

Acute Low Back Pain

Acute low back pain refers to a sudden onset of pain or discomfort in the lower [back](#) that typically lasts for a relatively short period, usually a few days to a few weeks (less than 7 weeks). It is a common condition that affects many individuals at some point in their lives

see also [Subacute low back pain](#).

Most cases are non-specific (e.g. lumbosacral sprain), only 10–20% can be given a precise pathoanatomical diagnosis ¹⁾:

► Patients writhing in pain. Should be evaluated for an intra-abdominal or vascular condition (e.g. pain of aortic dissection is typically described as a “tearing” pain): patients with neurogenic LBP tend to remain as still as possible, possibly needing to change positions at intervals

► Unrelenting pain at rest:

1. spinal tumor (intradural or extradural)

a) primary or metastatic spine tumor: suspected in patients with pain duration >1 month, unrelieved by bed rest, failure to improve with conservative therapy, unexplained weight loss, age > 50 yrs

b) nocturnal back pain relieved by aspirin is suggestive of osteoid osteoma or benign osteoblastoma

2. infection (especially in IV drug abusers, diabetics, post-spinal surgery, immunosuppressed patients, or those with pyelonephritis or UTI post-GU surgery). Fever is somewhat insensitive to spinal infections. Spine tenderness to percussion has 86% sensitivity with bacterial infections, but low specificity of 60%.

Types of infections include:

a) discitis

b) spinal epidural abscess: should be considered in patients with back pain, fever, spine tenderness, or skin infection (furuncle)

c) vertebral osteomyelitis

3. inflammatory

4. sacroiliitis: may produce pain and tenderness over one or both SI joints. Pelvic X-rays may show sclerosis of one or both sacroiliac joints.

a) bilateral & symmetric

ankylosing spondylitis: morning back stiffness, no relief at rest, improvement with exercise.

Usually seen in males with symptom onset before age 40 yrs. Positive Patrick’s test and pain on compressing the pelvis with the patient in the lateral decubitus position

Reiter syndrome (after Hans Reiter, a German bacteriologist): reactive arthritis (usually 1–3 weeks following certain bacterial infections) with the involvement of at least one other non-joint area

(urethritis, uveitis/conjunctivitis, skin lesions, mucosal ulcerations...). 75% are HLA-B27 positive may occur in Crohn's disease

b) bilateral&asymmetric

- psoriatic arthritis

- rheumatoid arthritis: adult & juvenile forms

c) unilateral

- gout

- osteoarthritis

- infection

► Evolving neurologic deficit. (Cauda equina syndrome: perineal anesthesia, urinary incontinence or urgency or retention, progressive weakness) all require emergent diagnostic evaluation to rule out treatable conditions such as:

spinal epidural abscess

spinal epidural hematoma

spinal tumor (intradural or extradural) massive central disc herniation

Pathologic fracture. Acute pain in patients at risk for osteoporosis or with known Ca should prompt evaluation for pathologic fractures

1. lumbar compression fracture: see Osteoporotic spine fractures

2. sacral insufficiency fracture: especially in rheumatoid arthritis patients on chronic steroids, often with no antecedent history of trauma. May cause back pain and/or radiculopathy. Often missed on plain films, best seen on CT, but may also be detected on bone scan

► Coccydynia . Pain and tenderness around the coccyx

► Tears in the annulus fibrosus. ("Anular tears") (NB: also present in 40% of asymptomatic patients between 50 and 60 yrs of age, and 75% between 60 and 70 yrs)

► Rarely following subarachnoid hemorrhage. (SAH) due to irritation of lumbar nerve roots and dura: usually accompanied by other signs of SAH

► Myalgia. May be a side effect of "statins" (drugs used to lower serum concentration of LDL cholesterol) with or without elevation of serum creatinine phosphokinase, sometimes with accompanying weakness and rarely with severe rhabdomyolysis and myoglobinuria leading to renal failure (risk may be increased with renal or hepatic dysfunction, advanced age, hypothyroidism, or serious infection)

► Drug-induced:

Phosphodiesterase type 5 (PDE5) inhibitors used for erectile dysfunction: all may be associated with LBP, but the incidence is higher with tadalafil, etiology unknown. Usually occurs 12-24 hours post-

dose and resolves by 48 hours. Most respond to simple analgesics

Treatment

see [Acute Low Back Pain Treatment](#).

Outcome

Nearly 30% of patients who present to an ED with acute, new onset, low back pain (LBP) report LBP-related functional impairment three months later ²⁾.

High initial pain intensity and disability combined with small pain reduction during the first week might predict unfavorable outcome and require adequate treatment ³⁾.

¹⁾

Frymoyer JW. Back Pain and Sciatica. N Engl J Med. 1988; 318:291–300

²⁾

Friedman BW, Gensler S, Yoon A, Nerenberg R, Holden L, Bijur PE, Gallagher EJ. Predicting three-month functional outcomes after an ED visit for acute low back pain. Am J Emerg Med. 2017 Feb;35(2):299-305. doi: 10.1016/j.ajem.2016.11.014. Epub 2016 Nov 5. PubMed PMID: 27856138.

³⁾

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