

# Acute Low Back Pain Guideline

These clinical guidelines are designed to assist clinicians by providing an analytical framework for the evaluation and treatment of patients. They are not intended to replace a clinician’s judgment or to establish a protocol for all patients with a particular condition. A guideline will rarely establish the only approach to a problem.

## GUIDELINE HISTORY and APPROVAL

ACTION	SEED GUIDELINE and/or MAIN INFORMATION & GROUP SOURCE(S)	DATE	ORGANIZATION
Guideline reviewed and approved	1. Institute for Clinical Systems Integration (ICSI) Acute Low Back Pain Guideline (Dec 2000 version) 2. Acute Low Back Pain Guideline in Adults. Clinical practice guideline, No. 14. Rockville, MD: U.S. Dept. of Health and Human Services, Agency for Health Care Policy and Research, AHCPR Pub. No. 95-0642. Dec. 1994	May 1, 2000	Geisinger Health Plan Acute Low Back Pain (LBP) Guideline Team
Guideline reviewed and approved	Same as above	June 22, 2000	Geisinger Health Plan Guideline Committee
Guideline reviewed and approved	Same as above	July 26, 2000	Geisinger Health Plan Quality Improvement Committee
Guideline reviewed and approved	Same as above	October 25, 2000	Geisinger Health Plan Quality Improvement Committee
Guideline reviewed and approved	1. Geisinger health Plan Acute Low Back Pain Guideline (June 2002 version) 2. Institute for Clinical Systems Integration (ICSI) Acute Low Back Pain Guideline (Sept. 2003 version) 3. Acute Low Back Pain Guideline in Adults. Clinical practice guideline, No. 14. Rockville, MD: U.S. Dept. of Health and Human Services, Agency for Health Care Policy and Research, AHCPR Pub. No. 95-0642. Dec. 1994	March 11, 2004	Geisinger Health Plan Acute Low back pain Guideline Team
Guideline reviewed and approved	Same as above	March 30, 2004	Geisinger Health Plan Guideline Committee
Guideline reviewed and approved	Same as above	April 28, 2004	Geisinger Health Plan Quality Improvement Committee
Guideline reviewed and approved	Same as above	May 3-5, 2004	Geisinger Health Plan Pharmacy
Guideline reviewed and approved	Same as above	May 5, 2004	Geisinger Health Plan Medical Management Committee (MMC)
Guideline reviewed and approved	Same as above	December 13, 2004	Geisinger Health Plan Guideline Committee

## Acute Low Back Pain

Guideline reviewed and approved	Same as above	December 15, 2004	Geisinger Health Plan Medical Directors
Guideline reviewed and approved	Same as above	Sept. 12, 2005	Geisinger Health Plan/ Guideline Committee
Guideline reviewed and approved	Same as above	Sept. 14, 2005	Geisinger Health Plan Pharmacy
Guideline reviewed and approved	Same as above	Sept. 19-30, 2005	Geisinger Health Plan/ Medical Directors
Guideline reviewed and approved	Same as above Institute for Clinical Systems Integration (ICSI) Acute Low Back Pain Guideline (Sept. 2005 version)	Nov. 9, 2005	Geisinger Health Plan/ Guideline Committee
Guideline reviewed and approved	Same as above	Dec. 12, 2005	Geisinger Health Plan Medical Management Committee (MMC)
Guideline reviewed and approved	Same as above	Jan. 25, 2006	Geisinger Health Plan Quality Improvement Committee
Guideline reviewed and approved	1. Same as above 2. Institute for Clinical Systems Integration Acute Low Back Pain Guideline (Sept 2006) 3. United States Preventive Services Task Force - Independent Expert Panel. 1996 (revised 2004).	July 16, 2007	Geisinger Health Plan/ Guideline Committee
Guideline reviewed and approved	Same as above	Sept. 10-14, 2007	Geisinger Health Plan Medical Directors
Guideline reviewed and approved	Same as above	Sept. 17, 2007	Geisinger Health Plan Medical Management Committee (MMC)
Guideline reviewed and approved	Same as above	Oct 24, 2007	Geisinger Health Plan Quality Improvement Committee

Duane E. Davis, M.D.  
Vice President, Chief Medical Officer  
Geisinger Health Plan

## OVERVIEW

Low back pain symptoms account for a significant proportion of the primary care physicians' workload. Therefore, the primary care physician plays a major role in the identification of low back pain and the entry of the patient into the health care system. Low back pain affects a reported 5.6 percent of U.S. adults each day. The lifetime prevalence is estimated to be at least 60 to 70 percent. Americans spend at least \$50 billion each year on low back pain, the most common cause of job-related disability and a leading contributor to missed work.

