<table>
<thead>
<tr>
<th>SUGGESTED GUIDELINES</th>
<th>PROCESS</th>
<th>IMPORTANT FINDINGS MEASUREMENTS AND VALUES</th>
<th>INTERVENTION</th>
<th>FOLLOW-UP</th>
</tr>
</thead>
</table>
| Patient Assessment *(1,2,7)* | Initial visit should include focused history (including psychosocial) and physical exam. **History:**  
- Pain: location, duration, frequency, severity  
- History of previous symptoms, traumatic event(s), treatment response  
- Review of prior imaging studies when available  
- Risk factors Psychosocial history:  
  - Depression  
  - Substance abuse  
  - Passive coping skills  
  - Employment Status  
  - Job Dissatisfaction  
  - Higher disability level  
  - Disputed compensation claim  
  - Somatization  
- Physical exam *(18)*  
  - Observation of movements for asymmetry or inconsistency  
  - Palpation for localized tenderness with percussion  
  - Range of motion testing  
  - Neurologic exam focusing on sensation, strength and | **Red flags:**  
- cauda equina syndrome or progressive neurologic defect  
  - saddle anesthesia  
  - recent onset of bladder dysfunction (urine retention, increased frequency, overflow incontinence)  
  - recent onset of fecal incontinence (loss of bowel control)  
  - major motor weakness  
- history of or suspicion of cancer, osteoporosis, osteoarthritis or ankylosing spondylitis *(18)*  
- fever above 38°C (100.4°F) for greater than 48 hours  
- immunosuppression or steroid use *(18)*  
- accident or traumatic injury (fracture or suspected fracture)  
- drug or alcohol use  
- Laboratory work dependent on history and examination suggestive of red flags or specific diagnosis associated with low back pain *(18)* | **Categorize patient as having one of the following four types:**  
- Non-specific low back pain  
- Back pain potentially associated with radiculopathy or spinal stenosis  
- Back pain potentially associated with another specific spinal cause (e.g. cancer, infection, etc.)  
- Back pain from a non-spinal source  
- Imaging info below  
- Address mental health issues/yellow flags  
- Educate patient on preventive care  
- Consider blood work if cancer or infection in suspected | **Refer emergent cases to Emergency Room (ER):**  
- sudden loss of bowel/bladder function  
- back pain secondary to trauma  
- saddle numbness  
- sudden unexplained bilateral leg weakness  
- Urgent referral (within 24 hours):  
  - fever above 38°C (100.4°F) for greater than 48 hours  
  - unrelenting night pain or pain at rest  
  - severe uncontrolled back or leg pain  
  - progressive pain with distal (below the knee) numbness or weakness of leg(s) |
<table>
<thead>
<tr>
<th>SUGGESTED GUIDELINES</th>
<th>PROCESS</th>
<th>IMPORTANT FINDINGS MEASUREMENTS AND VALUES</th>
<th>INTERVENTION</th>
<th>FOLLOW-UP</th>
</tr>
</thead>
</table>
| reflexes with emphasis on the L4, L5 and S1 nerve roots | • Neural tension test (most commonly straight leg raise) performed bilaterally to assess the mechanics and physiology of the respected neural system. A positive test should reproduce symptoms or associated symptoms. - supporting evidence for a nerve root or discogenic pathology | • Positive screening for depression, narcotic abuse, etc., or any of the following “yellow flags”:  
  ➢ belief that pain and activity are harmful  
  ➢ “sickness behaviors,” such as extended rest  
  ➢ depressed or negative moods, social withdrawal  
  ➢ treatment that does not fit best practice  
  ➢ problems with claims and compensation  
  ➢ history of back pain, time off or other claims  
  ➢ problems at work or low job satisfaction  
  ➢ heavy work  
  ➢ overprotective family or lack of support  
  • Risk factors\(^{(15)}\)  
  ➢ Age – first episode typically occurs between ages of 30-50. Becomes more common with advancing age  
  ➢ Fitness level  
  ➢ Pregnancy  
  ➢ Weight gain  
  ➢ Genetics  
  ➢ Occupational risk factors  
  ➢ Mental health factors | ➢ progressive neurological deficit | • Evaluation within 2-7 days  
  ➢ moderate to severe new onset back pain or leg pain  
  ➢ chronic back pain (lasting 6 weeks or longer)  
  ➢ unexplained weight loss (of 10 pounds or more in 6 months)  
  ➢ over age 50  
  ➢ history of cancer  
  • Refer for Physical Therapy (PT) or to spine specialist:  
  ➢ back/leg pain is disabling  
