

Understanding Back Pain

Mechanically Induced Back Pain and Pain from Nerve Compression

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Back pain which results from inflammation secondary to compromise of an intervertebral disc, spinal ligaments, or the muscles of the back is often referred to as mechanical back pain. The spine is a mechanical structure which supports the individual from the time of their birth throughout their life. It supports the individual during standing, sitting and during all activities of daily living. A muscle strain or low back strain may trigger mechanically induced symptoms. Mechanical pain not involving the spinal nerves usually originates near the lower spine and spreads to include the buttocks and thigh areas. This type of pain usually does not extend or radiate past the knee.

Compression induced pain occurs when pain sensitive spinal tissues are physically compressed and/or deformed. For example the nerve roots that exit the spine through the neuroforamen can be irritated, inflamed and/or compressed. The pain which results from compression occurs secondary to tethering of the nerve and "pulling" of the nerve with activity cause the radiating pain. A herniated disc is a common cause of compressive pain. A herniated disc can stretch a spinal ligament, compress pain sensitive spinal membranes and compress one or more spinal nerves. For example: the nerves leaving the lumbar spine join to form the sciatic nerve. The sciatic nerve controls and provides sensation to the muscles of the lower leg. When the nerve roots are irritated or are compromised secondary to compression/tethering the individual may experience radiating pain in the leg but no pain in the in the back itself. The individual may develop numbness and/or weakness. Compressive pain can also occur in the cervical spine secondary to herniated discs and/or bone spurs. This is often associated with radiating arm pain as well as numbness and weakness. A bone spur, spinal abscess or tumor may result in nerve root compression pain.