

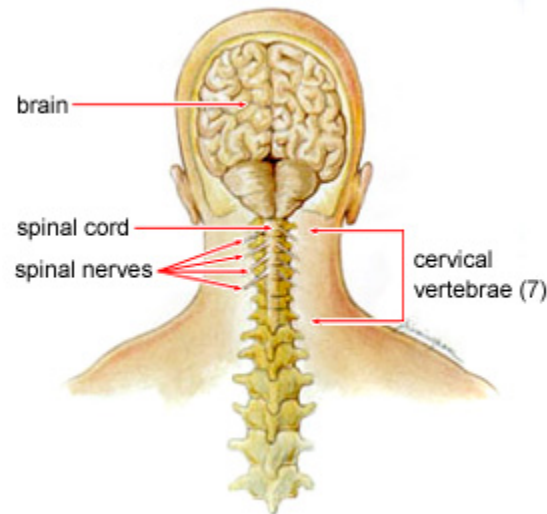
Neck Pain

The neck (cervical spine) is composed of vertebrae that begin in the upper torso and end at the base of the skull. The bony vertebrae along with the ligaments (which are comparable to thick rubber bands) provide stability to the spine. The muscles allow for support and motion. The neck has a significant amount of motion and supports the weight of the head. However, because it is less protected than the rest of the spine, the neck can be vulnerable to injury and disorders that produce pain and restrict motion. For many people, neck pain is a temporary condition that disappears with time. Others need medical diagnosis and treatment to relieve their symptoms.

Cause

Neck pain may result from abnormalities in the soft tissues—the muscles, ligaments, and nerves—as well as in bones and joints of the spine. The most common causes of neck pain are soft-tissue abnormalities due to injury or prolonged wear and tear. In rare instances, infection or tumors may cause neck pain. In some people, neck problems may be the source of pain in the upper back, shoulders, or arms.

Inflammatory Diseases



The vertebral column.

Rheumatoid arthritis can destroy joints in the neck and cause severe stiffness and pain. Rheumatoid arthritis typically occurs in the upper neck area.

Cervical Disk Degeneration

The disk acts as a shock absorber between the bones in the neck. In cervical disk degeneration (which typically occurs in people age 40 years and older), the normal gelatin-like center of the disk degenerates and the space between the vertebrae narrows. As the disk space narrows, added stress is applied to the joints of the spine causing further wear and degenerative disease. The cervical disk may also protrude and put pressure on the spinal cord or nerve roots when the rim of the disk weakens. This is known as a herniated cervical disk.

Injury

Because the neck is so flexible and because it supports the head, it is extremely vulnerable to injury. Motor vehicle or diving accidents, contact sports, and falls may result in neck injury. The regular use of safety belts in motor vehicles can help to prevent or minimize neck injury. A "rear end" automobile collision may result in hyperextension, a backward motion of the neck beyond normal limits, or hyperflexion, a forward motion of the neck beyond normal limits. The most common neck injuries involve the soft tissues: the muscles and ligaments. Severe neck injuries with a fracture or dislocation of the neck may damage the spinal cord and cause paralysis.

Other Causes

Less common causes of neck pain include tumors, infections, or congenital abnormalities of the vertebrae.

When Should You Seek Medical Care?

If severe neck pain occurs following an injury (motor vehicle accident, diving accident, or fall), a trained professional, such as a paramedic, should immobilize the patient to avoid the risk of further injury and possible paralysis. Medical care should be sought immediately.

Immediate medical care should also be sought when an injury causes pain in the neck that radiates down the arms and legs.

Radiating pain or numbness in your arms or legs causing weakness in the arms or legs without significant neck pain should also be evaluated.

If there has not been an injury, you should seek medical care when neck pain is:

- continuous and persistent
- severe
- accompanied by pain that radiates down the arms or legs
- accompanied by headaches, numbness, tingling, or weakness

Who Can Treat Neck Pain?

Many patients seek orthopaedic care for neck pain because orthopaedists are specifically trained to diagnose, treat, and help prevent problems involving the muscles, bones, joints, ligaments, and tendons. Although some orthopaedists confine their practices to specific areas of the musculoskeletal system, most treat a wide variety of diseases, injuries, and other conditions, including neck pain.

Diagnosis



Determining the source of the pain is essential to recommend the appropriate treatment and rehabilitation. Therefore, a comprehensive examination is required to determine the cause of neck pain.

Your orthopaedist will take a complete history of the difficulties you are having with your neck. He or she may ask you about other illnesses, any injury that occurred to your neck, and any complaints you have associated with neck pain. Previous treatment for your neck condition will also be noted.

Your orthopaedist will also perform a physical examination. This examination may include evaluation of neck motion, neck tenderness, and the function of the nerves and muscles in your arms and legs.

X-rays often will be obtained to allow your orthopaedist to look closely at the bones in your neck. This simple diagnostic imaging study (radiography) often helps orthopaedists to determine the cause of neck pain and to prescribe effective treatment.

Patients who require further evaluation may undergo one or more of the following examinations:

- **MRI** (magnetic resonance imaging). This non x-ray study allows an evaluation of the spinal cord and nerve roots.
- **CT** (computed tomography). This specialized x-ray study allows careful evaluation of the bone and spinal canal.
- **Myelography** (injection of a dye or contrast material into the spinal canal). This specific x-ray study also allows careful evaluation of the spinal canal and nerve roots.
- **EMG** (electromyography). This test evaluates nerve and muscle function.

Your orthopaedist may supplement your evaluation with blood tests, and, if necessary, will consult with other medical specialists.

Treatment

How neck pain is treated depends on what the diagnosis reveals. However, most patients are treated successfully with rest, medication, immobilization, physical therapy, exercise, activity modifications, or a combination of these methods.

For example, if pain is caused by inflammation as a result of stretching muscles and ligaments beyond their limits, your orthopaedist may prescribe rest and a neck collar for a specified period of time, as well as medication to reduce inflammation. If medication is prescribed to reduce pain, it should be used only as directed and should not be taken for extended periods of time. In addition, if your orthopaedist prescribes rest, it is vital that you follow these instructions carefully.

When neck pain persists or is chronic, your orthopaedist may recommend a rehabilitation program that includes an exercise program and various types of physical therapy to help you relieve your pain and prevent it from coming back.

Very few patients require surgery to relieve neck pain. For most patients, a combination of rest, medication, and physical therapy will relieve neck pain. Surgery may be necessary to reduce pressure on the spinal cord or a nerve root when pain is caused by a herniated disk or bony narrowing of the spinal canal. Surgery may also be required following an injury to stabilize the neck and minimize the possibility of paralysis, such as when a fracture results in instability of the neck.

This has been prepared by the American Academy of Orthopaedic Surgeons and is intended to contain current information on the subject from recognized authorities. However, it does not represent official policy of the Academy and its text should not be construed as excluding other acceptable viewpoints.

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