

**VA/DoD Clinical Practice Guideline for the
Diagnosis and Treatment of Low Back Pain***
PROVIDER REFERENCE CARDS
Low Back Pain
(Update 2007)

*Developed by the American College of Physicians and the American Pain Society with VA/DoD working group members

LBP

VA/DoD Clinical Practice Guideline for the Diagnosis and Treatment of Low Back Pain* (Update 2007)

Key Recommendations

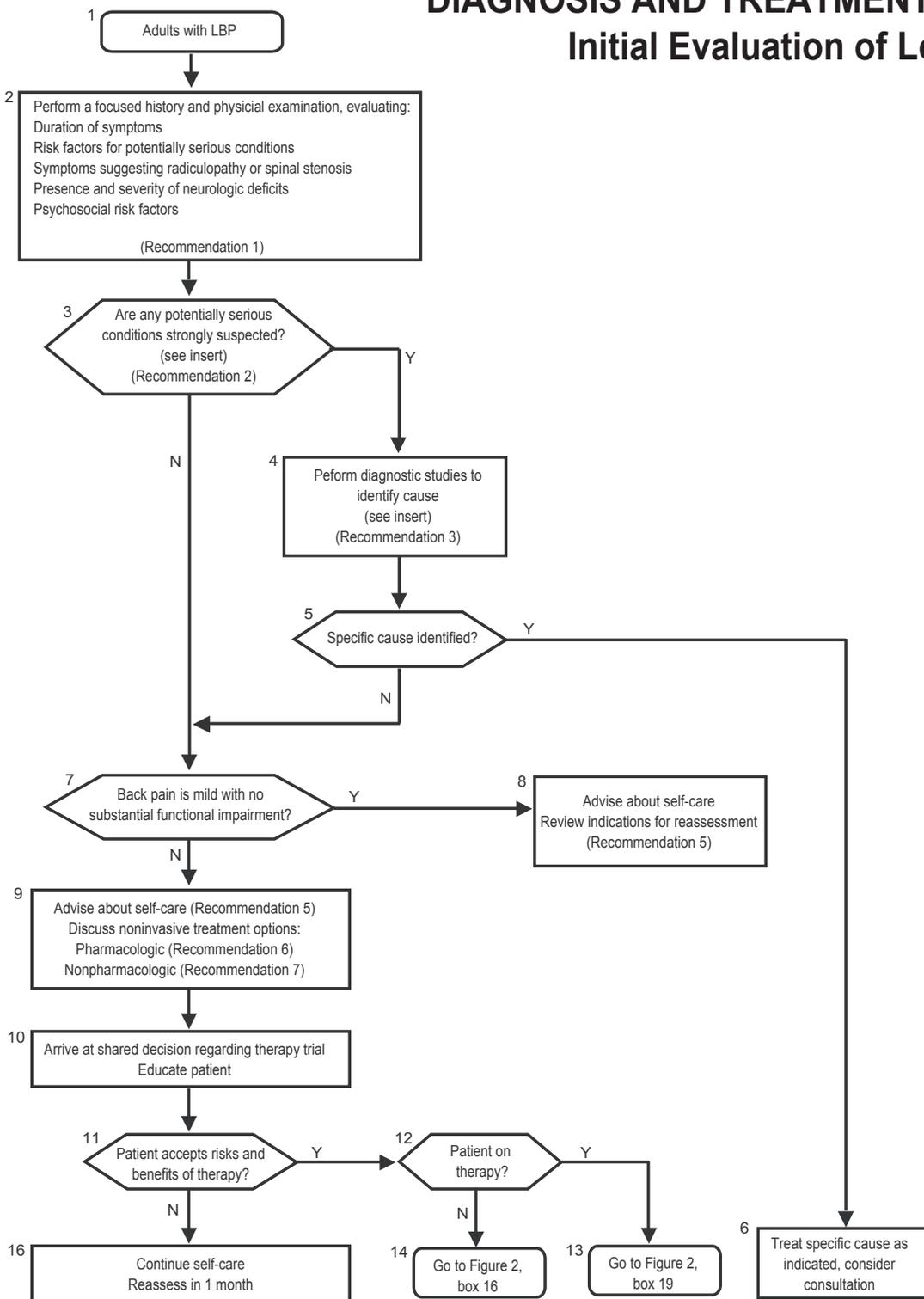
1. Clinicians should conduct a focused history and physical examination to help place patients with low back pain into one of three broad categories: non-specific low back pain, back pain potentially associated with radiculopathy or spinal stenosis, or back pain associated with another specific spinal cause. The history should include assessment of psychosocial risk factors, which predict risk for chronic disabling back pain.
(strong recommendation, moderate-quality evidence)
2. Clinicians should not routinely obtain imaging or other diagnostic tests in patients with non-specific low back pain.
(strong recommendation, moderate-quality evidence)
3. Clinicians should perform diagnostic imaging and testing for patients with low back pain when severe or progressive neurologic deficits are present or when serious underlying conditions are suspected on the basis of history and physical examination.
(strong recommendation, moderate-quality evidence)
4. Clinicians should evaluate patients with persistent low back pain and signs or symptoms of radiculopathy or spinal stenosis with magnetic resonance imaging (preferred) or computed tomography only if they are potential candidates for surgery or epidural steroid injection (for suspected radiculopathy).
(strong recommendation, moderate-quality evidence)
5. Clinicians should provide patients with low back pain evidence-based information about their expected course, advise patients to remain active, and provide information about effective self-care options.
(strong recommendation, moderate-quality evidence)
6. For patients with low back pain, clinicians should consider the use of medications with proven benefits in conjunction with back care information and self care. Clinicians should assess the severity of baseline pain and functional deficits, potential benefits, risks, and relative lack of long-term efficacy and safety data before initiating therapy. *(strong recommendation, moderate-quality evidence)*
For most patients, first-line medication options are acetaminophen or NSAIDs (Non Steroidal Anti-Inflammatory Drugs).
7. For patients who do not improve with self-care options, clinicians should consider the addition of non-pharmacologic therapy with proven benefits for low back pain. They are spinal manipulation for acute low back pain; and for chronic or sub-acute low back pain options include: intensive interdisciplinary rehabilitation, exercise therapy, acupuncture, massage therapy, spinal manipulation, yoga, cognitive-behavioral therapy, or progressive relaxation.
(weak recommendation, moderate-quality evidence)

