

# VA/DoD CLINICAL PRACTICE GUIDELINE FOR DIAGNOSIS AND TREATMENT OF LOW BACK PAIN

**Department of Veterans Affairs**

**Department of Defense**

**Pocket Card**

## **QUALIFYING STATEMENTS**

The Department of Veterans Affairs and the Department of Defense guidelines are based upon the best information available at the time of publication. They are designed to provide information and assist decision making. They are not intended to define a standard of care and should not be construed as one. Neither should they be interpreted as prescribing an exclusive course of management.

This Clinical Practice Guideline is based on a systematic review of both clinical and epidemiological evidence. Developed by a panel of multidisciplinary experts, it provides a clear explanation of the logical relationships between various care options and health outcomes while rating both the quality of the evidence and the strength of the recommendation.

Variations in practice will inevitably and appropriately occur when clinicians take into account the needs of individual patients, available resources, and limitations unique to an institution or type of practice. Every healthcare professional making use of these guidelines is responsible for evaluating the appropriateness of applying them in the setting of any particular clinical situation.

These guidelines are not intended to represent TRICARE policy. Further, inclusion of recommendations for specific testing and/or therapeutic interventions within these guidelines does not guarantee coverage of civilian sector care. Additional information on current TRICARE benefits may be found at [www.tricare.mil](http://www.tricare.mil) or by contacting your regional TRICARE Managed Care Support Contractor.

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## **I. Summary of Recommendations**

Recommendations were made using a systematic approach considering multiple domains: the confidence in the quality of the evidence, balance of desirable and undesirable outcomes, patient or provider values and preferences, and other implications, as appropriate (e.g., resource use, equity, acceptability).

### ***Diagnostic Approach***

#### **We recommend:**

- Clinicians conduct a history and physical examination, that should include identifying and evaluating neurologic deficits (e.g., radiculopathy, neurogenic claudication), red flag symptoms associated with serious underlying pathology (e.g., malignancy, fracture, infection), and psychosocial factors
- Diagnostic imaging and appropriate laboratory testing when neurologic deficits are serious or progressive or when red flag symptoms are present

#### **We suggest:**

- Performing a mental health screening as part of the low back pain evaluation and taking results into consideration during selection of treatment

#### **We recommend against:**

- Routinely obtaining imaging studies or invasive diagnostic tests for patients with acute axial low back pain (i.e., localized, non-radiating)

#### **There is inconclusive evidence to recommend for or against:**

- Any diagnostic imaging for patients with low back pain greater than one month who have not improved or responded to initial treatments

### ***Education and Self-care***

#### **We recommend:**

- For chronic low back pain:
  - Providing evidence-based information with regard to their expected course, advising patients to remain active, and providing information about self-care options

#### **We suggest:**

- For chronic low back pain:
  - Adding a structured education component, including pain neurophysiology, as part of a multicomponent self-management intervention

### ***Non-pharmacologic and Non-invasive Therapy***

#### **We recommend:**

- For chronic low back pain:
  - Cognitive behavioral therapy

#### **We suggest:**

- For acute low back pain:
  - Offering spinal mobilization/manipulation as part of a multimodal program
- For chronic low back pain:
  - Mindfulness-based stress reduction
  - Offering clinician-directed exercises
  - Offering spinal mobilization/manipulation as part of a multimodal program
  - Offering acupuncture
  - Offering an exercise program, which may include Pilates, yoga, and tai chi

#### **There is insufficient evidence to support:**

- For acute low back pain:
  - The use of specific clinician-directed exercise
  - The use of acupuncture

- For acute or chronic low back pain:
  - The use of lumbar supports
  - The use of ultrasound
  - The use of lumbar traction
  - The use of electrical muscle stimulation

**There is inconclusive evidence to support:**

- The use of transcutaneous electrical nerve stimulation (TENS)

**Pharmacologic Therapy**

**We recommend:**

- For acute or chronic low back pain:
  - Treating with nonsteroidal anti-inflammatory drugs (NSAIDs), with consideration of patient-specific risks

**We suggest:**

- For acute low back pain or acute exacerbations of chronic low back pain:
  - Offering a non-benzodiazepine muscle relaxant for short-term use
- For chronic low back pain:
  - Offering treatment with duloxetine, with consideration of patient-specific risks

