

## PEER Simplified Chronic Pain Guideline: Summary

### Treatment Interventions for Discussion with Patients

#### Physical Activity

The foundation of a treatment plan for chronic low back pain and osteoarthritis is physical activity.

About 2 in every 3 people who increase their activity will have improved pain independent of weight loss.

✓ Patients can choose the activity they enjoy; one type of exercise is not better than another

✓ A wearable activity tracker and an exercise prescription can help to increase physical activity.



#### Psychological Therapy

About 30-60% of patients with chronic pain will get pain improvement with cognitive behavioral therapy (CBT) or mindfulness-based stress reduction compared to 10-30% with control (e.g. wait list or no intervention).

#### Treatment Options

Percentage of patients who will have pain meaningfully reduced (≥30%):

	OSTEOARTHRITIS	CHRONIC LOW BACK PAIN	NEUROPATHIC PAIN
<b>Foundation of treatment</b>	Physical activity is the foundation of a treatment plan for osteoarthritis and chronic low back pain.		
<b>Add-on option</b>	Psychological therapy is an option for patients with any of these conditions.		
	Placebo or control: 40%	Placebo or control: 40%	Placebo or control: 29%
<b>Additional treatments with clear evidence of benefit</b>	Intra-articular corticosteroids: 70% SNRIs: 61% Oral NSAIDs: 58% Topical NSAIDs: 51%	Oral NSAIDs: 58% Spinal manipulation: 55% TCAs: 53% SNRIs: 50%	Gabapentinoids: 44% SNRIs: 42% Rubefacients (e.g. capsaicin): 40%
<b>Treatments with unclear benefit</b>	Glucosamine Chondroitin Viscosupplementation	Acupuncture Rubefacients (e.g. capsaicin)	TCAs Cannabinoids Topical nitrates
<b>Treatments with evidence of no benefit</b>	Acetaminophen	Corticosteroids (epidural)	Acupuncture Topical ketamine, amitriptyline, doxepin or combinations
<b>Treatments with harms that exceed benefit</b>	Opioids Cannabinoids	Opioids Cannabinoids	Opioids Topiramate Ocarbazepine

For more information, see <https://pain-calculator.com>.

No responder analyses identified for: osteoarthritis (ubefacients, platelet-rich plasma injections, TCAs), low back pain (acetaminophen, muscle relaxants, SNRIs, anticonvulsants, topical NSAIDs), neuropathic pain (exercise and lidocaine).

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#### Key Adverse Effects

TREATMENTS	PERCENTAGE STOPPING DUE TO ADVERSE EFFECTS	KEY ADVERSE EFFECTS TO DISCUSS WITH PATIENT	COST* (3-MONTH)
Placebo	~5% (2-9%)	—	—
Acetaminophen	Not statistically worse than placebo or control	Liver damage in overdose	\$25-50
Acupuncture		Not reported	\$150-300+
Chondroitin or glucosamine		None reported as greater than placebo	<\$50
Corticosteroids (intra-articular or other injections)		Infection (one in ~50,000 <sup>†</sup> ); post-dural puncture headache with spinal injection	\$25-50
Physical activity		Mild muscle soreness	\$0-500+
NSAIDs (topical)	6%	Application site reactions	\$50-75
Rubefacients (e.g. capsaicin)	6%	Local burning, skin redness	\$50-75
Cannabinoids	10%	Dizziness, nausea, drowsiness, confusion	\$150-300+
Gabapentinoids	12%	Dizziness, peripheral edema, weight gain	<\$50-150
SNRIs	12%	Dizziness, sedation, stomach upset, weight loss	<\$50-300
TCAs	16%	Dry mouth, dizziness, drowsiness	\$25-150
Opioids	27%	Sedation, dizziness, constipation, pruritis, vomiting, nausea, dependency, overdose	\$75-300
NSAIDs (oral)	Not reported	Stomach upset, gastrointestinal bleeds, increased blood pressure, worsening kidney problems, new or worsening heart failure; increased risk of myocardial infarction with some NSAIDs	\$50-100
Psychological Therapy		Not reported	Variable
Spinal manipulation		Case reports have associated neck manipulation with stroke. <sup>†</sup>	\$150-300+
Topical agents (lidocaine, amitriptyline, ketamine, doxepin)		Local reactions; Nitrates: headache, palpitations possible	Nitrates: <\$25; Others: \$175-300+
Viscosupplementation		Injection site reactions	\$150-300+

References: 1) Prescription drug costs taken from <https://pricing.fda.gov> and <https://www.drugs.com>. 2) Jones T, Kellberg G, Saharok S. Am Fam Physician. 2014;90:115-6. 3) Nielsen SM, Tarp S, Christensen R, Bliddal H, Kløkker L, Hennriksen M. Spyt Rev 2017; 6(11):84. Illustrations by Storyart: <https://storyart.com/>

#### Practice Points

- Physical Activity Prescriptions available from RxFiles (<https://bit.ly/ExerciseRxFiles>)
- Adding a second drug is reasonable when the initial agent provides a partial benefit
- Goals of treatment should be patient-identified, realistic and focused on functional outcomes
- Start/titrate/taper/stop one medication at a time to allow for accurate monitoring of response or adverse effects



NSAIDs = non-steroid anti-inflammatory drugs; SNRIs = serotonin norepinephrine reuptake inhibitors; TCAs = tricyclic antidepressants