

Diagnostic Tests

When trying to identify the source of back pain, your doctor will likely complete a physical exam and ask you about your medical history. Often, this is enough to help identify the cause of your pain. If your doctor suspects other problems, such as a fracture, infection, tumor, or other specific condition, he/she may order one or more tests. These tests may include:

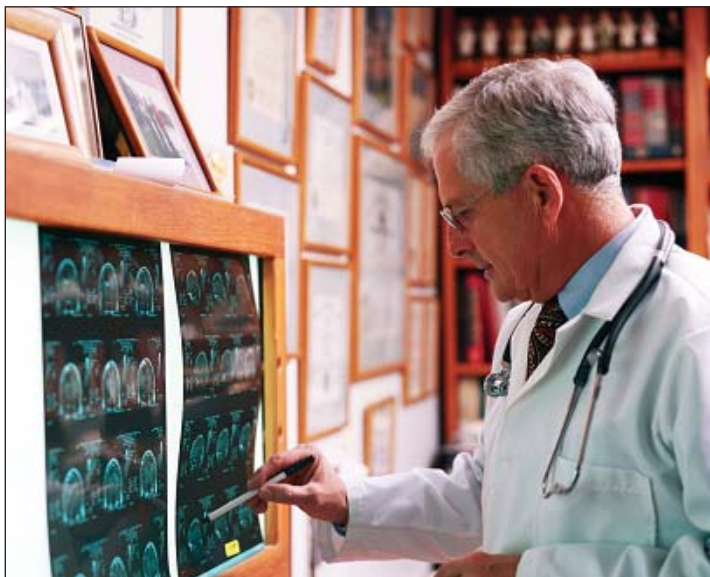
- **X-ray.** These images show the alignment of your bones and whether you have arthritis or broken bones. X-ray images won't directly show problems with your spinal cord, muscles, nerves, or discs.
- **Magnetic resonance imaging (MRI) or computerized tomography (CT) scans.** These scans can generate images that may reveal herniated discs or problems with bones, muscles, tissue, tendons, nerves, ligaments, and blood vessels.
- **Bone scan.** In rare cases, your doctor may use a bone scan to look for bone tumors or compression fractures caused by osteoporosis. In this procedure, you'll receive an injection of a small amount of a radioactive substance (tracer) into one of your

veins. The substance collects in your bones and allows your doctor to detect bone problems using a special camera.

- **Nerve studies (electromyography, or EMG).** This test measures the electrical impulses produced by the nerves and the responses of your muscles. Studies of your nerve-conduction pathways can confirm nerve compression caused by herniated discs or narrowing of your spinal canal (spinal stenosis).¹
- **Blood tests.** Blood tests may be used to point to problems such as infection or inflammation.²

Sources:

1. Mayo Clinic (2008). Back Pain [on-line]. Retrieved April 22, 2009. From <http://www.mayoclinic.com/health/back-pain/DS00171>.
2. National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS) (2005). Handout on health: Back pain [on-line]. Retrieved April 22, 2009. From http://www.niams.nih.gov/Health_Info/Back_Pain/default.asp.



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