**We recommend against:**

- For acute or chronic low back pain:
  - Treatment with benzodiazepines
  - The use of systemic corticosteroids (oral or intramuscular injection) for low back pain with or without radiculopathy
  - Initiating long-term opioid therapy (for patients who are already prescribed long-term opioid therapy, refer to the VA/DoD CPG for the Management of Opioid Therapy for Chronic Pain<sup>1</sup>)
- For chronic low back pain:
  - The chronic use of oral acetaminophen

**We suggest against:**

- For chronic low back pain:
  - Offering a non-benzodiazepine muscle relaxant

**There is insufficient evidence to recommend for or against:**

- For acute low back pain or acute exacerbations of chronic low back pain:
  - The use of time-limited opioid therapy (given the significant risks and potential benefits of opioid therapy, patients should be evaluated individually, including consideration of psychosocial risks and alternative non-opioid treatments; any opioid therapy should be kept to the shortest duration and lowest dose possible)
- For acute or chronic low back pain:
  - The use of time-limited (less than seven days) acetaminophen therapy
  - The use of antiepileptics, including gabapentin and pregabalin (including patients with both radicular and non-radicular low back pain)

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<sup>1</sup> See the VA/DoD Clinical Practice Guideline for the Management of Opioid Therapy for Chronic Pain. Available at: <http://www.healthquality.va.gov/guidelines/Pain/cot/>

- The use of topical preparations

***Dietary Supplements:***

**There is insufficient evidence to recommend for or against:**

- Nutritional, herbal, and homeopathic supplements for low back pain

***Non-surgical Invasive Therapy:***

**We suggest:**

- Offering epidural steroid injections for the very short-term effect (less than or equal to two weeks) reduction of radicular low back pain

**We recommend against:**

- Offering spinal epidural steroid injections for the long-term reduction of radicular low back pain, non-radicular low back pain, or spinal stenosis

**We suggest against:**

- Offering intra-articular facet joint steroid injections for the treatment of low back pain

**There is inconclusive evidence to recommend for or against:**

- Medial branch blocks and radiofrequency ablative denervation

***Team Approach to Treatment of Chronic Low Back Pain:***

**We suggest:**

- For selected patients with chronic LBP not satisfactorily responding to more limited approaches, offering a multidisciplinary or interdisciplinary rehabilitation program which should include at least one physical component and at least one other component of the biopsychosocial model (psychological, social, occupational) used in an explicitly coordinated manner

**Table 1: Dosing for Select Pharmacologic Agents<sup>1</sup>**

Generic	Starting Dose	Max/Day	Half-life (t <sub>1/2</sub> ) (hrs)
<b>Muscle Relaxants</b>			
TIZANIDINE	2-4 mg TID	36 mg	2.5
BACLOFEN	5 mg TID	80 mg	~ 3.75
CYCLOBENZAPRINE <sup>2</sup>	5 mg TID	30 mg	18
METAXALONE <sup>2</sup>	800 mg TID	3,200 mg	~ 9
METHOCARBAMOL <sup>2</sup>	1.5 gm QID	4.5 gm	1-2
ORPHENADRINE <sup>2</sup>	100 mg BID	200 mg	14-16
<b>Antidepressants</b>			
AMITRIPTYLINE <sup>2</sup>	10-25 mg QHS	150 mg	~ 13-36
DESPIRAMINE <sup>2</sup>	10-25 mg QHS	150 mg	15-24
NORTRIPTYLINE <sup>2</sup>	10-25 mg QHS	150 mg	14-51
DULOXETINE <sup>2</sup>	30 mg QD	60 mg	~ 12
VENLAFAXINE ER	37.5 mg QD	225 mg	~ 11
<b>NSAIDs<sup>3</sup></b>			
KETOROLAC	10 mg q 4-6H	40 mg	~ 5
KETOPROFEN	50 mg QID	300 mg	2-4
INDOMETHACIN	25 mg q 8H	200 mg	2.6-11.2
NAPROXEN	250 mg BID	1500 mg	12-17
IBUPROFEN	400 mg q 4-6H	3200 mg	~ 2
NABUMETONE	1000 mg QD	2000 mg	~ 24
PIROXICAM	20 mg QD	20 mg	50
SALSALATE	1000 mg TID	3000 mg	~ 1
SULINDAC	150mg BID	400 mg	7.8
DICLOFENAC NA	50-75 mg BID	150-200 mg	~ 2
CELECOXIB	100 mg BID	400 mg	~ 11
MELOXICAM	5-7.5 mg QD	15 mg	~ 15-22
ETODOLAC	200 mg q 8H	1000 mg	6.4

Dosing recommendations obtained from the FDA individual product prescribing information.

