

# Pain Management Toolkit/Resource



## Physical Therapy Pain Treatment and Management Interventions

PHYSICAL THERAPY PAIN TREATMENT AND MANAGEMENT: Please refer to necessary training, certifications, and state practice requirements for use of modalities or unfamiliar techniques.		
CURRENT EVIDENCE BASED PRACTICE AND CLINICAL PRACTICE GUIDELINES 2016		
Problem	Interventions	Additional Consults/Referrals/Evaluations to Consider
General Pain	<p>Passive Modalities Paired with Active Exercise:</p> <ul style="list-style-type: none"> <li>• TENs</li> <li>• Ultrasound</li> <li>• Corset</li> <li>• Traction</li> <li>• Self Management Education for Patient Use of Ice, Heat, Massage, Relaxation</li> </ul> <p>Cognitive Behavioral Interventions:</p> <ul style="list-style-type: none"> <li>• Relaxation Therapy</li> <li>• Biofeedback</li> <li>• Mindfulness based stress reduction: formal &amp; informal meditative practices</li> <li>• Imagery</li> <li>• Diaphragmatic Breathing</li> <li>• Autogenic Training</li> <li>• Progressive Muscle Relaxation Training</li> <li>• Hypnosis</li> <li>• Cognitive Restructuring</li> </ul>	<ul style="list-style-type: none"> <li>• Apply Cognitive-Behavioral strategies to enhance outcomes: <ul style="list-style-type: none"> <li>• Active Role of Patient in Pain Management</li> <li>• Reinforce Wellness Behaviors</li> <li>• Structured Therapy Program / Exercise Program</li> <li>• Address "Fear of Movement" Influencing Avoidance or Inactivity.</li> </ul> </li> <li>• If mild to moderate depression is a co-morbidity, both pain and depression should be treated concurrently.</li> <li>• If severe depression is a co-morbidity, treat depression as the primary diagnosis, along with pain therapies.</li> </ul>

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	<ul style="list-style-type: none"> <li>• Problem Solving</li> <li>• Spirituality</li> </ul>	
Low Back Pain	<ul style="list-style-type: none"> <li>• Spinal Manipulation Therapy</li> <li>• Supervised Exercise: Unloaded or Resistance, Flexion exercises, Extension exercises (Mckenzie), Isokinetic intensive machine muscle strengthening, Group aerobic low-impact exercise.</li> <li>• Graded, gradually progressive, exercise programs</li> <li>• Low or High Frequency TENS</li> <li>• Low Level Laser Therapy</li> <li>• Massage</li> <li>• Therapeutic Aquatic Exercise</li> <li>• Pilates</li> <li>• Yoga, supplementary</li> <li>• Deep Breathing, supplementary</li> <li>• Recreational Exercise</li> </ul>	<ul style="list-style-type: none"> <li>• Acupuncture</li> <li>• Dietary interventions</li> <li>• Apply Cognitive-Behavioral strategies to enhance outcomes: <ul style="list-style-type: none"> <li>• Active Role of Patient in Pain Management</li> <li>• Reinforce Wellness Behaviors</li> <li>• Structured Therapy Program / Exercise Program</li> <li>• Address "Fear of Movement" Influencing Avoidance or Inactivity.</li> </ul> </li> <li>• If mild to moderate depression is a co-morbidity, both pain and depression should be treated concurrently.</li> <li>• If severe depression is a co-morbidity, treat depression as the primary diagnosis, along with pain therapies.</li> </ul>