*Chou, R., Qaseem, A., Snow, V., et. al. Diagnosis and Treatment of Low Back Pain: A Joint Clinical Practice Guideline from the American College of Physicians and the American Pain Society. *Annals of Internal Medicine*, 2007, 147: 478-498.



DIAGNOSIS AND TREATMENT OF LOW BACK PAIN

Initial Evaluation of Low Back Pain



DIAGNOSTIC WORK-UP

Possible cause	Key features on history or physical examination	Imaging*	Additional studies*
Cancer	History of cancer with new onset of LBP	MRI	ESR
	Unexplained weight loss Failure to improve after 1 month Age >50 years	Lumbosacral plain radiography	
	Multiple risk factors present	Plain radiography or MRI	
Vertebral infection	Fever Intravenous drug use Recent infection	MRI	ESR and/or CRP
Cauda equina syndrome	Urinary retention Motor deficits at multiple levels Fecal incontinence Saddle anesthesia	MRI	None
Vertebral compression fracture	History of osteoporosis Use of corticosteroids Older age	Lumbosacral plain radiography	None
Ankylosing spondylitis	Morning stiffness Improvement with exercise Alternating buttock pain Awaking due to back pain during the second part of the night Younger age	Anterior - posterior pelvis plain radiography	ESR and/or CRP, HLA-B27
Severe/ progressive neurologic deficits	Progressive motor weakness	MRI	Consider EMG/NCV

* Level of evidence for diagnostic evaluation is variable.