Listed in order of increased COX-2 Selectivity:

**More COX 1 Selective**

**< 5-fold COX-2 Selective**

**5-50 fold COX-2 Selective**

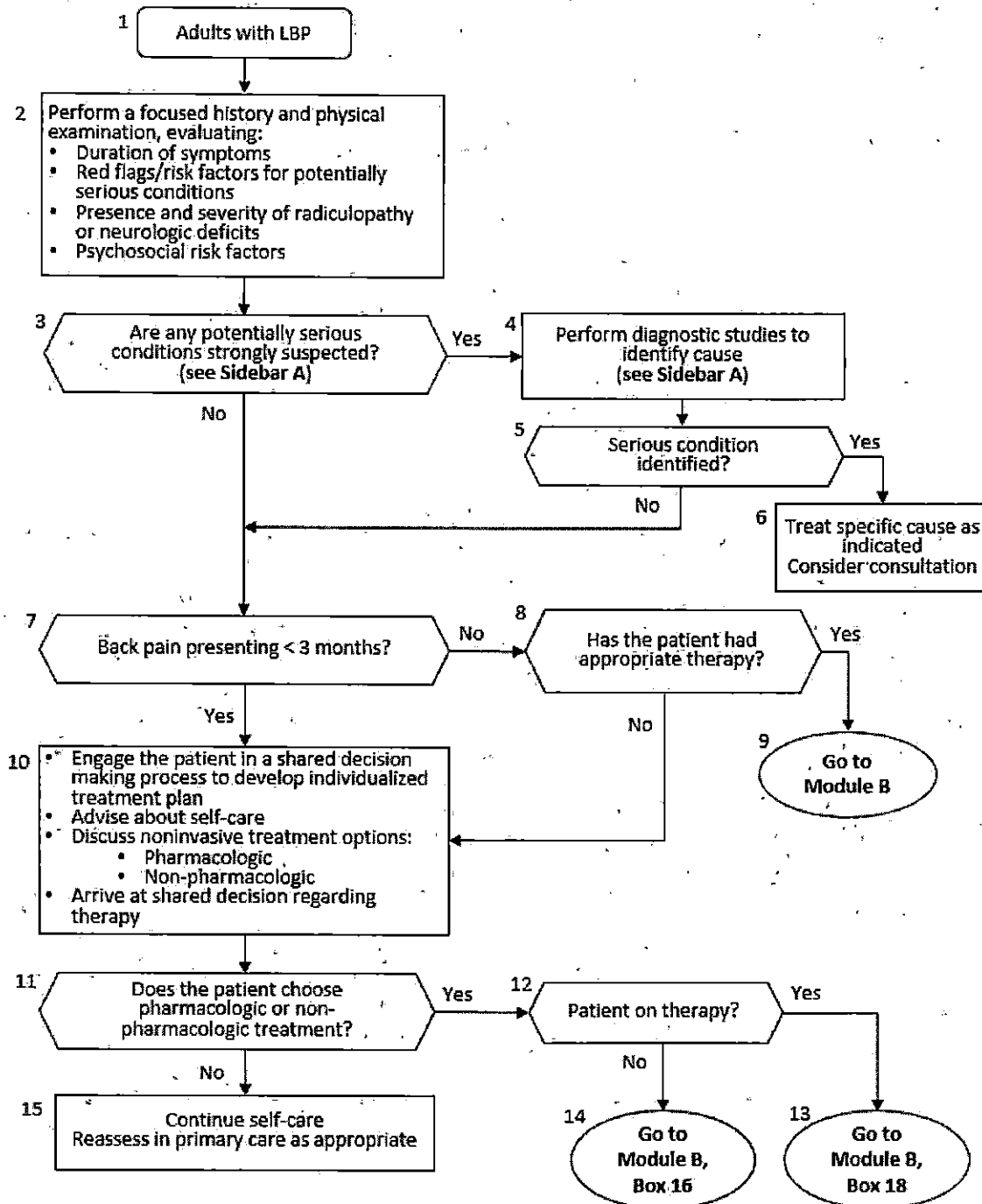
<sup>1</sup> Consult full prescribing information for individual drugs; dosing and half-life may be altered by patient age, renal and hepatic function, and product formulation; consider reduced dosing and/or frequency in the elderly.

