CONDITION

Herniated disk

A herniated disk occurs when tissue inside a spinal disk pushes through its outer layer and may irritate a nearby nerve.

WHAT IT IS
Spinal disk tissue pressing or irritating nearby nerves

BODY SYSTEM
Spine and nervous system

MAIN SYMPTOMS
Back or neck pain, radiating pain, numbness, weakness

WHAT CAUSES IT
Age-related disk wear, strain, or injury

HOW IT IS DIAGNOSED
Symptoms, nerve examination, and MRI when needed

MAIN TREATMENT
Activity adjustment, pain relief, physical therapy, sometimes surgery

CAN IT BE CURED?
Sometimes - herniated tissue can shrink naturally

IS IT AN EMERGENCY?
Sometimes - bladder changes, saddle numbness, or worsening weakness

LONG-TERM OUTLOOK
Most improve; some have lasting or recurrent symptoms

Overview

A herniated disk affects one of the flexible cushions between the bones of your spine. These cushions are called intervertebral disks. Each has a soft, gel-like centre surrounded by a tougher outer layer.

A disk herniates when some of its inner material pushes through a weak or torn area in the outer layer. "Slipped disk" is a common name, but the disk does not actually slip out of place. "Disk" and "disc" are different spellings of the same term.

A herniated disk matters when it irritates or presses on a nearby nerve. This can cause pain, tingling, numbness, or weakness along the path of that nerve. Some herniated disks cause no symptoms and are found by chance during a scan.

Herniated disks occur most often in the lower back, called the lumbar spine. They can also occur in the neck, or cervical spine. Herniation in the middle of the back is less common.

Most people improve without surgery. However, the location and severity of nerve pressure affect what symptoms occur and how quickly they settle.

Symptoms

Symptoms may begin suddenly after lifting, twisting, or another movement. They may also develop gradually without a clear injury.

A herniated disk in the lower back may cause:

Pain travelling down the leg is often called sciatica. It happens when a nerve root contributing to the sciatic nerve becomes irritated. The pain may feel sharp, burning, or electric. Coughing, sneezing, sitting, or bending may make it worse.

A herniated disk in the neck may cause:

Symptoms do not always match the apparent size of a herniation on an MRI. A small herniation in a tight space may cause marked symptoms, while a larger one may cause little or no discomfort.

Pressure on the spinal cord in the neck can affect balance, walking, or fine hand movements. This is different from irritation of a single nerve and needs prompt medical assessment.

- Lower back pain
- Pain spreading through the buttock and down one leg
- Tingling or numbness in the leg or foot
- Weakness in the leg, ankle, or foot
- Neck or shoulder-blade pain
- Pain spreading into an arm or hand
- Tingling or numbness in the arm or fingers
- Weakness in the shoulder, arm, or hand

Causes and risk factors

Spinal disks lose water and flexibility with age. This normal process can make the outer layer more likely to crack. Inner disk material can then push through the weakened area.

A sudden strain may trigger symptoms. Examples include lifting while twisting, bending awkwardly, or a forceful impact. In many cases, there is no single event. The disk may already have been weakening over time.

Factors associated with a greater chance of disk problems include:

These factors do not mean that you will develop a herniated disk. People who are active and use careful lifting techniques can still have one.

- Repeated heavy lifting, pulling, pushing, or twisting
- Long periods of sitting or frequent driving
- Smoking, which is linked with faster disk degeneration
- Higher body weight, which increases load on the lower spine
- Family traits that affect disk structure or degeneration
- Previous herniation or other age-related spinal changes

Diagnosis

A healthcare professional will ask where your pain travels, what makes it better or worse, and whether you have numbness or weakness. They may also ask about injuries, fever, cancer history, infections, and changes in bladder or bowel function.

The physical examination usually checks:

For lower-back symptoms, raising the straightened leg may reproduce pain from an irritated nerve. For neck symptoms, examination may include arm strength, hand coordination, and signs that the spinal cord is affected.

An MRI provides detailed images of disks, nerves, and other soft tissues. It can confirm the location of a herniation when imaging is needed. An immediate MRI is not usually necessary for uncomplicated symptoms that have only recently begun. Imaging becomes more important when there are emergency warning signs, progressive weakness, persistent symptoms, or a need to plan an injection or operation.

X-rays show bones but do not show a herniated disk. A CT scan, sometimes combined with dye around the spinal nerves, may be used when MRI is unsuitable. Nerve tests such as electromyography may occasionally help determine which nerve is affected or whether another condition is causing the symptoms.

- Muscle strength

- Skin sensation
- Reflexes
- Walking and balance
- Movements that reproduce nerve pain

Treatment and management

Treatment focuses on controlling symptoms, maintaining movement, and allowing an irritated nerve time to recover. The right approach is influenced by the disk's location, the degree of weakness, and how symptoms affect daily life.

Prolonged bed rest is generally not helpful. Short periods of rest may be needed during a severe flare, but gentle movement and a gradual return to normal activity are usually encouraged. You may need to temporarily change lifting, bending, driving, or sitting habits.

Pain-relieving or anti-inflammatory medicines may help some people. These medicines have different risks and are not suitable for everyone, so a pharmacist or healthcare professional can help you choose an appropriate option.

Physical therapy may include exercises to improve movement, strength, and confidence using the affected area. A therapist may also help you find more comfortable ways to sit, lift, sleep, and return to work. Exercise should be adjusted if it causes increasing weakness or a major spread of nerve pain.

An epidural steroid injection places anti-inflammatory medicine near an irritated spinal nerve. It may provide temporary relief from severe radiating pain, but it does not repair the disk or work for everyone.