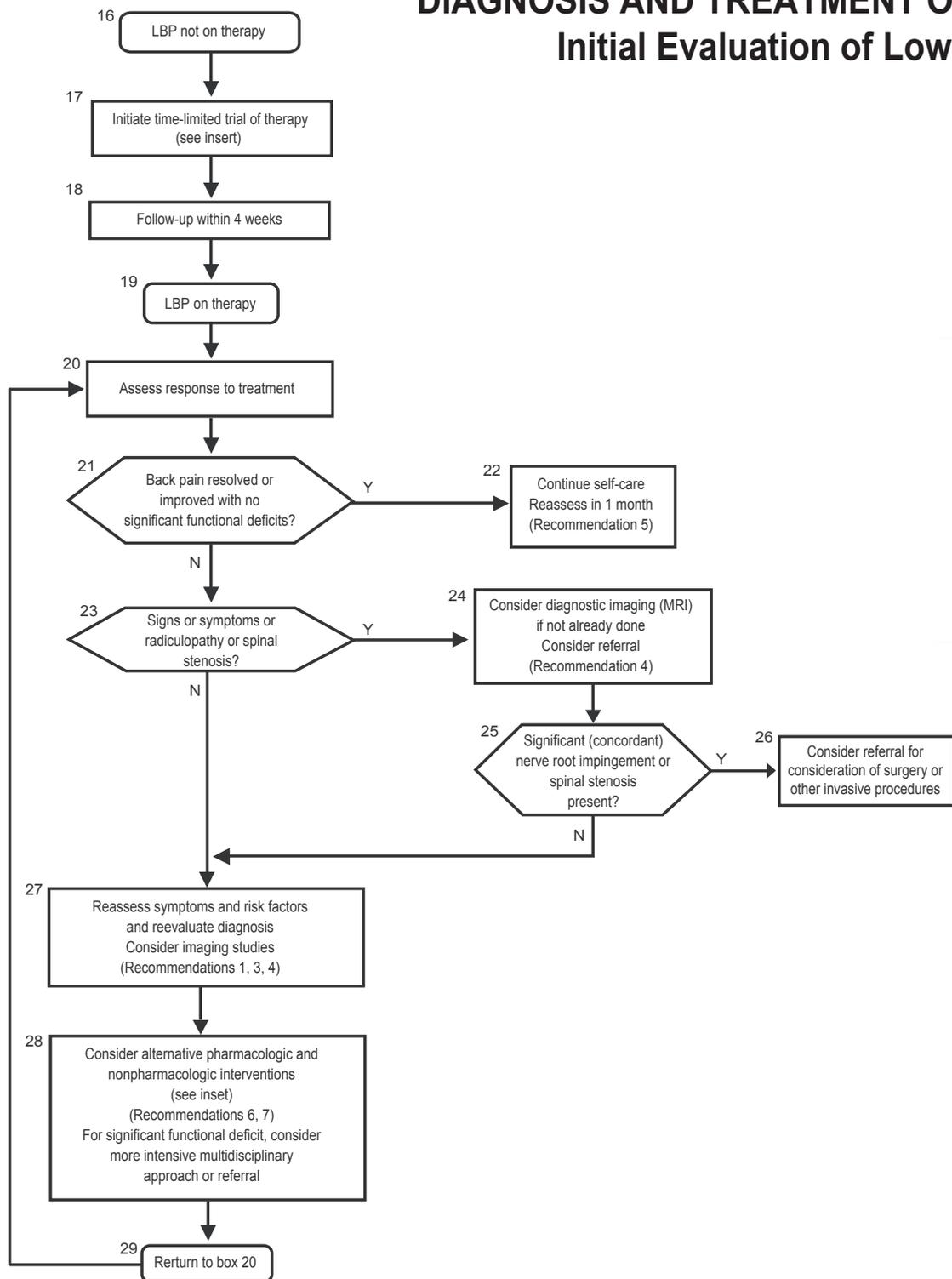
Herniated disc (Recommendation 4)	Back pain with leg pain in an L4, L5, or S1 nerve root distribution Positive straight-leg-raise test or crossed straight-leg-raise test	None	None
	Symptoms present >1 month	MRI	Consider EMG/NCV
Spinal stenosis (Recommendation 4)	Radiating leg pain Older age (Pseudoclaudication a weak predictor)	None	None
	Symptoms present > 1 month	MRI	Consider EMG/NCV

CRP - C-reactive protein
EMG - electromyography
ESR - erythrocyte sedimentation rate
MRI - magnetic resonance imaging
NCV - nerve conduction velocity



DIAGNOSIS AND TREATMENT OF LOW BACK PAIN

Initial Evaluation of Low Back Pain



Interventions* (Recommendations 5, 6, 7)

	Low Back Pain Duration	Acute < 4 Weeks >	Subacute or Chronic > 4 Weeks
Self-care	Advise to remain active	●	●
	Books, handouts	●	●
	Application of superficial heat	●	
Pharmacologic therapy	Acetaminophen	●	●
	NSAIDs	●	●
	Skeletal muscle relaxants	●	
	Antidepressants (TCA)		●
	Benzodiazepines	●	●
	Tramadol, opioids	●	●
Nonpharmacologic therapy	Spinal manipulation	●	●
	Exercise therapy		●
	Massage		●
	Acupuncture		●
	Yoga		●
	Cognitive-behavioral therapy		●
	Progressive relaxation		●
	Intensive interdisciplinary rehabilitation		●
	*Interventions supported by grade B evidence (at least fair-quality evidence of moderate benefit, or small benefit but no significant harms, costs, or burdens). No intervention was supported by grade A evidence (good-quality evidence of substantial benefit).		