<sup>2</sup> Use not recommended in patients > 65 years of age per American Geriatrics Society 2015 Updated Beers Criteria.

<sup>3</sup> Avoid chronic use in the elderly, unless other alternatives are not effective and patient can take a gastroprotective agent (proton pump inhibitor or misoprostol).

Abbreviations: BID: twice a day; COX-2: cyclooxygenase-2; gm: gram; hrs: hours; max: maximum; mg: milligram; NSAIDs: nonsteroidal anti-inflammatory drug; q 4-6H: every 4-6 hours; q 8H: every 8 hours; QD: one a day; QID: four times a day; QHS: nightly at bedtime; TID: three times a day

## Module A: Initial Evaluation of Low Back Pain



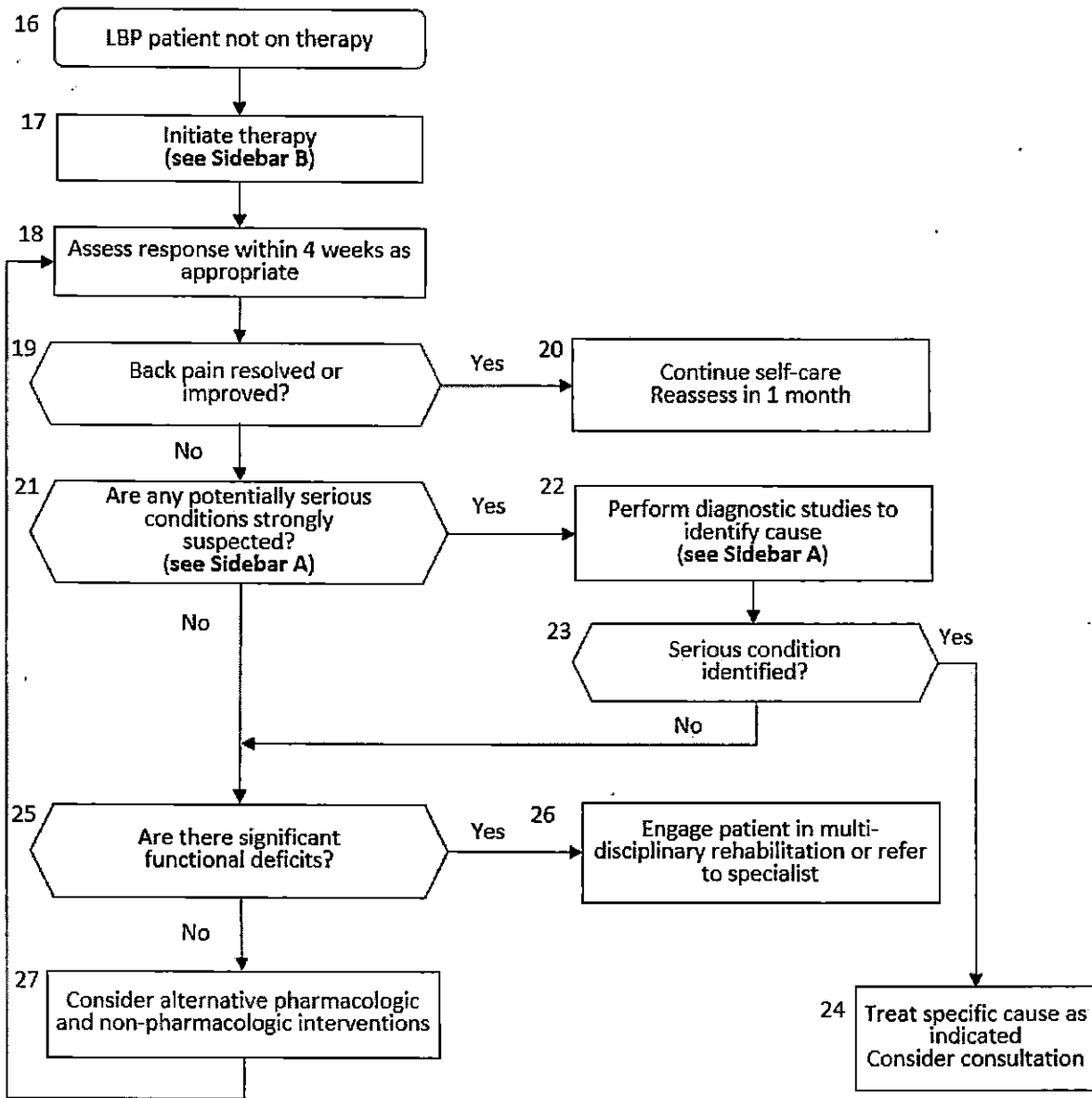
Sidebar A: Diagnostic Work-up		
Possible causes or conditions	Red flags or risk factors on history or physical examination	Suggested diagnostic imaging
<b>Cancer</b>	History of cancer with new onset of LBP Unexplained weight loss Failure of LBP to improve after 1 month Age > 50 years Multiple risk factors present	Lumbosacral plain radiography  For inconclusive results, advanced imaging such as MRI with contrast* as appropriate
<b>Infection</b>	Fever Intravenous drug use Recent infection Immunosuppression	MRI with contrast* ESR
<b>Fracture</b>	History of osteoporosis Chronic use of corticosteroids Older age (≥75 years old) Recent trauma Younger patients with overuse at risk for stress fracture	Lumbosacral plain radiography  For inconclusive results, advanced imaging such as MRI <sup>†</sup> , CT, or SPECT as appropriate
<b>Ankylosing spondylitis</b>	Morning stiffness Improvement with exercise Alternating buttock pain Awakening due to low back pain back pain during the second part of the night (early morning awakening) Younger age	Anterior-posterior pelvis plain radiography
<b>Herniated disc</b>	Radicular back pain (e.g., sciatica) Lower extremity dysesthesia and/or paraesthesia Positive straight-leg-raise test or crossed straight-leg-raise test	None
	Severe/progressive lower extremity neurologic deficits Symptoms present > 1 month	MRI <sup>†</sup>
<b>Spinal stenosis</b>	Radicular back pain (e.g., sciatica) Lower extremity dysesthesia and/or paraesthesia Neurogenic claudication Older age	None
	Severe/progressive lower extremity neurologic deficits Symptoms present > 1 month	MRI <sup>†</sup>
<b>Cauda equina or conus medullaris syndrome</b>	Urinary retention Urinary or fecal incontinence Saddle anesthesia Changes in rectal tone Severe/progressive lower extremity neurologic deficits	Emergent MRI <sup>†</sup> (preferred)

