CONDITION

Cervical spondylosis

Learn how age-related changes in the neck can cause pain, nerve symptoms, or spinal cord pressure, and how cervical spondylosis is evaluated and managed.

WHAT IT IS
Age-related wear and change in the neck spine

BODY SYSTEM
Bones, joints and nerves

MAIN SYMPTOMS
Neck pain, neck stiffness, arm or hand numbness, arm or hand weakness

WHAT CAUSES IT
Gradual age-related changes

HOW IT IS DIAGNOSED
Clinical examination with X-ray, MRI or CT

MAIN TREATMENT
Nonsurgical care, with surgery when needed

CAN IT BE CURED?
No - structural changes cannot be reversed

IS IT AN EMERGENCY?
Sometimes - sudden major weakness or paralysis

LONG-TERM OUTLOOK
Often manageable, but neurologic loss may not fully reverse

Overview

Cervical spondylosis is the medical term for age-related wear and change in the cervical spine, which is the part of the spine in the neck. It can affect the spinal discs, small joints, bones, and supporting ligaments.

Over time, spinal discs may lose water and become thinner. The body may form extra bone around stressed areas. These growths are called bone spurs, or osteophytes. The small joints at the back of the neck may also develop osteoarthritis.

These changes are common with aging and do not always cause symptoms. An imaging test may show cervical spondylosis in someone who has no pain or nerve problems. Treatment is based on symptoms and examination findings, not on an imaging result alone.

When symptoms do occur, cervical spondylosis often causes neck pain or stiffness. In some people, the changes narrow the openings where nerves leave the spine. This can irritate or compress a nerve root, causing cervical radiculopathy . Radiculopathy may produce pain, tingling, numbness, or weakness in an arm or hand.

Less often, narrowing of the spinal canal puts pressure on the spinal cord. This is called degenerative cervical myelopathy . Because spinal cord pressure can affect walking, hand function, and bladder or bowel control, it requires timely medical assessment.

Symptoms

Symptoms may begin slowly and can come and go. They may worsen after holding the neck in one position, such as while working at a computer or driving.

Common symptoms include:

A compressed nerve root may cause symptoms that travel from the neck into the shoulder, arm, or hand. The location depends on which nerve is affected. Symptoms can include burning or sharp pain, pins and needles, numbness, or weakness. Coughing, sneezing, or certain neck movements may make the pain worse.

Spinal cord pressure may cause different problems. Possible signs include:

Arrange prompt medical assessment for new or worsening weakness, hand clumsiness, balance problems, or walking changes. These symptoms are not always caused by cervical spondylosis, but they need evaluation for possible spinal cord or nerve involvement.

Seek emergency care for sudden major weakness or paralysis, loss of bladder or bowel control, numbness around the genitals or buttocks, or severe neck pain after a significant injury. Emergency assessment is also appropriate if neck discomfort occurs with symptoms that could suggest a heart attack or stroke, such as chest pressure, marked shortness of breath, facial drooping, or sudden difficulty speaking.

- Pain or stiffness in the neck
- Reduced ability to turn or bend the neck
- Muscle tightness or spasms around the neck and shoulders
- A grinding, clicking, or popping sensation with movement
- Headache that starts near the back of the head
- Pain around the shoulder blade or upper back
- Loss of hand coordination, such as difficulty fastening buttons or writing

- Dropping objects more often
- Weakness or stiffness in the arms or legs
- Poor balance, stumbling, or a change in walking
- A heavy or unsteady feeling in the legs
- Electric shock-like sensations down the spine or limbs when bending the neck
- New problems controlling the bladder or bowel

Causes and risk factors

Cervical spondylosis develops through gradual changes in the structures of the neck. Discs may dry out and lose height. As space between the vertebrae decreases, more stress can fall on the joints. Ligaments may thicken, and bone spurs may develop. Together, these changes can reduce space around a nerve root or the spinal cord.

Aging is the main risk factor. However, the amount of change seen on an X-ray or MRI does not reliably predict how much pain a person will have.

Other factors that may contribute include:

Poor posture may contribute to muscle strain and can aggravate symptoms, but posture alone does not explain every case. Neck pain is often influenced by several factors, including sleep, physical activity, stress, and how the nervous system processes pain.

- A past neck injury
- Work or activities involving repeated neck motion, heavy lifting, or prolonged awkward positioning
- A family tendency toward earlier degenerative spine changes
- Smoking, which can affect disc health and healing
- A naturally narrow spinal canal

Diagnosis

A clinician usually begins by asking when symptoms started, where pain travels, what makes it better or worse, and whether there is numbness, weakness, clumsiness, or difficulty walking. Information about injuries, other illnesses, medicines, and previous treatments can help guide the assessment.