MRI - magnetic resonance imaging

NSAIDs - nonsteroidal anti-inflammatory drugs

TCA - tricyclic antidepressants



Pharmacotherapy for the Treatment of Low Back Pain

DRUG	Usual Single Adult Analgesic Dose (mg)	Dose Interval (hours)	Max Daily Dose (mg)	Half-life (hours)	Contraindications
Non-Narcotic Analgesics					
Acetaminophen	325-650 500-1000	Q4-6H Q6-8H	4000	2	G6PD deficiency
Aspirin	325-650 500-1000	Q4-6H Q6	4000	6-12	Factor VII or IX deficiency, tartrazine dye hypersensitivity, asthma
Ibuprofen (Advil, Nuprin, Motrin, others)	200-800	Q4-6H	3200	2	
Ketoprofen OTC (Actron, Orudis-KT)	12.5-25	Q4-6H	75	2-4	
Naproxen Na OTC (Aleve, others)	220-440 initial, then 220	Q8-12H	660	13	
Indomethacin IR (Indocin, others)	25-50	Q6-8H	150	4-5	Active GI bleeding, ulcer disease
Meloxicam (Mobic)	7.5 initial, then 7.5-15	Q24H	15	15-20	
Naproxen (Naprosyn, others)	500 initial, then 250-500	Q6-8H Q12H	1250 on day 1, then 1000	13	
Salsalate (Disalcid, others)	1000	Q8-12H	4000	15	GI ulcer or bleeding
Choline Mg trisalicylate (Trilisate, others)	1000—1500	Q8-12H	3000	9-17	Bleeding disorders, tartrazine dye hypersensitivity, asthma
Diclofenac IR (Cataflam,) Delayed release (Voltaren) Extended release (Voltaren XR)	50 50-75 100	Q8H Q8-12H Q24H	150 200 200	1-2	Porphyria
Diflunisal (Dolobid, others)	1000 initial, then 500	Q8-12H	1500	8-12	Active GI bleeding
Etodolac (Lodine, others) Extended release (Lodine XL)	200-400 400-1000	Q6-8H Q24H	1200 1000	3-11	
Flurbiprofen (Ansaid, others)	50-100	Q6-8H	300	5-7	Dendritic keratitis
Ketoprofen (Orudis, others) Extended release (Oruvail, others)	25-75 200	Q6-8H Q24H	300	2-4	

Pharmacotherapy for the Treatment of Low Back Pain

Other NSAIDs					
DRUG	Usual Single Adult Analgesic Dose (mg)	Dose Interval (hours)	Max Daily Dose (mg)	Half -life (hours)	Contraindications
Ketorolac (Toradol) PO**	10	Q4-6H	40	4-7	***
Ketorolac (Toradol) IM/IV**	Pts<65yrs: 30 Pts>65yrs: 15	Q6H Q6H	120 60	4-7 4-7	***
Indomethacin sustained release (Indocin SR, others)	75	Q12H	150	4-5	Active GI bleeding, ulcer disease
Nabumetone (Relafen)	1000	Q12-24H	2000	24	Active peptic ulceration; severe hepatic impairment
Naproxen NA (Anaprox, others) Extended release (Naprelan)	550 initial then 275 or 550 750-1000	Q6-8H Q12H Q24H	1375 on day 1, then 1100 ER: 1000	13	
Oxaprozin (Daypro)	1200	Q24H	1800	24	3rd trimester pregnancy; history of GI disease; renal or hepatic dysfunction; bleeding disorder; cardiac failure; elderly; debilitated; breastfeeding
Piroxicam (Feldene, others)	20	Q24H	20	50	Active GI bleeding
Sulindac (Clinoril, others)	150-200	Q12H	400	8	
Tolmentin (Tolectin, others)	200-600	Q6-8H	1800	1-2	