Acute low back pain is generally a self-limited condition, and most patients recover within a few weeks without the need for imaging studies. Of patients presenting with low back pain, less than 1% have an urgent situation requiring urgent consultation. The majority of low back pain patients do not have a neurologic problem, an orthopedic problem, or a neurosurgical problem.

However, physicians need to be vigilant for red flags that point to more serious conditions, such as infection or malignancy, which require imaging. In this guideline, warning signs are identified and appropriate use of imaging studies for a variety of symptoms and conditions are presented. When the initial attempts at treatment fail, the patient may require further investigation or referral.

## SEED GUIDELINE(S)

The Institute for Clinical Systems Improvement (ICSI), a collaboration of health care organizations, is an objective voice dedicated to championing health care quality and to helping its member organizations identify and accelerate the implementation of best clinical practices for their patients.

An independent, non-profit organization, ICSI facilitates collaboration on health care quality improvement by medical groups, hospitals and health plans that provide health care services to people who live and work in the state of Minnesota and in adjacent areas of surrounding states. Founded in 1993 by HealthPartners Medical Group, Mayo Clinic and Park Nicollet Health Services, today ICSI has 62 members and is funded by all six Minnesota health plans. The combined medical groups and hospital systems represent more than 7,600 physicians.

<http://www.icsi.org/index.aspx?catID=2>

Bigos S, Bowyer O, Braen G, et al. *Acute Low Back Problems in Adults. Clinical Practice Guideline, Number 14*. Rockville, MD: US Department of Health and Human Services, Public Health Service, Agency for Health Care Policy and Research, AHCPR Pub. No. 95-0642. December 1994.

Institute for Clinical Systems Improvement (ICSI) Acute Low Back Pain Guideline (Sept. 2006 version).

United States Preventive Services Task Force - Independent Expert Panel. 1996 (revised 2004)

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## GOALS

1. To appropriately identify high-risk low back pain patients.
2. To increase provider understanding of an appropriate physical exam when presented with low back pain.
3. To educate providers about the epidemiology of low back pain.
4. To educate providers about appropriate referral to neurology, orthopedics, and neurosurgery.
5. To change patient expectations regarding appropriateness of imaging studies for diagnostic purposes.

## FAST FACTS

- ◆ 90% of individuals without symptoms/signs of dangerous conditions (e.g., age over 50, personal history of cancer, unexplained weight loss, failure of conservative therapy) will recover within 4 weeks. Conservative therapy is optimal for these patients.
- ◆ In the absence of signs of dangerous conditions, there is no need for imaging studies (plain radiographs, CT, MRI) in the first 4 weeks.
- ◆ Conservative therapy includes return to work and resumption of normal activity as soon as possible and non-prescription analgesics. Activity modification, prescription analgesics and/or muscle relaxants may be necessary.
- ◆ While patients with sciatica may take longer to recover, most patients will recover with conservative therapy.