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Neck Pain	<ul style="list-style-type: none"> <li>• Combined Manual Therapy and Supervised Exercise:</li> <li>• Exercise provides the best outcomes when combined with cervical manipulation/mobilization (training required).</li> <li>• Exercise therapy ( alone or in combination with joint manipulation/mobilization): Cranio-cervical flexion (i.e., exercises to strengthen the longus colli [LC] and longus capitis [Lca] muscles) and neck strengthening-endurance exercises</li> <li>• Flexibility exercises of the anterior-medial-posterior scalene, upper trapezius, levator scapulae, pectoralis minor, and pectoralis major</li> <li>• Coordination, Strengthening, and Endurance Exercises</li> <li>• Low or High Frequency TENS</li> <li>• Low Level Laser Therapy</li> <li>• Intermittent Mechanical Cervical Traction (training required) combined with Manual therapy and Strengthening Exercises</li> </ul>	<ul style="list-style-type: none"> <li>• Acupuncture</li> <li>• Chiropractic Technique</li> <li>• Patient education with focus on a bio-psychosocial approach is indicated to ensure that the treatment administered corresponds with the individual patient's coping strategies, attitudes, beliefs, and illness perception</li> <li>• Apply Cognitive-Behavioral strategies to enhance outcomes: <ul style="list-style-type: none"> <li>• Active Role of Patient in Pain Management</li> <li>• Reinforce Wellness Behaviors</li> <li>• Structured Therapy Program / Exercise Program</li> <li>• Address "Fear of Movement" Influencing Avoidance or Inactivity.</li> </ul> </li> <li>• If mild to moderate depression is a co-morbidity, both pain and depression should be treated concurrently.</li> <li>• If severe depression is a co-morbidity, treat depression as the primary diagnosis, along with pain therapies.</li> </ul>
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	<ul style="list-style-type: none"> <li>• Spinal mobilization/manipulation: Thoracic manipulation and/or Cervical mobilization combined with Thoracic mobilization</li> <li>• Upper quarter mobilization</li> <li>• Yoga, supplementary</li> <li>• Nerve mobilization (training required)</li> <li>• Myofascial Release</li> <li>• Mechanical intermittent cervical traction combined with manual joint mobilization, dry hot pack application,</li> <li>• Biofeedback</li> <li>• Qigong</li> <li>• Low-level laser therapy: continuous wave or multiple pulsed waves to irradiate known trigger points, tender points, acupuncture points, and symptomatic zygapophyseal joints</li> <li>• Dry needling</li> <li>• Ischemic compression of trigger points: Sustained ischemic compression of a trigger point in the upper trapezius muscle</li> <li>• Patient education</li> </ul>	
Whiplash Injuries	<ul style="list-style-type: none"> <li>• Supervised Exercise</li> <li>• Low or High Frequency TENS</li> </ul>	

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	<ul style="list-style-type: none"> <li>• Low Level Laser Therapy</li> <li>• Patient education to gain early return to normal, non-provaccative activities with reassurance of good prognosis and usual full recovery</li> </ul>	
Chronic Arthritis	<ul style="list-style-type: none"> <li>• Light to moderate intensity physical activity</li> <li>• T'ai Chi</li> <li>• Low or High Frequency TENS</li> <li>• Low Level Laser Therapy</li> <li>• Yoga, supplementary               <ul style="list-style-type: none"> <li>• Deep Breathing, supplementary</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Acupuncture</li> <li>• Omega-3 Fatty Acid</li> <li>• Herbal Indian Frankincense               <ul style="list-style-type: none"> <li>• Herbal Willow Bark</li> </ul> </li> <li>• Apply Cognitive-Behavioral strategies to enhance outcomes:               <ul style="list-style-type: none"> <li>• Active Role of Patient in Pain Management</li> <li>• Reinforce Wellness Behaviors</li> <li>• Structured Therapy Program / Exercise Program</li> <li>• Address "Fear of Movement" Influencing Avoidance or Inactivity.</li> </ul> </li> <li>• If mild to moderate depression is a co-morbidity, both pain and depression should be treated concurrently.</li> <li>• If severe depression is a co-morbidity, treat depression as the primary diagnosis, along with pain therapies.</li> </ul>

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Rheumatoid Arthritis	Control of Inflammation through <ul style="list-style-type: none"> <li>• Ice/Heat</li> <li>• Massage</li> <li>• Self management</li> </ul>	<ul style="list-style-type: none"> <li>• Referral to Rheumatologist as needed</li> </ul>
Fibromyalgia	<ul style="list-style-type: none"> <li>• Aerobic &amp; Strengthening Supervised Exercise</li> <li>• Low or High Frequency TENS</li> <li>• Low Level Laser Therapy               <ul style="list-style-type: none"> <li>• Yoga, supplementary</li> </ul> </li> <li>• Massage               <ul style="list-style-type: none"> <li>• Relaxation</li> </ul> </li> </ul>	
Peripheral Diabetic Neuropathy	<ul style="list-style-type: none"> <li>• Low or High Frequency TENS</li> <li>• Low Level Laser Therapy</li> </ul>	
Muscle Pain	<ul style="list-style-type: none"> <li>• Graded Strength Training</li> <li>• Cardiovascular Training</li> <li>• Flexibility Training</li> <li>• Balance Training</li> <li>• Body Mechanics</li> </ul>	