The physical examination may include checking:

Imaging is not always needed for mild, short-term neck pain without warning signs. Age-related changes are common on scans, so an abnormal result may not be the source of a person's symptoms.

When imaging is appropriate, tests may include:

Electromyography and nerve conduction studies may sometimes help distinguish a pinched nerve in the neck from a nerve problem at the elbow, wrist, or elsewhere. These tests measure electrical activity in muscles and nerves.

Blood tests do not diagnose cervical spondylosis. A clinician may order them when symptoms could have another cause, such as infection or inflammatory disease.

- Neck movement and areas of tenderness
- Muscle strength in the arms and legs
- Sensation in the hands and limbs
- Reflexes
- Hand coordination
- Balance and walking
- Whether certain neck positions reproduce arm symptoms
- X-rays , which show bone alignment, disc-space narrowing, and bone spurs
- Magnetic resonance imaging, or MRI , which gives a detailed view of discs, nerve roots, the spinal cord, and other soft tissues
- Computed tomography, or CT , which provides detailed bone images and may be used when MRI is unsuitable or more bone detail is needed

Treatment and management

Treatment depends on the main symptoms, their effect on daily life, and whether a nerve root or the spinal cord is involved. Most people with uncomplicated neck pain or cervical radiculopathy begin with nonsurgical care.

Staying gently active is usually preferred to prolonged bed rest. Activities may need temporary adjustment, but avoiding all movement can lead to more stiffness and muscle weakness. Short, frequent changes of position may be more comfortable than remaining seated for long periods.

A physical therapist may teach exercises to improve neck movement, strengthen supporting muscles, and improve shoulder and upper-back function. Therapy may also include guidance on pacing activities, work setup, and safe ways to return to usual tasks. Traction helps some people with nerve-related arm pain, but it is not appropriate in every situation.

Heat may relax tight muscles, while a wrapped cold pack may reduce pain after an aggravating activity. Either should be used for limited periods to avoid skin injury.

Nonprescription pain medicines may be considered for short-term symptom relief. These include acetaminophen and nonsteroidal anti-inflammatory drugs, such as ibuprofen or naproxen. These medicines are not safe for everyone and can interact with other treatments. A clinician or pharmacist can help a person choose an appropriate option and use it safely.

For persistent or more severe symptoms, a clinician may discuss prescription medicines. Depending on the situation, these may target inflammation, muscle spasm, or nerve-related pain. Medicines can reduce symptoms but do not reverse structural changes in the spine.

A soft cervical collar is sometimes used for a brief period during a painful flare. Long-term use is generally avoided because it can weaken neck muscles. Forceful neck manipulation should be discussed with a qualified clinician, particularly when there are neurologic symptoms or concern about spinal cord compression.

An image-guided steroid injection near an irritated nerve may provide temporary relief for selected people with cervical radiculopathy. It does not remove the underlying narrowing, and uncommon but serious complications are possible. The expected benefits and risks should be reviewed with an experienced specialist.

Surgery may be considered when there is progressive weakness, significant spinal cord compression, or disabling nerve pain that has not improved with appropriate nonsurgical care. Procedures may remove a disc, bone spur, or other tissue pressing on nerves or the spinal cord. Some operations join vertebrae together with a fusion, while others use an artificial disc or create more space in the spinal canal.

The goals and risks of surgery depend on the exact problem. Surgery for myelopathy often aims to prevent further neurologic decline; recovery of existing symptoms varies.

Complications

Many people have stable or manageable symptoms. Possible complications are mainly related to ongoing nerve or spinal cord pressure.

Cervical radiculopathy can cause persistent arm pain, numbness, or muscle weakness. Severe or prolonged nerve compression may lead to loss of muscle bulk or lasting weakness, although

many cases improve without surgery.

Degenerative cervical myelopathy can gradually affect hand control, balance, walking, and independence. Bladder or bowel problems may occur in more advanced cases. Earlier recognition matters because neurologic loss may not fully reverse after pressure on the spinal cord is relieved.

Chronic pain may also interfere with sleep, work, exercise, and mood. A management plan may need to address these effects rather than focusing only on scan findings.

Follow up

Routine follow-up is appropriate when pain persists, repeatedly returns, or limits sleep, work, or normal activities. Contact a clinician if symptoms do not improve with initial care or if medicine causes side effects.

Follow-up may review function as well as pain. Useful changes to track include whether arm symptoms are spreading, whether grip feels weaker, and whether walking or hand coordination has changed.

Seek an earlier medical review for:

Sudden severe neurologic symptoms, paralysis, or loss of bladder or bowel control require emergency assessment rather than a routine appointment.

- New or increasing arm or leg weakness
- Worsening numbness
- New hand clumsiness
- Increasing falls, poor balance, or walking difficulty
- Fever, unexplained weight loss, or pain that is severe at rest
- Symptoms beginning after a significant injury

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