Pain Management

Pain Management in Lower Limb Amputation

Phase	Management
Pre-Amputation	Assess for and manage existing pain Develop a perioperative pain management plan
Peri-Operative, Post-Amputation, Prosthetic Training	***All phases:*** Assess and treat residual limb pain (RLP), phantom limb pain (PLP), and phantom limb sensation (PLS) Provide treatment plan for RLP, PLP, PLS, including: patient education, narcotic use, regional anesthesia, psychosocial interventions, nonpharmacologic interventions (i.e., exercises, soft tissue mobilization, tapping, residual limb compression, etc.) Complete initial assessment of medical comorbidities and consult experts as appropriate, especially if not addressed preoperatively Initiate medical interventions and education as needed Consider concurrent injuries or conditions that may affect success in rehabilitation Consider consult for mirror therapy, alone or in combination with other therapies, to improve pain, function and quality of life for individuals with phantom limb pain. ***Perioperative:*** Consider intraoperative placement of a perineural catheter for the post-operative delivery of local anesthetic to reduce pain following amputation surgery ***Post-Amputation, Prosthetic Training*** Consider perineural catheter delivered anesthetic for the treatment of chronic severe phantom limb pain with functional impairment.
Lifelong Care	Reassess and adjust treatment for residual limb pain (RLP), phantom limb pain (PLP), and phantom limb sensation (PLS), as above. Assess and treat contributing musculoskeletal problems
All phases	A behavioral health consultation should be considered for any individual with lower limb loss with ongoing engagement through the phases of care.

Phantom Limb Pain

Etiology	Key Historical or Examination Features	Evaluation	Non-pharmacological Management	Pharmacologic Management
Primary Phantom Limb Pain (PLP)	Onset in early post-amputation period Often nocturnal Gradually reduced in intensity and frequency over time Can be exacerbated by residual limb pain	Diagnosis of exclusion once other causes of PLP have been ruled out	Desensitization Mirror Therapy Residual limb compressive devices Prosthetic use Transcutaneous electrical stimulation (TENS) H-wave Percussion Acupuncture Alternative and complementary medicine Mental health evaluation and treatment (Depression & PTSD)	TCAs Anticonvulsants Antispasmodics SSRIs NMDA receptor antagonists Perineural catheter delivered anesthetic for the treatment of chronic severe phantom limb pain with functional impairment
Referred pain from proximal neurological or musculoskeletal source	Consider symptoms of typical musculoskeletal, radicular, and other causes	Imaging as appropriate EMG/Nerve conduction studies	Treat underlying cause as appropriate	Pharmacologic Rx as appropriate
Referred pain from a Neuroma	Aggravated by prosthetic use Local Tinel or tenderness at the end of the nerve	Diagnostic injection Ultrasound or MRI	Prosthetic modification to reduce mechanical loads Corticosteroid injection Phenol ablation Surgical resection	Consider pharmacologic Rx if non-responsive to other treatments: TCAs Anticonvulsants Antispasmodics SSRIs NMDA receptor antagonists

