



Michigan Quality Improvement Consortium Guideline

# Management of Acute Low Back Pain in Adults

The following guideline recommends assessment, diagnosis and management of acute low back pain in adults (low back pain of ≤ 4 weeks duration).<sup>1</sup>

Eligible Population	Key Components	Recommendation and Level of Evidence
Adults with low back pain or back-related leg symptoms for ≤ 4 weeks' duration	<p>Patients with low risk of serious pathology, i.e., no red flags</p> <p><b>Red flags</b></p> <ul style="list-style-type: none"> <li>Unexplained weight loss</li> <li>Fever</li> <li>History of cancer</li> <li>Sudden bowel or bladder dysfunction</li> <li>Progressive and/or severe lower extremity neurologic deficits</li> <li>Abnormal spinal or perineal reflexes</li> <li>Perineal hypoesthesia</li> </ul>	<p><b>Reassure:</b> 90% of episodes resolve within 6 weeks regardless of treatment. <b>[C]</b> Advise that flare-ups may occur in the subsequent year.</p> <p><b>Testing/Assessment:</b></p> <ul style="list-style-type: none"> <li>Detailed history and physical exam, with attention to red flags, recent falls, strength, reflexes, spine percussion, segmental mobility. (see <a href="#">MQIC low back pain tools</a>)</li> <li>Assess pain and function (activities of daily living; ability to work, exercise, and perform household tasks).</li> <li>Diagnostic tests or imaging usually not required for acute non-traumatic back pain. <b>[B]</b></li> <li>Depression screening recommended <b>[B]</b> (<a href="#">PHQ-9</a>), since concurrent coincident depression worsens prognosis. (see <a href="#">MQIC depression guideline</a>)</li> </ul> <p><b>Therapy:</b></p> <ul style="list-style-type: none"> <li>Stay active and continue ordinary activity within the limits permitted by pain. Avoid bed rest. <b>[A]</b> Early return to work is associated with less disability. Injury prevention (e.g., use of proper body mechanics, safe back exercises).</li> <li>Heat for painful areas may reduce pain due to muscle spasm <b>[B]</b>; stretching exercises <b>[D]</b> and spinal manual therapy <b>[B]</b> may be recommended.</li> <li>Spinal stabilization exercises are comparable to manual therapy and superior to general exercise in reducing pain and improving function in low back pain. <b>[A]</b></li> <li>Modalities such as traction, ultrasound, paraspinal injections or TENS are not effective.</li> </ul> <p><b>Referral:</b></p> <ul style="list-style-type: none"> <li>If pain and/or disability persists beyond 2 weeks, consider referral for physical therapy to improve strength and flexibility.</li> <li>If pain and/or disability persists beyond 4 weeks, consider referral to a multidisciplinary back pain program, especially if psychosocial risks to return to work exist.</li> </ul> <p><b>Medication Strategies:</b></p> <ul style="list-style-type: none"> <li>Prescribe medications on a time-contingent basis, not pain-contingent basis.</li> <li>No single drug category has been proven to be more effective than another in pain control. Consider side-effect profiles. NSAIDs are often a good first choice. Non-benzodiazepine muscle relaxants may be added but are sedating and may limit mobility.</li> <li>Opioids and benzodiazepines are generally not indicated as first-line treatment, and early opioid use is associated with longer disability. If prescribed, limit to short-term (i.e., one week or less), and only after assessing for risk of addiction or misuse. Avoid co-prescribing opioids with benzodiazepines, muscle relaxants or hypnotics due to high risk of respiratory depression and death. See <a href="#">MQIC opioid prescribing in adults guideline</a> for more information.</li> </ul> <p><b>Work:</b> Return to work recommendations should be individualized, based on occupation.</p>
	<p>Identification and management of suspected serious pathology (high index of suspicion based on red flags)</p>	<p><b>Cauda Equina Syndrome:</b> (severe and/or progressive neurologic deficit, recent bowel or bladder dysfunction, perineal hypoesthesia)  <b>Management:</b> Transfer to hospital emergency department for emergent studies and definitive care. <b>[C]</b></p> <p><b>Cancer:</b> history of cancer or cancer risks (age &gt; 50; insidious onset of pain; smoking; no relief at bedtime or worsening when supine; constitutional symptoms, e.g., fever, unexplained weight loss)  <b>Management:</b> CBC, urinalysis, C-reactive protein ± ESR. <b>[C]</b> Consider MRI (without and with contrast) - negative lumbosacral X-rays do not rule out cancer.</p> <p><b>Infection:</b> e.g., epidural abscess, discitis, osteomyelitis (risks: steroid therapy; diabetes; immunosuppression; hemodialysis) history of UTI, TB, HIV, endocarditis or other infection; no relief of pain at bedtime or worsening when supine; recent surgery or spinal instrumentation (e.g., spine injection or myelogram); insidious onset; history of IV drug use; severe or progressive neurologic deficit)  <b>Management:</b> CBC, urinalysis, C-reactive protein ± ESR. <b>[C]</b> Consider MRI (without and with contrast) - negative lumbosacral X-rays do not rule out infection.</p> <p><b>Spinal Fracture:</b> (risks: older age group [esp. women age &gt; 50]; recent injury or cumulative trauma; prolonged steroid therapy, cancer, osteoporosis or ankylosing spondylitis)  <b>Management:</b> lumbosacral X-rays. <b>[B]</b> After 10 days, if fracture still suspected or multiple sites of pain, consider MRI or referral. <b>[D]</b></p> <p><b>Epidural Hemorrhage:</b> (risks: anticoagulation, recent spinal instrumentation or catheter, lumbar puncture)  <b>Management:</b> Transfer to hospital emergency department for emergent studies and definitive care; reversal of anticoagulation as needed.</p>

<sup>1</sup> [Acute Low Back Pain | Acute Pain \(cdc.gov\)](#)

**Levels of Evidence for the most significant recommendations:** A = randomized controlled trials; B = controlled trials, no randomization; C = observational studies; D = opinion of expert panel

This guideline lists core management steps. It is based on several sources, including North American Spine Society (NASS). Diagnosis and treatment of low back pain. 2020. [Diagnosis and Treatment of Low Back Pain - Clinical Guideline \(spine.org\)](#) Qaseem A, Wilt TJ, McLean RM, Forciea MA., Noninvasive Treatments for Acute, Subacute, and Chronic Low Back Pain: A Clinical Practice Guideline from the American College of Physicians. Ann Intern Med. 2017;166:514–530. doi: 10.7326/M16-2367. Individual patient considerations and advances in medical science may supersede or modify these recommendations.