● NSAID products with minimal usage in DoD omitted (fenoprofen, mefenamic acid, meclofenamate)

**Combined duration (injectable and oral) should not exceed 5 days; initial IM dose of 60mg (<65yrs) or 30mg (>65yrs) may be given

***Contraindications: Patients who have developed nasal polyps, angioedema or bronchospastic reactions to other NSAIDs; active or history of peptic ulcer disease; recent or history of GI bleeding or perforation; patients with advanced renal disease or risk of renal failure; labor and delivery; breastfeeding; prophylaxis before major surgery; suspected or confirmed cerebrovascular bleeding; hemorrhagic diathesis; concurrent ASA or other NSAIDs; epidural or intrathecal administration; concomitant probenecid.



Commonly Prescribed Muscle Relaxants

DRUG	Usual Oral Adult Dosage	Contraindications
Cyclobenzaprine (Flexeril, others)	10mg TID; not to exceed 60mg/day	Cardiac disease, hyperthyroidism, concomitant treatment with MAO inhibitors or within 14 days of discontinuation
Methocarbamol (Robaxin, others)	Initial 1500mg QID; Maintenance: 1000 QID or 1500 TID	Renal impairment
Carisoprodol (Soma, others)	350mg TID & HS	Acute intermittent porphyria
Chlorzoxazone (Parafon Forte, others)	500-750mg TID-QID	Impaired liver function
Diazepam (Valium, others)	2-10mg TID-QID	Comatose patient; pre-existing CNS depression; respiratory depression; arrow-angle glaucoma; severe uncontrolled pain; pregnancy
Orphenadrine (Norflex, others)	100mg BID	Glaucoma; pyloric or duodenal obstruction; stenosing peptic ulcers; prostatic hypertrophy; bladder neck obstruction; cardiospasm (megaesophagus), myasthenia gravis
Metaxalone (Skelaxin)	800mg TID-QID	Known tendency to drug-induced hemolytic or other anemias; significantly impaired renal or hepatic function
Tizanidine (Zanaflex)	4mg initial; then 2-4mg TID; max 36mg/day	
Tramadol (Ultram, others)	50-100mg Q4-6H; max 400mg/day	Opioid dependant patients; acute intoxication with alcohol, hypnotics, centrally-acting analgesics, opioids, or psychotropic agents
Narcotic Analgesics		
Morphine sulfate extended release (MS Contin, others)	Titrate to patient effect	Increased intracranial pressure; severe respiratory depression
Morphine sulfate immediate release	Titrate to patient effect	Increased intracranial pressure; severe respiratory depression
Oxycodone/APAP 5mg/325mg (Percocet, others)	1-2 tabs Q4-6H; max 4000mg APAP/day	Severe respiratory depression
Hydrocodone/APAP 5mg/5mg (Vicodin, others)	1-2 tabs Q4-6H; max 4000mg APAP/day	CNS depression; severe respiratory depression
Codeine/APAP 30mg/300mg (Tylenol #3, Elixir 12mg/120mg/ 5ml, others)	1-2 tabs Q4-6H; max 4000mg APAP/day	

Tricyclic Antidepressants

DRUG **	Contraindications
Amitriptyline (Elavil, others)	During or within 14 days of MAOIs Acute post MI Coadministration with cisapride; may cause QT interval prolongation and increase the risk of arrhythmia
Desipramine (Norpramin)	During or within 14 days of MAOIs Acute post MI Hypersensitivity to dibenzazepines; risk of cross-sensitivity reactions
Doxepin (Sinequan, others)	During or within 14 days of MAOIs Acute post MI Urinary retention. Glaucoma Hypersensitivity to dibenzazepines; risk of cross-sensitivity reactions
Imipramine (Tofranil)	During or within 14 days of MAOIs Acute post MI Hypersensitivity to dibenzazepines; risk of cross-sensitivity reactions
Nortriptyline (Pamelor, others)	During or within 14 days of MAOIs Acute post MI Hypersensitivity to dibenzazepines; risk of cross-sensitivity reactions

**Use in low back pain is off-label

All TCAs have a black box warning: Increased risk of suicidal thinking and behavior in children, adolescents, and young adults in short-term studies with major depressive disorder (MDD) and other psychiatric disorders.