Abbreviations: CT: computed tomography; ESR: electron spin resonance; LBP: low back pain; MRI: magnetic resonance imaging; SPECT: single-photon emission computed tomography

\*MRI with contrast, except where contraindicated (e.g., renal insufficiency), otherwise MRI without contrast

<sup>†</sup>MRI, except where contraindicated, (e.g., patients with pacemakers), otherwise CT or CT myelogram

## Module B: Management of Low Back Pain





Sidebar B: Interventions			
Category	Intervention	Low Back Pain Duration	
		Acute < 4 Weeks	Subacute or Chronic > 4 Weeks
Self-care	Advice to remain active	X	X
	Books, handout	X	X
	Application of superficial heat	X	
Non-pharmacologic therapy	Spinal manipulation		X
	Clinician-guided exercise		X
	Acupuncture		X
	CBT and/or mindfulness-based stress reduction		X
	Exercise which may include Pilates, tai chi, and/or yoga		X
Pharmacologic therapy	NSAIDs	X	X
	Non-benzodiazepine skeletal muscle relaxants	X	
	Antidepressants (duloxetine)		X
Other therapies	Intensive interdisciplinary rehabilitation		X

Abbreviations: CBT: cognitive behavioral therapy; NSAIDs: nonsteroidal anti-inflammatory drugs