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	<ul style="list-style-type: none"> <li>• Aquatic Therapy</li> <li>• Modalities:</li> <li>• Ice/Heat</li> <li>• Massage <ul style="list-style-type: none"> <li>• Self management</li> </ul> </li> </ul>	
Mechanical / Compressive Pain	<ul style="list-style-type: none"> <li>• Splinting</li> <li>• Strengthening <ul style="list-style-type: none"> <li>• Assistive Device Use</li> </ul> </li> </ul>	
Adhesive Capsulitis	<ul style="list-style-type: none"> <li>• Shoulder Mobility and Stretching, combined with corticosteroid injections</li> <li>• Patient Education on <ul style="list-style-type: none"> <li>• Natural course of the disease</li> <li>• Activity promotion and modification in functional pain free ranges</li> <li>• Stretching to up to level of irritability</li> </ul> </li> <li>• Modalities: Shortwave Diathermy, Ultrasound, Electrical Stimulation; Combined with Mobility and Stretching Exercises</li> <li>• Joint Mobilization of the Glenohumeral Joint <ul style="list-style-type: none"> <li>• Stretching Program</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Translational manipulation under anesthesia directed to the glenohumeral joint may be necessary in patients with adhesive capsulitis who are not responding to conservative interventions.</li> </ul>

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Residual Limb Pain and/or Phantom Limb Pain	<ul style="list-style-type: none"> <li>• Prosthetic Socket Modifications</li> <li>• TENS</li> <li>• Desensitization</li> <li>• Mirror Therapy</li> <li>• Scar Mobilization</li> <li>• Relaxation</li> <li>• Biofeedback</li> <li>• Virtual Reality</li> <li>• Sensory Discrimination Training</li> <li>• Ultrasound</li> <li>• Thermotherapy</li> <li>• Vibration <ul style="list-style-type: none"> <li>• Massage</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Therapeutic Techniques in Home Program</li> <li>• Patient and Family Education</li> <li>• Peer Support Group</li> </ul>
CRPS / Reflex Sympathetic Dystrophy	<ul style="list-style-type: none"> <li>• Motor imagery therapy</li> <li>• Brisk rubbing of the affected extremity (i.e., counterirritation)</li> <li>• Apply prescribed heat or cold therapy and antiembolism stockings, as appropriate</li> <li>• Increase ROM, strength, and function in the affected limb, as appropriate</li> <li>• Mirror therapy can be effective in patients who develop CRPS after a stroke</li> </ul>	<ul style="list-style-type: none"> <li>• Spinal cord stimulation has been shown to reduce pain in CRPS 1</li> <li>• Corticosteroids can be effective in early-stage CRPS 1 in reducing pain and inflammation</li> <li>• Sympathetic nerve blocks (e.g., I.V. regional nerve blocks, stellate ganglion [cervical]) may be ordered to reduce pain without blocking motor activity</li> </ul>

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	<ul style="list-style-type: none"> <li>• Transcutaneous Electrical Nerve Stimulation (TENS)</li> </ul>	<ul style="list-style-type: none"> <li>• Assess anxiety level and coping ability; provide emotional support, educate, and encourage discussion about potential complications, treatment risks and benefits, and individualized prognosis</li> <li>• Request referral to a mental health clinician, if appropriate, for counseling on coping with chronic pain, depression, or fear of movement/extreme self-protective behavior</li> <li>• Request referral to a social worker for identification of resources for support groups, Internet information and support, and in-home services</li> <li>• Acupuncture is a form of neuromodulation (i.e., pharmacologic, electrical, or manual stimulation of the nervous system).</li> <li>• Other neuromodulation techniques used with variable success include implanted spinal cord stimulators, transcutaneous electrical nerve stimulation.</li> </ul>
Cancer Pain Considerations	<ul style="list-style-type: none"> <li>• Treatment of Interruption of daily routines including self-care, work, leisure, or social</li> </ul>	<b>Contraindications:</b> <u>Cryotherapy contraindications</u> Raynaud's syndrome



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	<p>activities due to cancer or from the effects of the cancer treatment.</p> <ul style="list-style-type: none"> <li>• Treatment of common side effects of cancer, including fatigue, pain, weakness, cognitive difficulties, anxiety or depression, and changes in self-esteem or self-image</li> <li>• Aquatic Therapy, as clinically appropriate</li> <li>• Clinicians should follow the guidelines of their clinic/hospital and what is ordered by the patient's physician.</li> </ul> <p>Treatment of specific pain symptoms within realm of guidelines and contraindications, some listed in additional interventions / considerations.</p>	<p>Cryoglobulinemia Cold urticaria Paroxysmal cold hemoglobinuria Impaired circulation Over area of nerve regrowth <u>Cryotherapy precautions</u> Hypertension Hypersensitivity to cold Over an acute wound Over superficial nerves <u>Thermotherapy contraindications</u> Decreased circulation Decreased sensation Acute/subacute traumatic and inflammatory conditions Skin infections Impaired cognition or language barrier Malignancy Liniments Presence of or tendency for hemorrhage or edema Heat rubs <u>Electrotherapy contraindications/precautions</u></p>
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		<p>Do not place electrodes near carotid bodies, cardiac pacemakers or implantable cardioverter defibrillators, phrenic nerve or urinary bladder stimulators, the phrenic nerve, eyes, or gonads</p> <p>Osteomyelitis</p> <p>Hemorrhage</p> <p>Impaired sensation, mental status, communication<sup>(2)</sup></p> <p>Cardiovascular disease</p> <p>Over malignancy</p> <p>Dermatological conditions</p> <p>Proximity of electromagnetic radiation</p> <p>In pregnant women, near the pelvis, lumbar spine, hips, or abdomen</p> <p>In patients with stroke or seizures, near the neck</p> <p>History of spontaneous abortion in pregnant women</p>
Post Stroke Shoulder Pain	<ul style="list-style-type: none"> <li>• Cryotherapeutic agents</li> <li>• Transcutaneous electric nerve stimulation (TENS) may reduce shoulder pain</li> <li>• Interventions that could be beneficial for restoring somatosensory function and reducing somatosensory</li> </ul>	<ul style="list-style-type: none"> <li>• Arm slings to support a flaccid arm during standing or transferring</li> <li>• Supporting devices such as lapboards, wheelchair trays and arm troughs may be used to maintain appropriate arm position</li> </ul>