  ➢ patient has functional or job limitations |
<table>
<thead>
<tr>
<th>SUGGESTED GUIDELINES</th>
<th>PROCESS</th>
<th>IMPORTANT FINDINGS MEASUREMENTS AND VALUES</th>
<th>INTERVENTION</th>
<th>FOLLOW-UP</th>
</tr>
</thead>
</table>
| Imaging (1,2,5,10)    | • Diagnostic imaging is not routinely recommended for non-specific acute low back pain  
• For severe or progressive neurologic deficit or when cancer, cauda equina, or infection is suspected – Magnetic Resonance Imaging (MRI) is preferred over Computed Tomography (CT)  
• For persistent (longer than 1 month) low back pain and signs/symptoms of radiculopathy or spinal stenosis - MRI is preferred over CT, BUT only if the patient is a candidate for surgery or epidural injection  
• For evaluation of ankylosing spondylitis: Anterior Posterior (AP) pelvis plain x-ray  
• For evaluation of vertebral compression fracture: Lumbosacral (LS) plain x-rays  
• Without signs and symptoms of a serious underlying condition, four to six weeks of conservative treatment may be tried before imaging studies are performed | • See above for risk factors of cancer, cauda equina, & infection | • Order imaging studies as appropriate for findings on history and physical exam; if suspicion of aortic aneurysm – emergency imaging(18)  
• Imaging is not warranted for most individuals with acute low back pain. Without signs and symptoms indicating a serious underlying condition, imaging does not improve clinical outcomes in these individuals. Even with a few weaker red flags, four to six weeks of treatment is appropriate before consideration of imaging(10)  
• Imaging should be done to rule out underlying pathology or for those who are considering surgery, including epidural steroid injections | • Treat specific cause if identified.  
• Refer as appropriate |
<table>
<thead>
<tr>
<th>SUGGESTED GUIDELINES</th>
<th>PROCESS</th>
<th>IMPORTANT FINDINGS MEASUREMENTS AND VALUES</th>
<th>INTERVENTION</th>
<th>FOLLOW-UP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment (2,4,6,10)</td>
<td>▪ Most patients improve with conservative therapy within six weeks</td>
<td>▪ Documentation of recommended supervised OR therapeutic exercises in back pain lasting more than 12 weeks ▪ Cauda equina syndrome is a surgical emergency</td>
<td>Non-Invasive Treatment: Pharmacologic Therapy ▪ Acetaminophen ▪ Non-steroidal anti-inflammatories (NSAIDs) ▪ Skeletal muscle relaxants (for acute low back pain). Recommend use of non-benzodiazepines (e.g., cyclobenzaprine [Flexeril], tizanidine [Zanaflex], or metaxalone [Skelaxin])&lt;sup&gt;(10)&lt;/sup&gt; Most pain reduction from these medications occurs in the first seven to 14 days, but the benefit may continue for up to four weeks. Side effects including drowsiness have been reported in up to 30% of patients taking muscle relaxants&lt;sup&gt;(18)&lt;/sup&gt; ▪ Tri-cyclic antidepressants (for chronic low back pain) ▪ Corticosteroids ▪ Local anesthetics (topical or intraspinal) ▪ Opioids or tramadol (cautious and responsible use in the presence of acute or subacute low back pain), at a minimum effective dose for a limited period of time, usually less than one to two weeks. Opioids appear no more effective than safer analgesics for managing low back symptoms. Poor patient tolerance and risks of drowsiness, decreased reaction time, clouded judgment, and potential misuse/dependence have been reported in up to 35% of patients. Patients should be warned of these potentially debilitating problems and addictive potential&lt;sup&gt;(18)&lt;/sup&gt;.</td>
<td>▪ Follow-up within 1-3 weeks, if no improvement consider referral to spine specialist ▪ Assess pain and functional status as above ▪ Consider surgical referral when conservative management fails ▪ Monitor for response to therapy and for adverse outcomes</td>
</tr>
<tr>
<td>SUGGESTED GUIDELINES</td>
<td>PROCESS</td>
<td>IMPORTANT FINDINGS MEASUREMENTS AND VALUES</td>
<td>INTERVENTION</td>
<td>FOLLOW-UP</td>
</tr>
<tr>
<td>----------------------</td>
<td>---------</td>
<td>-------------------------------------------</td>
<td>--------------</td>