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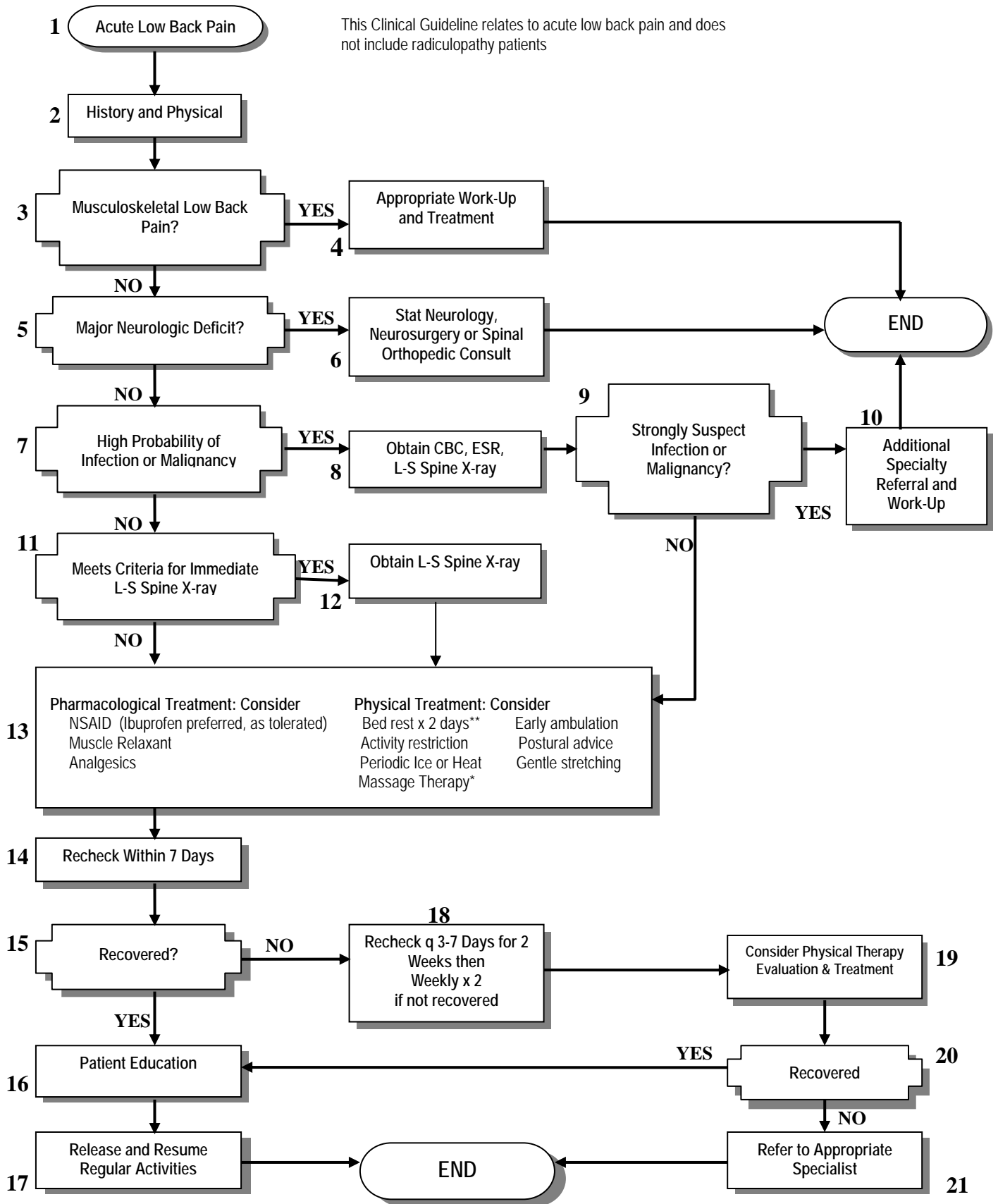
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\*This is not a covered GHP benefit

\*\* Bed rest is not recommended. If patient must rest, bed rest should be limited to no more than two days.

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## ANNOTATIONS

### **Annotation 1.**

#### Acute Low Back Pain

“Acute” is defined as six weeks from the onset of symptoms. (The protocol addresses primary care only for up to six weeks of treatment.

### **Annotation 2.**

#### **History for Acute Back Pain**

1. Circumstances of onset and duration of pain.
2. Character, location, severity (zero to ten scale) and radiation of pain.
3. Presence of A.M. stiffness one hour in duration.
4. Aggravating or relieving factors.
5. History of previous episodes of back pain.
6. Associated symptoms such as:
  - a) Bladder changes
  - b) Fever
  - c) Bowel changes
  - d) Nausea and vomiting
  - e) Menstrual changes
  - f) Circulation changes
7. Assess for osteoporosis risk factors if 50 years of age or older.
8. History of drug or alcohol abuse.
9. Previous and current treatments and response to treatment.
10. Functional status.
11. Occupation.