Surgery is not needed for most herniated disks. It may be considered when:

A common lower-back operation is a discectomy, which removes the part of the disk pressing on a nerve. Neck operations may remove the affected disk and stabilize or replace it. Surgery can relieve pressure, but it cannot reverse all age-related changes in the spine. Numbness or weakness may also take longer to improve than pain.

- Nerve pain remains disabling despite non-surgical care
- Weakness is significant or getting worse
- Spinal cord pressure is affecting walking or hand function
- Emergency nerve compression affects bladder, bowel, or saddle sensation

Complications

Persistent nerve irritation can lead to ongoing pain, altered sensation, or muscle weakness. Weakness may affect walking, grip, balance, or the ability to lift the front of the foot.

A herniated neck disk can sometimes compress the spinal cord. This may cause clumsy hands, difficulty walking, heavy or stiff legs, or loss of balance. Without treatment, severe spinal cord compression can leave lasting problems.

A large lower-back herniation can rarely compress the bundle of nerves at the bottom of the spinal canal. This is called cauda equina syndrome. It can affect bladder, bowel, sexual function, and sensation around the genitals or buttocks. It requires emergency assessment.

Symptoms can also return after they have improved. Another part of the same disk, or a different disk, may herniate later.

Prevention

A herniated disk cannot always be prevented. Aging and inherited features of disk structure are not under your control.

Regular activity and strength work may help your spine tolerate everyday loads. Building activity gradually is usually safer than making sudden large increases in lifting or exercise.

Other practical measures include:

These steps may reduce strain, but they cannot guarantee that a disk will not herniate.

- Keeping loads close to your body when lifting
- Using your legs rather than twisting through your back
- Changing position during long periods of sitting
- Taking breaks during repetitive physical work
- Avoiding smoking
- Working toward a body weight that is manageable for you

Living with it and what to expect

Many people notice clear improvement over several weeks to a few months. The body can gradually break down and absorb some of the herniated material. Inflammation around the nerve may also settle.

Recovery is not always steady. Pain may improve and then flare after a long drive, poor sleep, unusual activity, or lifting. A temporary flare does not necessarily mean that the disk has been damaged again.

Radiating arm or leg pain often changes before numbness does. Altered sensation may take longer to settle, and some people have a lasting patch of numbness. Muscle strength can recover slowly because nerves and weakened muscles need time to heal.

You may be able to keep working with temporary changes to lifting, sitting, or repetitive tasks. Returning gradually to valued activities can help rebuild strength and confidence. Complete avoidance of movement can lead to stiffness and loss of fitness.

Some people have persistent or recurring pain and need longer-term rehabilitation, specialist pain care, injections, or surgery. Follow-up is useful if improvement stops, symptoms interfere with sleep or daily life, or new nerve symptoms develop.

When to get medical help

Arrange a routine appointment if pain travels into an arm or leg, lasts more than a few weeks, keeps returning, or limits work, sleep, or usual activity. Also seek assessment for numbness or weakness, even if the pain is manageable.

Contact a healthcare service promptly if weakness is new or getting worse, you are repeatedly tripping or dropping objects, or neck symptoms are affecting balance and hand coordination.

Seek urgent assessment for severe back or neck pain accompanied by fever, a significant recent injury, unexplained weight loss, or a history that raises concern for infection or cancer.

Go to an emergency department immediately if you develop:

These symptoms may indicate serious nerve or spinal cord compression. They are different from routine pain flares and should not wait for a standard appointment.

- New difficulty starting urination or an inability to empty your bladder
- New loss of bladder or bowel control
- Numbness around the genitals, inner thighs, or buttocks
- Rapidly worsening weakness, especially in both legs
- Sudden inability to walk safely

Common questions

Is a slipped disk the same as a herniated disk?

Yes. "Slipped disk," "ruptured disc," and "herniated disk" are commonly used for the same problem. The disk does not literally slip. Part of its inner material pushes through a weakened outer layer.

Can a herniated disk heal on its own?

It can improve without surgery. The herniated material may shrink, and inflammation around the nerve may settle. The disk may not return to its original structure, but symptoms can still improve substantially.

Is walking good for a herniated disk?

Gentle walking is often well tolerated and can help you stay active. Start with an amount you can manage and increase gradually. Stop and seek advice if walking causes marked new weakness, loss of balance, or rapidly worsening symptoms.

Do I need an MRI?

Not always. A physical examination is often enough to begin treatment when symptoms are recent and there are no warning signs. MRI may be appropriate for progressive weakness, emergency symptoms, persistent pain, or treatment planning.

Will I need surgery?

Most people do not. Surgery is mainly considered for severe or persistent nerve symptoms, worsening weakness, spinal cord pressure, or emergency compression of the nerves controlling bladder and bowel function.

Can a herniated disk come back?

Yes. Symptoms can recur from the same disk or another level of the spine. Staying active and rebuilding strength may help you manage future episodes, but recurrence cannot always be prevented.

Sources

- National Institute for Health and Care Excellence. Low back pain and sciatica in over 16s: assessment and management . NICE guideline NG59. Published 2016; updated 2020.
- American College of Radiology. ACR Appropriateness Criteria: Low Back Pain . Revised 2021.
- North American Spine Society. Diagnosis and Treatment of Lumbar Disc Herniation with Radiculopathy . Evidence-based clinical guideline, 2012.

- American Academy of Orthopaedic Surgeons, OrthoInfo. Herniated Disk in the Lower Back .
- American Academy of Orthopaedic Surgeons, OrthoInfo. Herniated Disk in the Neck .
- Deyo RA, Mirza SK. Herniated lumbar intervertebral disk. New England Journal of Medicine . 2016;374:1763-1772.
- American Association of Neurological Surgeons. Herniated Disc . Patient information.