<td>-----------</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Non-Invasive Treatment: Non-pharmacologic Therapy</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Interdisciplinary rehabilitation</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Exercise therapy</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Activity - continue activities of daily living within the limits permitted by symptoms(^{(18)})</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Spinal manipulation is safe and effective for patients in the first month of acute low back symptoms without radiculopathy. If manipulation has not resulted in symptomatic and functional improvement after 4 weeks, it should be stopped and the patient reevaluated.(^{(18)})</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Cognitive behavioral therapy</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Progressive relaxation</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Heat for short periods of time</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Education</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>➢ document discussion of treatment options including natural history of low back pain, treatment options, alternatives to surgery, risks and benefits, and evidence of effectiveness (surgical and others)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>➢ Written patient education</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>NOTE:</strong> Transcutaneous electrical nerve stimulation (TENS) and traction have not proven effective</td>
<td></td>
</tr>
<tr>
<td>Activity (^{(1,2)})</td>
<td></td>
<td></td>
<td>• Maintain or resume normal activity as early as possible. Address fear-avoidance beliefs (fear of activity)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Heavy lifting, trunk twisting and bodily vibrations should be avoided in the acute phase.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Discuss activity limitations on initial visit</td>
<td>• Record date and recommendation on activity and bed rest</td>
<td>• If pain better on follow-up, increase activity</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Work restrictions generally not recommended</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\(^{(18)}\) Reference number(s) for the guideline(s) and evidence-based conclusion(s).

Healthways, A Sharecare company. Medical Integrity
<table>
<thead>
<tr>
<th>SUGGESTED GUIDELINES</th>
<th>PROCESS</th>
<th>IMPORTANT FINDINGS MEASUREMENTS AND VALUES</th>
<th>INTERVENTION</th>
<th>FOLLOW-UP</th>
</tr>
</thead>
</table>
| Tobacco Use (3,8,11-14,16-18) | • Provide smoking cessation counseling and other forms of treatment as a routine component of care  
• Advise all individuals not to use tobacco products, or e-cigarettes(16)  
• Advise no exposure to environmental tobacco smoke at work, home and public place(17) | • Tobacco use patterns  
• Prior quit attempts  
• Readiness assessment  
• Combination therapy with counseling and medications is more effective than either component alone  
• Use of e-cigarettes  
  ➢ e-cigarettes are not supported as an alternative to smoking or to facilitate smoking cessation(11,18)  
• Factors to consider when choosing a pharmacotherapy(8)  
  ➢ Clinician familiarity with the medications and contraindications for selected patients  
  ➢ Previous patient experience with a specific pharmacotherapy (positive or negative)  
  ➢ Patient characteristics (e.g., history of depression, concerns about weight gain | • Bed rest is not recommended and should be limited to no more than two days. Exercise is recommended to reduce the recurrence of low back pain  
Think: 5 A’s(31)  
• Ask about smoking  
• Advise to quit  
• Assess willingness to quit  
• Assist user to quit (i.e., refer to smoking cessation program and consider pharmacotherapy)  
• Arrange follow-up  
• Alcohol is associated with relapse so patients should consider limiting and/or abstaining from alcohol while quitting tobacco(8)  
• Anticipate triggers or challenges that may occur when stopping tobacco. Discuss these with the patient so they can develop a plan to deal successfully with issues that arise(8)  
First line pharmacotherapy adjuvants(8,11,18)  
• Nicotine replacement  
  ➢ OTC - patch, gum, lozenge  
  ➢ Rx – nasal spray, inhaler  
• Sustained-release bupropion  
• Varenicline  
• e-Cigarettes(11,18)  
  ➢ Not FDA approved or regulated  
  ➢ Not enough information about safety or effectiveness for cessation | • Follow-up should begin within the first week after quit date. Second follow-up with the first month(8)  