Phantom Limb Sensation

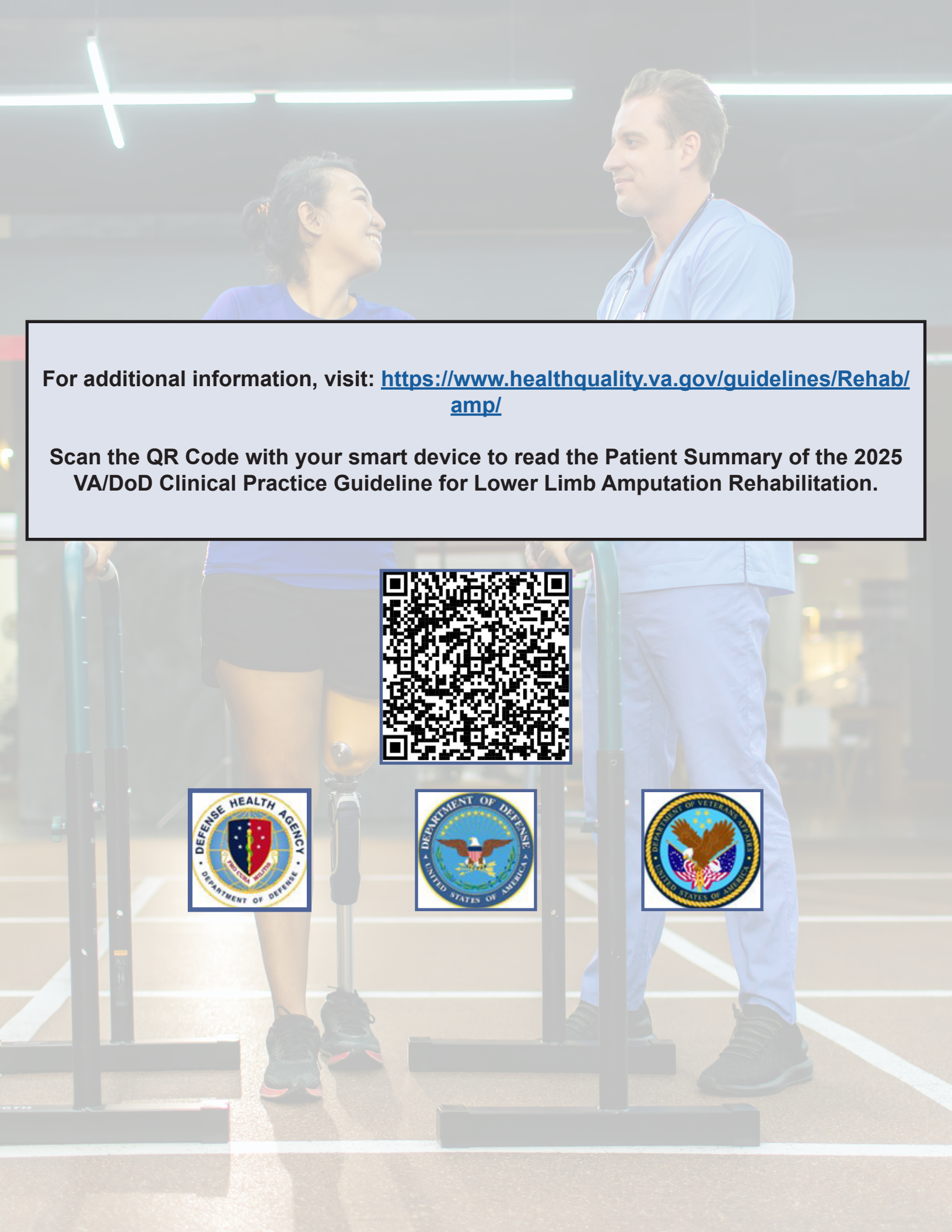
Character	Key Historical or Examination Features	Evaluation	Non-pharmacological Management	Pharmacologic Management
If mild and non-functionally limiting	None	None	Educate and reassure patient	None
If of adequate severity that it is perceived as uncomfortable or distressing	Onset in early post-amputation period	No specific	Desensitization Mirror Therapy Residual limb compressive devices Prosthetic use TENS Acupuncture Alternative and complementary medicine	Consider pharmacologic Rx if non-responsive to other treatments: TCAs Anticonvulsants Antispasmodics SSRIs NMDA receptor antagonists

Musculoskeletal Pain

Etiology	Key Historical or Examination Features	Evaluation	Non-pharmacological Management	Pharmacologic Management
Degenerative arthritis	Exacerbation with increased mobility and mechanical loading	X-ray Include weight-bearing views	Physical therapy Corticosteroid/ visco-supplementation injections Surgical referral as appropriate	Non-narcotic pain medications
Non-specific low back pain	Exacerbation with ambulation	Imaging and laboratory studies if red flags or persistent symptoms	Physical Therapy	Non-narcotic pain medications

Residual Limb Pain

Etiology	Key Historical or Examination Features	Evaluation	Non-pharmacological Management	Pharmacologic Management
Mechanical	Exacerbated by use of prosthesis Associated with residual limb findings of redness, callous or ulceration	Evaluate prosthetic fit and alignment	Refer to prosthetist	Non-narcotic pain medications
Neuroma	Pain with prosthetic use Local Tinel sign Possible palpable mass	Diagnostic injection Ultrasound or MRI	Prosthetic modification to reduce mechanical loads Corticosteroid injection Phenol ablation Surgical resection	Consider pharmacologic Rx if non-responsive to other treatments: TCAs Anticonvulsants Antispasmodics SSRIs NMDA receptor antagonists
Ischemic	Claudication with ambulation	Vascular evaluation	Treat as appropriate	None
Infection	Classical examination features Unexplained poor glucose control Pain unexplained by other causes	Laboratory evaluation: WBC CRP/ESR Glucose Imaging studies as appropriate	Treat as appropriate	None
Neuropathic Central (CRPS) Peripheral	Hypersensitivity Autonomic features	Consider triple phase bone scan	Desensitization Residual limb compressive devices Prosthetic use TENS Acupuncture Alternative and complementary medicine Mental health evaluation and treatment (depression, PTSD)	Consider pharmacologic Rx if non-responsive to other treatments: TCAs Anticonvulsants Antispasmodics SSRIs NMDA receptor antagonists



For additional information, visit: https://www.healthquality.va.gov/guidelines/Rehab/amp/

Scan the QR Code with your smart device to read the Patient Summary of the 2025 VA/DoD Clinical Practice Guideline for Lower Limb Amputation Rehabilitation.