Orthopaedics

Seventeen Things Physicians and Patients Should Question

by
Canadian Orthopaedic Association
Canadian Arthroplasty Society
Arthroscopy Association of Canada
Canadian Orthopaedic Foot and Ankle Society
Canadian Shoulder and Elbow Society

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Choosing Wisely Canada™
In collaboration with the Canadian Medical Association

1. **Don't use arthroscopic debridement as a primary treatment in the management of osteoarthritis of the knee.**
Several recent meta-analyses have culminated in clinical practice guidelines recommending against the use of arthroscopic debridement for the treatment of degenerative knee arthritis or degenerative and meniscal tears, as it appears there is no maintained benefit of arthroscopic surgery over conservative management (exercise therapy, injections, and drugs). However, this does not preclude the judicious use of arthroscopic surgery when indicated to manage symptomatic co-existing pathology in the presence of osteoarthritis or degeneration.

2. **Don't order a knee MRI when weight-bearing x-rays demonstrate osteoarthritis and symptoms are suggestive of osteoarthritis as the MRI rarely adds useful information to guide diagnosis or treatment.**
The diagnosis of knee osteoarthritis can be effectively made based upon the patient's history, physical examination, and plain radiography consisting of weight-bearing posterior-anterior, lateral and skyline views. Ordering MRI scans incurs further waiting times for patients, can cause unnecessary anxiety while waiting

3. **Don't order a hip MRI when x-rays demonstrate osteoarthritis and symptoms are suggestive of osteoarthritis as the MRI rarely adds useful information to guide diagnosis or treatment.**
The diagnosis of hip osteoarthritis can be effectively made based upon the patient's history, physical examination and plain radiography. Ordering MRI scans incurs further waiting times for patients, can cause unnecessary anxiety while waiting for specialist consultation, and can delay MRI imaging for appropriate patients.

4. **Don't prescribe opioids for management of osteoarthritis before optimizing the use of non-opioid approaches to pain management.**
The use of opioids in chronic non-cancer pain is associated with significant risks. Optimization of non-opioid pharmacotherapy and non-pharmacologic therapy is strongly recommended. Treatment with opioids is not superior to treatment with non-opioid medications in improving pain-related function over 12 months in patients with moderate to severe hip, knee or back pain due to osteoarthritis.

5. **Don't routinely request pathological examination of tissue from uncomplicated primary hip and knee replacement surgery undertaken for degenerative arthritis.**
Several large reviews including thousands of patients have demonstrated that routine pathological examination of operative specimens from uncomplicated primary hip and knee arthroplasty surgeries does not alter patient management or outcome.

6. **Avoid performing routine post-operative deep vein thrombosis ultrasonography screening in patients who undergo elective hip or knee arthroplasty.**
Since ultrasound is not effective at diagnosing unsuspected deep vein thrombosis (DVT) and appropriate alternative screening tests do not exist, if there is no change in the patient's clinical status, routine post-operative screening for DVT after hip or knee arthroplasty does not change outcomes or clinical management.

7. **Don't use needle lavage to treat patients with symptomatic osteoarthritis of the knee for long-term relief.**
The use of needle lavage in patients with symptomatic osteoarthritis of the knee does not lead to measurable improvements in pain, function, 50-foot walking time, stiffness, tenderness or swelling.

8 **Don't use glucosamine and chondroitin to treat patients with symptomatic osteoarthritis of the knee.**

Both glucosamine and chondroitin sulfate do not provide relief for patients with symptomatic osteoarthritis of the knee.

9 **Don't use lateral wedge insoles to treat patients with symptomatic medial compartment osteoarthritis of the knee.**

In patients with symptomatic osteoarthritis of the knee, the use of lateral wedge or neutral insoles does not improve pain or functional outcomes. Comparisons between lateral and neutral heel wedges were investigated, as were comparisons between lateral wedged insoles and lateral wedged insoles with subtalar strapping. The systematic review concludes that there is only limited evidence for the effectiveness of lateral heel wedges and related orthoses. In addition, the possibility exists that those who do not use them may experience fewer symptoms from osteoarthritis of the knee.