#### Physical Examination For Acute Low Back Pain

1. General physical exam to r/o non-musculoskeletal causes of acute low back pain.
  - a) Vital signs
  - b) Abdominal/Pelvic exam as indicated. Consider visceral, vascular, neurogenic causes of low back pain.
2. Inspection
  - a) Note gross deformities, muscle atrophy, local swelling
  - b) Inspect spinal profile for abnormal curvature
3. Palpation
  - a) Palpate for tenderness, spasm, atrophy
4. Neurological Exam & Tests
  - a) Gait
  - b) Heel Walk – Toe walk
  - c) ROM of the thoracic/lumbar spine. ROM of the spine to include flexion, extension, rotation, lateral bending. Note effect on pain.

- d) Reflexes lower extremity
- e) Strength testing toes, ankles, knees, hips
- f) Sensory exam lower extremities: vibration, light touch pin prick (use sterile needle)
- g) \*Straight leg raising and include dorsi-flexion of the foot
- h) \*Patrick's Test – for external rotation of the hip joint to exclude symptomatic disease of the hip joint
- i) \* Sacroiliac compression and separation tests

5. Test for consistency

- a) \*pointing tests
- b) \*Seated SLR

Straight Leg Raising: While patient supine, knee locked raise leg until radicular ipsilateral symptoms appear, or become aggravated. Lower leg until radicular symptoms resolve or decrease. Then dorsiflex the ipsilateral foot, recurrence of radicular pain indicated a positive test. Radicular symptoms must be present for a positive test.

Contralateral Straight Leg Raising: A contralateral straight leg test is positive when radicular symptoms occur or are aggravated in the symptomatic leg when performing a straight leg test on the non-symptomatic leg.

Patrick's Tests — FABER Test (flexion, abduction, & external rotation of the hips.) Patrick's Test is positive when pain is elicited with these maneuvers. A positive test indicated sacroiliac joint disease and/or hip disorders.

Iliac Compression & Separation Test: The patient lies in a supine position. The physician then pushes both iliac crests lateral, trying to spread them apart. Next both crests are pressed medially. The test is positive when pain occurs in the affected sacroiliac joint.

Pointing Test: Point tenderness is elicited on palpation. Area is marked with a skin pencil. Marked areas remain consistently tender for remainder of examination.

Seated Leg Raising: While patient is seated the symptomatic leg is gradually extended at the knee. A positive test reproduces the radicular pain.

**Annotation 4**

Appropriate work-up and treatment. Recheck within 1-2 weeks.

**Annotation 5**

Major Neurologic Deficit

Major – Cauda Equina syndrome (variable motor and sensory loss in lower extremities, bilateral sciatica, bowel/bladder dysfunction, and “saddle anesthesia”) or Spinal Cord Syndrome with a sensory level.

**Annotation 11**

Meets Criteria for Immediate L-S Spine X-ray Criteria for Ordering X-rays With Acute Low Back Pain

1. Suspected lesion in the L-S spine as part of systemic illness
2. History of serious trauma in the previous 12 months
3. Known cancer
4. Unexplained weight loss
5. Treatment with corticosteroids (long term systemic therapy) or other predisposing factors to osteoporosis
6. When the clinical history and examination raises suspicion of spondylitis or demonstrates a significant neuromotor deficit, (i.e., definite limb weakness or asymmetric absent reflex)

**Annotation 13**

Treatment

Pharmacological Treatment: **Note: Pharmaceutical coverage is dependent upon individual pharmacy benefit design and certain drugs may require prior authorization. Providers are encouraged to review the GHP Formulary at <http://www.thehealthplan.com/>, or contact the GHP Pharmacy at 1-800-988-4861.**

Musculoskeletal Medications. Generics preferred. Methocarbamol (Robaxin), chlorzoxazone (Paraflex), cyclobenzaprine (Flexeril), and carisoprodol are all appropriate choices for muscle relaxants.

Non-Steroidal Anti- Inflammatory Agents

Ibuprofen is the preferred NSAID, then try OTC options such as ASA. Simple analgesics such as APAP may be beneficial in osteoarthritis and other non-inflammatory conditions.

Limit new Rx's to 14-day supply

Concomitant use of H2 antagonists is not approved by the FDA for prevention of NSAID induced ulcers. If results are poor, try alternative, possibly from another chemical class.

Cox-2 inhibitor agent may be preferred in patients with peptic ulcer.

