

Family Medicine Clerkship

Curriculum Resources



ACGME [Competencies](#)

Clerkship Objectives organized by [ACGME & FM Themes](#)

[FM Principles](#)

Core Topics

[Special Topics](#)

[General Resources](#)

[Clerkship Setting](#)

[Faculty Development](#)

[Glossary](#)

[FMCR Members](#)

[User's Guide](#)

[Future of FM Report](#)

Back Pain

OVERVIEW

Back problems affect virtually everyone at some time in life. Surveys indicate a yearly prevalence of symptoms in 50% of working-age adults. Lower back problems are among the most frequent reasons for patients to visit their physician, and back problems are costly in terms of medical treatment, lost productivity, and non-monetary costs such as diminished ability to perform or enjoy usual activities.

Acute lower back problems are defined as an inability to perform usual activities due to lower back or back-related symptoms of less than three months' duration. About 90% of patients with acute lower back pain spontaneously recover activity tolerance within one month.

Students should become familiar with the diagnosis and treatment of back pain and understand the important public health and workforce implications of this highly prevalent condition. Balancing the use of conservative treatment with imaging and interventions is a major issue that has implications for the individual patient as well as the economic state of our health care system.

TOPIC LEARNING GOALS AND OBJECTIVES (Organized by ACGME Competencies)

Patient Care

GOAL: Students will recognize the importance of empathic communication and patient education in caring for patients with back pain.

OBJECTIVES: Students will be able to:

- Provide patient education verbally along with appropriate handouts on back pain.
- Discuss the role of stress in the exacerbation of back pain.
- Describe appropriate management for acute mechanical lower back pain.
- Discuss the relative value of medications commonly prescribed for lower back pain.
- Discuss the limitations and risks of prolonged bed rest.
- Discuss the value of returning to normal activities as tolerated.
- Predict prognosis for a patient presenting with acute mechanical lower back pain.

Medical Knowledge

GOAL: Students will understand the differential diagnosis for back pain along with the appropriate anatomy and pathophysiology of the major causes of back pain.

OBJECTIVES: Students will be able to:

- Describe the key elements of the history for lower back pain.
- Detail the differential diagnosis for lower back pain.
- Differentiate between musculoligamentous strain and acute radicular back pain.
- Identify "red flags" for potentially serious causes of lower back pain (fracture, tumor, infection, or cauda equina syndrome).
- Describe and perform a complete back examination to determine the cause of the back pain.
- Identify specific nerve root or spinal cord compression based on the results of the exam.
- Describe and perform a complete neurological exam of the lower extremities including the straight leg raise (SLR) maneuver.
- Discuss the issue of sensitivity and specificity with regards to ipsilateral and contralateral SLR.

Practice-Based Learning and Improvement

GOAL: Students will understand the barriers to dealing with back pain patients around disability issues and pain medications.

OBJECTIVES: Students will be able to:

- Discuss why physicians have difficulty interacting with patients who claim disability based upon lower back pain.
- Discuss why physicians have difficulty providing adequate pain control for fear of addicting patients to narcotics, being manipulated, causing harm, or getting investigated by the DEA or state medical board.

Interpersonal and Communication Skills

GOAL: Students will communicate effectively with patients concerning the diagnosis and treatment of back pain.

OBJECTIVES: Students will be able to:

- Approach patients with an optimistic attitude, because 90% of patients with acute lower back pain spontaneously recover activity tolerance within one month.
- Discuss the use of conservative management for lower back pain while reserving surgery as the treatment of last resort.
- Describe how to provide informed consent to patients prior to back surgery.
- Demonstrate how to teach patients the fundamentals of proper body mechanics as a means of preventing lower back pain.
- Communicate effectively with patients who have worries or concerns about the effect of back pain on their function at work, home, or recreation.

Professionalism

GOAL: Students will establish and adhere to high personal standards in the care of patients with back pain.

OBJECTIVES: Students will be able to:

- Communicate honestly and openly with patients about the prognosis for back pain.
- Balance "the art and the science of medicine" when considering a patient's back pain disability request.

Systems-Based Practice

GOAL: Students will appraise and utilize the best evidence in caring for patients with back pain.

OBJECTIVE: Students will be able to:

- Find and use high-quality Web sites that base information provided on evidence-based medicine (EBM).
- Describe use of EBM to determine a cost-effective use of diagnostic imaging in the evaluation of lower back pain.
- Discuss how routine testing (laboratory tests, x-ray of the lumbosacral spine) and imaging studies are not recommended during the first month of back pain except when a "red flag" is noted.
- Discuss how an MRI scan is costly and unnecessary unless it will change patient management.
- Describe the limitations of the MRI in evaluating lower back pain because false positive MRI scans increase with age.