10 **Don't use post-operative splinting of the wrist after carpal tunnel release for long-term relief.**

Routine post-operative splinting of the wrist after the carpal tunnel release procedure showed no benefit in grip or lateral pinch strength or bowstringing. In addition, the research showed no effect in complication rates, subjective outcomes or patient satisfaction. Clinicians may wish to provide protection for the wrist in a working environment or for temporary protection. However, objective criteria for their appropriate use do not exist. Clinicians should be aware of the detrimental effects including adhesion formation, stiffness and prevention of nerve and tendon movement.

11 **Do not order ultrasound for ankle sprains or Achilles tendon ruptures that should be diagnosed with a focused history and physical examination.**

Ankle sprains and Achilles tendon ruptures are diagnosed by a history and physical examination. Further imaging is not necessary when a classic clinical picture is present and do not change management for these injuries. These injuries can often be treated nonoperatively if diagnosed early and further imaging may lead to delayed treatment. In particular for Achilles tendon ruptures, walking on the injury during the wait for further imaging can result in higher risk surgery with less predictable outcomes.

12 **Do not order routine pathology for uncomplicated interdigital neuroma resection excisions.**

When neuroma resection is performed by an experienced surgeon and the anatomical appearance of the specimen is not unexpected, pathological examination is not necessary and does not change management. If the surgical findings are atypical, pathological examination may be useful and performed.

13 **Don't order non-weight bearing x-rays when a patient is seeking care for foot and ankle.**

When patients are seeking care related to their foot and ankle, weight bearing radiographs should be ordered. Non-weight bearing x-rays underestimate the pathology (arthritis or deformity) and lead to further potentially unnecessary testing and increased unnecessary costs.

14 **Don't use cementless stem fixation when performing arthroplasty for fractured neck of femur in elderly patients.**

Compared to cemented fixation, cementless fixation results in increased revision risk, increased risk of periprosthetic fracture and no reduction in mortality risk. There have been many studies on the outcomes of patients with femoral neck fractures. These studies and subsequent meta-analysis in conjunction with international registry data has led to multiple guidelines recommending the use of cemented stems when performing arthroplasty. The use of cemented stems results in a lower risk of revision, lower risk of periprosthetic fracture, and no benefit in mortality risk. These findings are similar to Canadian data demonstrating an increased revision risk with cementless fixation that is independent of individual surgeon volume, and increased mortality with cementless fixation.

15 **Don't order x-rays or other advanced imaging for symptoms of non-traumatic shoulder pain.**

Routine imaging is not recommended for patients with non-traumatic shoulder pain. If movement is significantly restricted, symptoms are not improving or if suspecting traumatic pathology, then x-ray is encouraged as the initial investigation. A three-view x-ray series (AP, lateral and axillary views) is recommended. Ultrasound and MRI are not recommended for those with shoulder pain unless malignancy is suspected.

16 **Don't use corticosteroids (CSI), platelet-rich plasma (PRP), and autologous blood (AB) as first-line treatment for lateral epicondylitis.**

The CSES recently completed a Systematic Review and Position Statement on lateral epicondylitis. There is ongoing controversy regarding the non-operative treatment of lateral epicondylitis. All English-language randomized trials comparing non-operative treatment of patient > 18 years of age with lateral epicondylitis were included. The available evidence does not support the use of non-operative treatment options including corticosteroids, PRP, or AB in the treatment of lateral epicondylitis.

17 **Don’t dispose of non-contaminated wrapping materials in contaminated waste bins.**

Disposal of non-contaminated waste leads to CO2 emissions due to the need for high-temperature incineration. The carbon footprint of disposal of biohazardous clinical waste via high temperature incineration is 1074 kg CO2e/ton compared to regular waste (172–249 kg CO2e/ton) and recycling (21–65 kg CO2e). Various studies have shown that non-contaminated waste generated in the operating room during a primary joint replacement is on average between 5.2 kg and 6.2 kg. Thus, implementing correct waste segregation practices of non-contaminated materials, will aid in reducing the overall impact of emissions on the environment.

