

Orthopedic Elective Surgery: What Every DC Should Know (Pt. 1)

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Chiropractic treatment is extremely effective in the management of many musculoskeletal conditions. But how we manage the patient when our care does not relieve the patient's symptoms is just as important. We need to be able to give our patients guidance about their options, even when those options are beyond our scope of practice.

In other words, we should be familiar with the surgical interventions that might be effective in relieving their symptoms and which ones are best avoided. Patients will appreciate your ability to explain the cons - and yes, also the pros - of surgical interventions so they can make better choices. You don't need to be a surgeon to evaluate the recent data. With that said, I'd like to focus on some of the common elective orthopedic procedures and their clinical effectiveness (or lack thereof).

Not Enough Evidence (Where Have We Heard That Before?)

Surprisingly, many common elective orthopedic interventions often lack strong supportive evidence, particularly in the form of randomized, controlled trials. It is surprising that the research just hasn't been done. Although some on the surgical interventions suggests they may be effective overall or in certain subgroups, high-quality, evidence-based studies have not been done to show that many commonly performed elective orthopedic procedures are more effective than nonoperative alternatives.

Even so, these procedures are still recommended. This is amusing because we as chiropractors often hear this same criticism from surgeons regarding chiropractic treatment. We all tend to be biased depending on what tools we have at hand. If you have a hammer, everything looks like a nail.

Top 10 Procedures: Evaluating Their Value According to Research

The 10 most common elective orthopedic procedures are arthroscopic anterior cruciate ligament reconstruction, arthroscopic meniscal repair of the knee, arthroscopic partial meniscectomy of the knee, arthroscopic rotator-cuff repair, arthroscopic subacromial decompression, carpal tunnel decompression, lumbar spine decompression, lumbar spine fusion, total hip replacement, and total knee replacement. Table 1 outlines these procedures and clinical indications.

TABLE 1: COMMON ELECTIVE ORTHOPEDIC PROCEDURES AND INDICATIONS.	
Procedure	Main Indication
Arthroscopic anterior cruciate ligament reconstruction	Anterior cruciate ligament rupture
Arthroscopic meniscal repair of the knee	Traumatic meniscal tears
Arthroscopic partial meniscectomy of the knee	Degenerative meniscal tears

Arthroscopic rotator-cuff repair	Acute rotator-cuff tears
Arthroscopic subacromial decompression	Subacromial impingement syndrome
Carpal tunnel decompression	Carpal tunnel syndrome
Lumbar spine decompression	Spinal canal stenosis
Lumbar spine fusion	Degenerative disc disease
Total hip replacement	End-stage osteoarthritis
Total knee replacement	End-stage osteoarthritis

Of the 10, only carpal tunnel decompression and total knee replacement have randomized, controlled trial evidence supporting their superiority over nonoperative care. Total hip replacement and arthroscopic meniscal repair have not been compared with nonsurgical management in randomized trials. There have been several clinical trials done comparing different surgical techniques and different types of total and partial hip arthroplasties. Meniscal repair was found to have better long-term patient-reported outcome measures, better activity levels, and lower failure rates than meniscectomy.

I am not suggesting these surgical procedures are ineffective for some patients; what I am saying is there is a lack of high-quality evidence that many commonly performed elective orthopedic procedures are more effective than nonoperative alternatives. Some of these procedures have actually been demonstrated to be no more effective than no treatment at all; yet these procedures are still recommended.

The following is a summary of present information and trials that have been done of the most common elective surgeries.

Elective Knee Surgeries

Arthroscopic anterior cruciate: The most complete study done by Frobell and colleagues compares structured rehabilitation plus early anterior cruciate ligament reconstruction with structured rehabilitation plus optional later anterior cruciate ligament reconstruction in 121 adults with acute anterior cruciate ligament injuries. Reported outcomes and adverse events did not differ between the two interventions after two and five years. *This indicates that one can wait to have knee surgery for acute anterior cruciate ligament injuries. The key takeaway is getting good rehab.*

Arthroscopic meniscal repair of the knee for traumatic tears: No randomized, controlled trial has been performed to date on arthroscopic meniscal repair. One review, which included primarily observational studies, compared surgical procedures with nonsurgical treatment; clinical findings based on International Knee Documentation Committee protocols suggested that nonsurgical treatment was unsatisfactory. *This opinion seems to support meniscal repair for acute injuries.*

Arthroscopic partial meniscectomy of the knee for degenerative tears: This procedure has been reviewed, and a randomized, controlled trial of *arthroscopic partial meniscectomy did not show clinically any important benefit over conservative treatment of knee function and pain.* From the studies available to date, meniscal repair seems to be the best option over partial meniscectomy.

Elective Shoulder Surgeries

Arthroscopic rotator-cuff repair for acute rotator-cuff tears: The best available review for this procedure was done via a Cochrane review, *which found no clinically important differences*

between arthroscopic rotator-cuff repair over non-operative care. I am a big fan of Cochrane reviews, they are internationally recognized as the highest standard in evidence-based health care.

Arthroscopic subacromial decompression for subacromial impingement syndrome: This procedure has been reviewed and compared to various conservative treatments, including no intervention and placebo. The consensus has been that subacromial decompression *does not provide clinically important improvement in pain, function or quality of life compared with other treatments.* In other words, it is not recommended.

Carpal Tunnel Surgery

In the single meta-analysis that synthesized four randomized, controlled trials comparing surgical versus nonsurgical treatment (splinting or local corticosteroid injections), surgical treatment was shown to relieve symptoms significantly better than nonsurgical treatment; however, surgical treatment was associated with more complications.

Carpal tunnel decompression is the one elective surgery that has been well-documented with randomized controlled trials. *This surgery does have good clinical outcomes and can be recommended if conservative treatment does not alleviate symptoms.*

Editor's Note: Part 2 of Dr. Pate's article discusses what research says about lumbar spine surgery, lumbar spine fusion for degenerative disc disease, and total knee replacement surgery. Complete references supporting the citations in both parts accompany pt. 2.

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