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	<p>sensitization in persistent shoulder pain include electrical stimulation, mirror therapy, and mental imagery</p> <ul style="list-style-type: none"> <li>• Gentle passive and active assisted ROM Avoid aggressive ROM exercises. (Stay below 90° of flexion and abduction, and avoid use of pulleys)</li> <li>• Strengthening exercises</li> <li>• Repetitive task-oriented practice</li> <li>• CIMT</li> <li>• Bilateral training</li> <li>• Mental practice</li> <li>• Weight-bearing through affected extremity</li> <li>• Neurodevelopmental training (NDT)</li> <li>• EMG-triggered electrical stimulation</li> <li>• Use of mirror</li> <li>• Core stability exercises, strengthening of abdominal muscles, rhythmic stabilization, postural control in progressive developmental positions</li> <li>• Balance training</li> <li>• Encourage use of affected arm in practical tasks</li> </ul>	<ul style="list-style-type: none"> <li>• Shoulder strapping might be useful to defer onset of pain<sup>(27)</sup> or to remind caregivers that the shoulder is at risk for damage if improperly handled</li> </ul>
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- Avoid overuse and unsafe compensatory techniques
- Prevent glenohumeral subluxation with positioning, supports, and/or strapping as indicated
- FES to reduce subluxation
  - Educate patient to be vigilant in checking arm position

### References:

Clinical Practice Guideline Healthcare Improvement Scotland, 2013

[www.sign.ac.uk/guidelines/fulltext/136/index.html](http://www.sign.ac.uk/guidelines/fulltext/136/index.html)

Clinical Practice Guideline Institute for Clinical Systems Improvement, 2013

[https://www.icsi.org/\\_asset/bw798b/ChronicPain.pdf](https://www.icsi.org/_asset/bw798b/ChronicPain.pdf)

Neck Pain: Clinical Practice Guidelines Linked to the International Classification of Functioning, Disability, and Health from the Orthopaedic Section of the American Physical Therapy Association, 2008

<http://www.jospt.org/doi/pdf/10.2519/jospt.2008.0303>

Pain Management: Neck Pain – Physical Occupational Therapy; Sharon Richman, MSPT; Mary Woten, RN, BSN; 04.2016

<https://ceu.cinahl.com/course/5000010450>

Pain Management: Neck Pain -- Alternative Therapy; Tanja Schub, BS; Carita Caple, RN, BSN, MSHS; 12.2015 <https://ceu.cinahl.com/introduction>

Shoulder Pain and Mobility Deficits: Adhesive Capsulitis: Clinical Practice Guidelines Linked to the International Classification of Functioning, Disability, and Health from the Orthopaedic Section of the American Physical Therapy Association; 2013

<http://www.jospt.org/doi/pdf/10.2519/jospt.2013.0302>

VA/DoD Evidence Based Clinical Practice Guideline for the Management of Upper Extremity Amputation Rehabilitation; 2014

<http://www.healthquality.va.gov/guidelines/Rehab/UEAR/VADoDCPGManagementofUEAR121614Corrected508.pdf>

Phantom Limb Pain; Amy Lombara, PT,DPT; 01.2016

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Complex Regional Pain Syndrome: Overview; Tanja Schub, BS; Jennifer Pilgrim, RN, BSN, MA; Nicole Edmonds, RN; 05.2016

<https://ceu.cinahl.com/course/5000010891>

Cancer Pain: Occupational Therapy; Abigail Grover Snook, PT, MS, Med; 05.2016

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Stroke Shoulder Pain; Ellenore Palmer, BScPT, MSc; 01.2016

<https://ceu.cinahl.com/course/5000016994>