercise Medicine (CASEM) Board approved the development of Choosing Wisely Canada's recommendations. A small working group was created to review existing Choosing Wisely Canada recommendations. The CASEM Board then created a list of suggested recommendations based on existing research, experience and common practice patterns. A national survey was conducted with CASEM's membership, soliciting members' feedback for each recommendation. The five recommendations with near unanimous support were selected to be included in CASEM's Choosing Wisely Canada's Top 5 List. Each recommendation was further developed by the small working group, and submitted to CASEM's publication's committee for review and feedback. Final edits were made and approved for submission to Choosing Wisely Canada by the CASEM Board.

#### **Climate-Conscious Recommendations**

Choosing Wisely Canada's climate-conscious recommendations are developed by clinician societies to improve planetary health without compromising patient care. These recommendations highlight everyday practices we can reduce or eliminate to minimize environmental harm. Visit our [climate page](#) to explore all the recommendations and learn more.

## Sources:

- 1 Arthritis Alliance of Canada. [The Impact of Arthritis in Canada: Today and Over the Next 30 Years](#) [Internet]. 2011 [cited 2017 May 5].  
Buchbinder R, et al. Management of degenerative meniscal tears and the role of surgery. *BMJ*. 2015;350:h2212. [PMID: 26044448](#).  
Englund M. The role of the meniscus in osteoarthritis genesis. *Rheum Dis Clin North Am*. 2008;34:573-9. [PMID: 18687273](#).  
Englund M. Meniscal tear – a common finding with often troublesome consequences. *J Rheumatol*. 2009;36:1362-4. [PMID: 19567632](#).  
Englund M, et al. Incidental meniscal findings on knee MRI in middle-aged and elderly persons. *N Engl J Med*. 2008;359:1108-15. [PMID: 18784100](#).  
Strobel MJ. *Manual of Arthroscopic Surgery*. Springer: Verlag Berlin Heidelberg; 2002;1:99-200.  
US Department of Veteran Affairs. [VA/DoD Clinical Practice Guidelines: The Non-Surgical Management of Hip & Knee Osteoarthritis \(OA\)](#) [Internet]. 2014 [cited 2017 May 5].
- 2 Andres BM, et al. Treatment of tendinopathy: what works, what does not, and what is on the horizon. *Clin Orthop Relat Res*. 2008;466:1539-54. [PMID: 18446422](#).  
Busse JW, Craigie S, Juurlink DN, Buckley DN et al. Guideline for opioid therapy and chronic noncancer pain. *CMAJ*. 2017 May 8;189(18):E659-E666. [PMID: 28483845](#).  
Fanelli G, et al. Opioids for chronic non-cancer pain: a critical view from the other side of the pond. *Minerva Anesthesiol*. 2016;82:97-102. [PMID: 26173558](#).  
Khan KM, et al. Histopathology of common tendinopathies. Update and implications for clinical management. *Sports Med*. 1999;27:393-408. [PMID: 10418074](#).  
Wilson JJ, et al. Common overuse tendon problems: A review and recommendations for treatment. *Am Fam Physician*. 2005;72:811-8. [PMID: 16156339](#).
- 3 Carr JB 2nd, et al. Pediatric Pes Planus: A State-of-the-Art Review. *Pediatrics*. 2016 Mar;137(3):e20151230. [PMID: 26908688](#).  
Halabchi F, et al. Pediatric flexible flatfoot; clinical aspects and algorithmic approach. *Iran J Pediatr*. 2013;23:247-60. [PMID: 23795246](#).  
Vergillos Luna M, Khal AA, Milliken KA, Solla F, Rampal V. Pediatric Flatfoot: Is There a Need for Surgical Referral? *J Clin Med*. 2023 Jun 1;12(11):3809. [PMID: 37298004](#).
