

# Understanding Back Pain

## Back Pain May Mimic the Pain of Organ Disease

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There are many internal disorders and organ diseases, which may bring a patient to the doctor with a chief complaint of back pain. On the other hand, there are also numerous back disorders, which will refer pain that mimics internal disorders prompting an internal medicine workup. The frequency and importance of this phenomenon suggest the need for an examination of the spine in cases of suspected internal disease. Pain syndromes originating from the spine typically involve radiating pain and/or referred pain. There are number of reasons why this occurs, one of which is the way pain signals converge on the central nervous system.

The following the levels of the spine are associated with referred pain from the following organs. The heart, C8-T4; lungs, T2-T5; esophagus, T4-T5; stomach and duodenum, T6-T8; liver and gall bladder, T7-T8; pancreas, T8; small intestine, T9-T10; appendix and ascending colon, T10-L1; ovary, testes, and adrenal gland, T11-L1; bladder, kidney, uterus, T11-L1; transverse colon, L2-L3; sigmoid colon and rectum, S2-S5; cervix, neck of the bladder, prostate, and urethra, S2-S5.

**Cervical Angina:** The term cervical angina refers to the pain arising from the neck which closely mimics the pain associated with coronary artery disease referred to as angina pectoris. The most common cause is arthritis of the neck and/or irritation of spinal nerve roots in the lower neck region. Laboratory, EKG, and a musculoskeletal evaluation are all helpful in diagnosing the angina of heart origin.

**Cervical Syndrome:** The cervical syndrome is noted for its simulation of internal/visceral disease. The syndrome is characterized by variety of bizarre clinical manifestations as a result of irritation of the autonomic nervous system most commonly associated with neck arthritis (spondylosis). Referred pain from the neck can mimic, visceral conditions such as pharyngeal or laryngeal disorders, eye (ocular) lesions, hearing disorders, as well as angina associated with functional, and organic heart disease. Dysfunction of the neck with associated pain can mimic or can contribute to increase hearing sensitivity (hyperacusis), neck-tongue pain syndromes, ringing in the ears (tinnitus), vertigo and headaches.

**Thoracic-Simulated Visceral Disease:** The mid back or thoracic region is the area of the spine most likely to become the source of referred pain, which simulates an internal disorder. Common examples of disorders of the thoracic spine include rib pain, which might mimic the pain associated with lung or pleural disease and right scapular pain with radiation into the inter-rib region, which may mimic the pain associated with gall bladder disease. One of the most common simulated disorder is gall bladder inflammation (cholecystitis), which can be simulated by thoracic degenerative disc disease, ribs, or postural induced pain involving in the mid back. Dysfunction and inflammation involving the lower vertebral levels of the mid-back (thoracic spine) can result in a pattern of pain which can mimic the pain associated with kidney disease.

**Lumbar and Pelvic Origin of Simulated Visceral Disease:** A mechanical lesion of the upper portion of the lumbar spine can induce pain which may mimic kidney or ureter disorders. Pain arising from the low back can refer to the pelvic region and mimic

the pain of visceral disease in the pelvis. The clinical presentation of this type of syndrome is often variable with patients demonstrating or complaining of pelvic pain, disturbances of bladder, disturbances of the bowel, gynecologic and sexual discomfort or dysfunction. Pelvic unleveling associated with scoliosis or a short leg (leg length less than the other side) may be associated with chronic pelvic discomfort, which may mimic the pattern of pain arising from disease of the pelvis. Simulated pelvic disease referred from the low back or sacral plexus can easily misdiagnosed and subsequently mismanaged.