How the list was created:

Recommendations 1-5

The Canadian Orthopaedic Association (COA) established its Choosing Wisely Canada Top 5 recommendations by asking its National Standards Committee to review the evidence base associated with the five treatments and procedures chosen by the American Academy of Orthopaedic Surgeons for the Choosing Wisely® campaign in the United States. Satisfied that the list was relevant to the Canadian clinical context, the Committee recommended its adoption to the COA's Executive Committee, and the motion was then unanimously approved by the Board of Directors. Therefore, all five items were adopted with permission from the Five Things Physicians and Patients Should Question, © 2013 American Academy of Orthopaedic Surgeons.

Recommendations 6-10

This list was developed by the COA in collaboration with the Canadian Arthroplasty Society (CAS) and the Arthroscopy Association of Canada (AAC). Recommendation 6 arises from the position statement from the AAC concerning arthroscopy of the knee joint. Recommendations 7, 8 and 10 were brought forth by members of the CAS at their Annual Meeting in 2017. Recommendation 9 was brought forth by members of the COA Standards Committee following the COA Annual Meeting in June 2017.

Recommendations 11-16

The COA recently formed a Subspecialty Society Council, in which all affiliated Subspecialty Societies are represented by their President or a member of the Executive. This Council encouraged the Subspecialty Society members to forward their recommendations and references for review. As clinical and practical experts in their field, the COA has endorsed these recommendations based on past position statements and publications.

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About the Canadian Orthopaedic Association

The Canadian Orthopaedic Association (COA) is a proud partner of the Choosing Wisely Canada campaign. With some 1,300 members, the COA is the national professional association that represents Canada's orthopaedic surgeons. Its mandate is to promote excellence in bone and joint care through continuing professional development, models of care, practice-management strategies, government relations and a code of ethics. The COA has met annually since 1945, providing a venue for Canada's orthopaedic surgeons to update and refine their skills, as well as discuss and respond to professional and patient issues. Faced with increasing subspecialization, the COA has avoided fragmentation by forming subspecialty societies within the parent organization. Thus, the COA continues to speak with a united voice on behalf of the orthopaedic

About the Canadian Arthroplasty Society

The Canadian Arthroplasty Society was formed to address the growing awareness in this country for a dedicated and focused group of orthopaedic surgeons to formally meet and exchange ideas and experiences in hip and knee arthroplasty. This conference provides an ideal opportunity to highlight the challenges and successes in this always fascinating

About the Arthroscopy Association of Canada

The founding meeting of the Arthroscopy Association of Canada (AAC) occurred in 2012, initiated by a small group of committed orthopaedic surgeons. While there was interest in pursuing a formalized structure, the group did not fully materialize into a functioning association at that time. The Arthroscopy Association of Canada (AAC) was re-formed in 2017, and the current AAC Executive is grateful to the founding members, many of whom have been pivotal contributors to the early success of the Association.
The AAC was formed to encourage national collaboration and advancement of sports and arthroscopy research and education. The AAC will mobilize the knowledge gained through the Association's research to contribute to the global advancement of arthroscopic surgery and improved patient outcomes. Members include orthopaedic surgeons, researchers and allied health care professionals.community in Canada.

About the Canadian Orthopaedic Foot and Ankle Society

The Canadian Orthopaedic Foot and Ankle Society (COFAS) was formed in June of 2002 at the combined meeting of the Canadian and American Orthopaedic Associations. Since then, COFAS has fostered numerous initiatives related to education, research and advocacy related to surgical foot and ankle care.community in Canada.

About the Canadian Shoulder and Elbow Society

The mission of the CSES is to provide continuing medical education, coordinate clinical and translational research, and promote evidence-based practices in shoulder and elbow care in Canada.
The vision of the CSES is to advance the science and practice of shoulder and elbow care to improve treatment outcomes and quality of life for Canadians and globally.

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.

ChoosingWiselyCanada.org | info@ChoosingWiselyCanada.org | @ChooseWiselyCA | /ChoosingWiselyCanada