- 4 Anderson MW, et al. Imaging evaluation of the rotator cuff. *Clin Sports Med*. 2012;31:605-31. [PMID: 23040549](#).  
Harrison AK, et al. Subacromial impingement syndrome. *J Am Acad Orthop Surg*. 2011;19:701-8. [PMID: 22052646](#).  
Lewis J, et al. Rotator Cuff Tendinopathy: Navigating the Diagnosis-Management Conundrum. *J Orthop Sports Phys Ther*. 2015;45:923-37. [PMID: 26390274](#).  
Roy JS, et al. Diagnostic accuracy of ultrasonography, MRI and MR arthrography in the characterisation of rotator cuff disorders: a systematic review and meta-analysis. *Br J Sports Med*. 2015;49:1316-28. [PMID: 25677796](#).  
Thomopoulos S, et al. Mechanisms of tendon injury and repair. *J Orthop Res*. 2015;33:832-9. [PMID: 25641114](#).  
Yablon CM, et al. Rotator cuff and subacromial pathology. *Semin Musculoskelet Radiol*. 2015;19:231-42. [PMID: 26021584](#).
- 5 Prado MP, et al. A comparative, prospective, and randomized study of two conservative treatment protocols for first-episode lateral ankle ligament injuries. *Foot Ankle Int*. 2014;35:201-6. [PMID: 24419825](#).  
Vuurberg G, Hoorntje A, Wink LM et al. Diagnosis, treatment and prevention of ankle sprains: update of an evidence-based clinical guideline. *Br J Sports Med*. 2018 Aug;52(15):956. Epub 2018 Mar 7. [PMID: 29514819](#).  
Kerkhoffs GM, Rowe BH, Assendelft WJ, Kelly KD, Struijs PA, van Dijk CN. Immobilisation for acute ankle sprain. A systematic review. *Arch Orthop Trauma Surg*. 2001 Sep;121(8):462-71. [PMID: 11550833](#).
- 6 Center for Disease Control and Prevention. [Questions about Multi-dose vials](#). | Injection Safety. CDC.  
 College of Physicians and Surgeons of British Columbia. Accreditation Standards: [Single-use Devices and Multi-dose Vials](#).  
Miller DC, Smith C. The Safe Use of Multidose and Single-Dose Vials, *Pain Medicine*, Volume 20, Issue 5, May 2019, Pages 1047–1048, <https://doi.org/10.1093/pm/pny314>. [PMID: 30759243](#).  
Kirschke DL, Jones TF, Stratton CW, Barnett JA, Schaffner W. Outbreak of joint and soft-tissue infections associated with injections from a multiple-dose medication vial. *Clin Infect Dis*. 2003 Jun 1;36(11):1369-73. doi: 10.1086/375064. Epub 2003 May 16. [PMID: 12766830](#).  
Public Health Ontario. [Updated Guidance on the Use of Multidose Vials](#).
- 7 Leddy JJ, Burma JS, Toomey CM et al. Rest and exercise early after sport-related concussion: a systematic review and meta-analysis. *Br J Sports Med*. 2023 Jun;57(12):762-770. [PMID: 37316185](#).  
Patricios JS, Schneider KJ, Dvorak J et al. Consensus statement on concussion in sport: the 6th International Conference on Concussion in Sport- Amsterdam, October 2022. *Br J Sports Med*. 2023 Jun;57(11):695-711. [PMID: 37316210](#).

**About Choosing Wisely Canada**

Choosing Wisely Canada is the national voice for reducing unnecessary tests and treatments in health care. One of its important functions is to help clinicians and patients engage in conversations that lead to smart and effective care choices.

**Web:** [choosingwiselycanada.org](http://choosingwiselycanada.org)

**Email:** [info@choosingwiselycanada.org](mailto:info@choosingwiselycanada.org)

**Twitter:** [@ChooseWiselyCA](https://twitter.com/ChooseWiselyCA)

**Facebook:** [/ChoosingWiselyCanada](https://www.facebook.com/ChoosingWiselyCanada)