  ➢ In person  
  ➢ Via telephone  
• Assess at each visit: smoking status, weight gain, nicotine withdrawal symptoms |
<table>
<thead>
<tr>
<th>SUGGESTED GUIDELINES</th>
<th>PROCESS</th>
<th>IMPORTANT FINDINGS MEASUREMENTS AND VALUES</th>
<th>INTERVENTION</th>
<th>FOLLOW-UP</th>
</tr>
</thead>
</table>
| Immunizations (9)   | • Influenza Vaccination | • Document if patient has received an influenza vaccination  
• Document if adverse event occurs | • Administer vaccination yearly | • Yearly |
|                     | • Pneumonia Vaccination | • Document if patient has received a pneumonia vaccination  
• Document if adverse event occurs | • There are two different types of pneumococcal vaccines:  
➢ PCV13 (pneumococcal conjugate vaccine)  
➢ PPSV23 (pneumococcal polysaccharide vaccine)  
Administer appropriate vaccine as indicated  
[http://www.cdc.gov/vaccines/schedules/hcp/adult.html](http://www.cdc.gov/vaccines/schedules/hcp/adult.html) | • As indicated |
| Epidural Steroid Injections (2) | • Consider referral before surgery | • Persistent radicular symptoms in dermatomal distribution despite conservative therapy | • Perform under fluoroscopy with contrast for best results  
**Note:** Fluoroscopy is contraindicated in pregnancy | |

**Epidural Steroid Injections**
- • Consider referral before surgery
- • Persistent radicular symptoms in dermatomal distribution despite conservative therapy
- • Perform under fluoroscopy with contrast for best results

**Note:** Fluoroscopy is contraindicated in pregnancy
| Depression Screening (19,20,21) | - Screen for presence of depression in adults aged ≥18 years regardless of risk factors(20)  
- Have an adequate system in place to assure an accurate diagnosis, effective treatment, and appropriate follow-up(20) | - Use validated depression screening tool such as the Patient Health Questionnaire (PHQ-2 or PHQ-9), Hospital Anxiety and Depression Scales in adults, the Geriatric Depression Scale in older adults, and the Edinburgh Postnatal Depression Scale (EPDS) in postpartum and pregnant women(19,21)  
- Risk factors among the general adult populations vary by sex, age, race/ethnicity, education, marital status, geographical location, and employment status. Women, young and middle-aged adults, and nonwhite persons have higher rates of depression than their counterparts, as do persons who are undereducated, previously married or unemployed(20)  
- Other groups at increased risk of developing depression are persons with chronic illnesses (e.g. cancer or cardiovascular disease), other mental health disorders (including substance misuse, or a family history of psychiatric disorders)(20)  
- Risk factors in older adults include disability, poor health status related to medical illness, complicated grief, sleep disturbances, loneliness, and history of depression age(20)  
- Effective treatment of depression in adults generally includes antidepressants or specific psychotherapy approaches (e.g. CBT or brief psychosocial | - USPSTF recommends screening all adults who have not been screened previously(20)  
- Use clinical judgement and consideration of risk factors, comorbid conditions, and life events to determine if additional screening(21)  
- Administer treatment and/or refer patients who meet criteria for depression to a mental health specialist | - Screening is suggested at subsequent visits  
- Evaluate response to depression treatment with three follow-up contacts in 12 weeks and adjust medication as indicated and/or confer with mental health specialist.
This guideline is intended as an educational reference and not as a substitute for the clinical judgment of the treating physician concerning appropriate and necessary care for a specific patient. This guideline is based on the clinical references listed at the end of the document. Note that a specific treatment or therapy listed may not be a covered benefit for all individuals. Please check the individual’s eligibility and benefits plan.

**REFERENCE LIST**


<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>11.</td>
<td>Naftilan, Allen J., Associate Professor of Medicine, Vanderbilt University Medical School; Clinical Director, The Heart Failure Program, The Vanderbilt Heart Institute, Nashville, Tennessee</td>
</tr>
</tbody>
</table>