Fact Sheet
Back Pain and the Spine

Widespread in society, back pain affects individuals regardless of age, ethnicity or economic status.

- Four out of five adults experience low back pain at some point during their lives. – American Academy of Orthopedic Surgeons (AAOS)
- After the common cold, low back pain is the next leading reason for missed workdays for people under 45. – AAOS
- Back pain is the second most frequently reported reason for visiting a doctor and the third most frequent reason for surgery. – National Health and Nutrition Examination Survey III
- More than 65 million Americans suffer from low back pain each year. – American Association of Neurological Surgeons (AANS)
- One-half of all patients who suffer from an episode of low back pain will have another occurrence within one year. – AANS

Common Spinal Problems
While a frequent cause of back or neck pain can be a muscle strain or ligament/tendon sprain, many with chronic pain may actually have common problems related to the spine. The body relies heavily on the spine for support and mobility, and its complex structure of moving elements and nerves makes it a common source of back and neck pain. Several structures in the spine are capable of producing back pain, including nerves, discs, joints, ligaments and bones.

Inflamed joints, irritated nerves and herniated discs in the spine are a few of the common causes of back pain (see following sections for more detail). While not always a reason, the degenerative process of the spine, which occurs naturally through aging, plays a significant role in making the spine susceptible to these conditions.

- “In almost 90 percent of all low back pain cases, a nerve in the spine gets pinched or irritated, the muscles tense up and pain results.”
- One-third of adults over age 20 show evidence of herniated discs. – Well-Connected Report: Low Back Pain and Sciatica (September 2000)
- By the age of 30, discs in the spine begin to show signs of deterioration. – MayoClinic.com

Types of Pain
Back pain is either acute or chronic. Most episodes of acute pain—sudden, intense pain lasting a short period of time—are due to injuries to muscle or other soft tissues, such as ligaments and tendons. These sprains or strains will usually heal in a few days or weeks.

Chronic pain—deep, dull or aching pain lasting for three months or more—may be located in one area or travel down the arms or legs. Chronic pain, pain radiating to arms and legs (radicular pain), or numbness and tingling often indicates a specific anatomic abnormality and warrants seeking a spine specialist, such as a neurosurgeon or orthopedic surgeon, for appropriate diagnosis and treatment. Symptoms needing immediate attention include bowel or bladder dysfunction, fever, weakness or numbness of the arms or legs, or pain that limits or prohibits everyday activities.
Common symptoms and possible causes of back and neck pain are briefly described below.

**Low Back Pain**

**Adults younger than 60 years old:**
- Leg pain and possible numbness, usually worse after long periods of standing or sitting, is frequently caused by disc herniation (ruptured disc).
- Mechanical low back pain, resulting from bending or running, is commonly caused by degenerative disc disease (deteriorating discs).
- Low back pain that worsens when standing or walking may be caused by spondylolisthesis (misaligned vertebrae).

**Adults older than 60 years old:**
- Low back pain pronounced in the morning or evening is frequently caused by facet joint osteoarthritis (joint cartilage deterioration).
- Leg pain while walking and standing can be caused by spinal stenosis (narrowing of spinal canal) or degenerative spondylolisthesis.

**Neck Pain**
- Neck pain that radiates down the arm is frequently caused by disc herniation or foraminal stenosis (narrowing of neural passageways).
- Neck pain related to certain activities is frequently caused by foraminal stenosis.
- Arm pain with lack of coordination is commonly caused by cervical stenosis with myelopathy (narrowing of spinal canal with spinal cord dysfunction).
- Neck pain lasting at a low level for a few months with occasional flare-ups may be the result of disc degeneration.
- Neck pain pronounced in the morning or evening is commonly caused by facet joint osteoarthritis.

**Causes of Pain**

Pain from the spine can be caused by degeneration, deformity, trauma, infection, tumors or inflammation. The most common cause of pain results from degenerative conditions of the spine, which occur naturally with age. Degenerative changes cause spinal structures to harden, thicken, dehydrate, expand and lose elasticity. These changes reduce flexibility and functionality, and the spine becomes less able to tolerate loads and is more susceptible to injury. The first changes from degeneration generally start in a person’s early 20s and continue progressively until death. While this process cannot be stopped, degenerative effects can be slowed by regular exercise, proper lifting techniques, balanced nutrition and not smoking.

Degeneration and the effects of everyday “wear and tear” can lead to changes in the structural integrity of the discs, joints and vertebral cartilage. The result can be disorders that cause pain by applying pressure on adjacent nerves or abnormal stress and friction on spinal structures. Arthritis (joint inflammation) can serve as one example. Inflammation in joints caused by wear and tear can cause considerable pain from friction wherever those joints may be. When arthritis occurs in the spine, the inflamed joints can impinge on nerve roots and compound pain.

Often, injury from heavy physical labor, strenuous sports, accidents, falls, household chores, and even poor posture contribute to back pain. Muscle strains from these events are typical results. A common injury, whiplash, usually occurs from traumatic events such as auto accidents. Whiplash pain can be caused by tears and bleeding in the muscles, ruptures in ligaments, or disc herniations.