\*\* Keep in mind the risk factors for NSAID- induced ulcers:

1. Age > 60 years
2. Prior history of peptic ulcer disease or GI bleeding
3. High dose NSAID
4. Concurrent use of corticosteroids or anticoagulants

\*\* (Source: Committee on Practice Parameters of the American College of Gastroenterology, 1998).

Physical Treatment:

If bed rest is not clearly indicated, consider limiting activities in the work setting, such as: no effort in excess of 5-10 pounds, no repetitive bending at the waist, a stretch/walk/sit break for 5-10 minutes every hour as needed for comfort. In non-work setting, avoid exacerbating activities.

Periodic ICE or HEAT: Ice or heat should not be applied for any longer than 15 minutes-30 minutes at a time. This may be repeated after 30 minutes. Patients can be advised that some painful conditions such as spasm may respond better to heat whereas other causes of back pain such as inflammation or swelling may respond better to ice.

**Annotation 15, 20**

Recovered

“Recovered” is defined as the ability to return to pre-morbid level of function with independent management of discomfort.

**Annotation 16**

Patient Education

Consider back school; PT/OT evaluation and education; physician education of patient; educational materials such as pamphlets, video, slide presentation; nurse educator.

**Annotation 18**

Recheck every 1-2 weeks if not recovered up to 6 weeks of primary care.

Additional Specialty Referral and Work-Up

Review change in symptoms

Include focused neuro/musculoskeletal exams

Treatment Options:

- Change NSAID/antispasmodics/analgesics if no previous response
- Back Supports

Changes in activity status for work at home

Special considerations depending on:

- Training & Experience
- Manipulation
- Steroid Taper
- Steroid Injection of Trigger Points
- TENS Unit
- L/S spine x-ray if no improvement in symptoms after 4 weeks or meets x-ray criteria
- MRI if significant neuro changes (i.e. definite limb weakness or asymmetric absent reflex) persist or develop and patient is considered a surgical candidate. Consideration for telephone consultation with specialist if questions persist. (See criteria MRI)

EMG/NCS not indicated in the acute period.

If systemic process is suspected after re-evaluation, consider ESR, CBC, UA, etc., based on clinical findings.

**Annotation 19**

Consider Physical Therapy Evaluation & Treatment

**PHYSICAL THERAPY**

Timeliness: Patient to be evaluated within 5 working days of referral (pending unforeseen circumstances)

Frequency/Duration: 3-5 times per week for 1 week, then 1-3 times per week for 2 or 3 weeks

**Physical Therapy Treatment**

\*An order of “P.T. Evaluation and treatment” will involve a complete P.T. evaluation and then treat according to the patient’s needs within the stated precautions of the ordering physician. The following specific options are available for acute low back patients.

Modalities:

- Or the first 2 weeks, the primary emphasis is on pain control; then
- Emphasis on manual therapy, positioning, body mechanics, self management, aerobic conditioning and therapeutic exercise.

**Annotation 21**

Refer to Appropriate Specialist

Appropriate Specialist includes: neurologist, physiatrist, rheumatologist, neurosurgeon, occupational medicine physician.

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## REFERENCES

### History and Physical

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## MEASURES

- ◆ Denominator – GHP members 18 years and older. No visits in the last four months for back pain.

- ◆ Primary diagnoses of back pain

Use Primary ICD9 Codes 724.0 – 724.9 to identify back pain as the primary diagnosis.

No claims for the last 4 months with one of the diagnoses.

Exclude members having back surgery: Herniated disk, spinal stenosis, back surgery – Exclude codes 722-722.99 and CPT codes 2100 through 22899.

- ◆ Numerator

Percent of referral for surgical consult up to 12 weeks after acute incident.

Percent of patients receiving x-rays, CT or MRI up to twelve weeks following acute back pain episode. Spine/pelvis CPT codes 72010 – 72120, CT of Spine CPT codes 72128 –72133, MRI CPT codes 72146 – 72159, Myelogram 72255 – 72265, 72270, Dystrophy Lumbar CPT code 72295.

Percent of patients with referral for surgery or neurosurgery (CPT codes 99241 – 99245)

Percent of patients with PT referral two or less weeks after initial incident. CPT codes PT – 97001, 97002, therapy 97010 – 97039, moist heat or manipulation 97110 – 97546.