EDUCATIONAL METHODS

Clinical Experience

- Diagnose and treat patients with back pain in clinical settings.

Small-Group Learning

- Doctoring Case on back pain (two parts using standardized patients) can be used in year 2 or 3. Contact [Richard Usatine](#) for case materials.

Problem-Based Learning

- Doctoring Case on back pain (two parts using standardized patients) can be used in year 2 or 3. Contact [Richard Usatine](#) for case materials. It is case-based, small-group learning, but can be used in a PBL format.

Curricular Resources

- Doctoring Case on back pain (two parts using standardized patients) can be used in year 2 or 3. Contact [Richard Usatine](#) for case materials.

Published Material

- Deyo RA, Weinstein JN. Primary Care: Low Back Pain. NEJM. February 2001. 344 (5): 363-370

[Reference](#) at PubMed

- [Essentials of Family Medicine, Fourth Edition](#)

Author: Philip Sloane, MD; Lisa Slatt, MD; Mark Ebell, MD, MS; Louis Jacques
 Publisher: Lippincott Williams & Wilkins, 2002

Lectures

- PowerPoint presentation - [Pam Rockwell](#), University of Michigan

Web Sites

- [Low back pain or sciatica in the primary care setting](#). Veterans Health Administration, Department of Defense. Clinical practice guideline for the management of low back pain or sciatica in the primary care setting. Washington (DC): Department of Veterans Affairs (U.S.); 1999
- [Medline Plus](#) has a great collection of material for patients and physicians
- Low Back Pain: [Tips on Pain Relief and Prevention](#) - from AAFP
- Agency for Healthcare Research and Quality (HS09804). Clinical Decisionmaking: [Recommendations for diagnosing and treating low back pain](#)
 Abstract: Recommendations for diagnosing and treating low back pain call for a conservative, step-by-step approach. Although low back pain rarely indicates a serious disorder, it is a major cause of disability and cost. In the workplace, low back pain accounts for one-third of workers' compensation costs.
- Outcomes/Effectiveness Research: Researchers study the [causes of low back pain, use of imaging to identify herniated disks, and cancer in back pain patients](#)
 Abstract: Outcomes/Effectiveness Research. Researchers study the causes of low back pain, use of imaging to identify herniated disks, and cancer in back pain patients. About two-thirds of adults suffer from low back pain at some time. Doctors differ widely in how they care for patients with low back pain.
- Research Activities, May 2001: Clinical Decisionmaking: [Sophisticated imaging tests and specialty care usually are not necessary](#)
 Abstract: Sophisticated imaging tests and specialty care usually are not necessary to evaluate and manage acute low back pain. Two out of three people will develop low back pain at some point in their lives. While low back pain rarely indicates a serious disorder, it is a major cause of pain, disability, and lost social life.
- Outcomes/Effectiveness Research: Researchers examine [use of acupuncture, surgery, and imaging tests](#)
 Abstract: Outcomes/Effectiveness Research. Researchers examine use of acupuncture, surgery, and imaging tests in treating back pain patients. Advanced diagnostic imaging, spinal surgery, and alternative therapies such as acupuncture are widely used in the diagnosis and treatment of patients with low back pain.
- Clinical Practice Guidelines: [AHCPR-sponsored guidelines](#) Abstract: Clinical Practice Guidelines. AHCPR-sponsored guidelines help users increase quality and cut costs. The Agency for Health Care Policy and Research's experience with clinical practice guidelines has demonstrated that evidence-based practice recommendations can be incorporated into guidelines.
- Clinical Decisionmaking: [Back pain study examines pain intensity and functioning](#)
 Abstract: Back pain study examines pain intensity and functioning. Most episodes of low back pain (LBP) improve within 6 weeks or less of onset. Only 5 to 10 percent of patients with LBP have persistent symptoms, and only 2 percent have radiating leg

pain; however, these patients account for 85 percent of medical care.

Other

- [American College of Sports Medicine](#)

ASSESSMENT STRATEGIES

- University of Texas at San Antonio OSCE
- [Caryl Heaton, DO](#), UMD-RWJ OSCE

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For questions or comments, please contact [Webmaster](#) or [Ardis Davis](#)

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