



Herniated disk

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With Mayo Clinic physical medicine and rehabilitation specialist

Randy A. Shelerud, M.D.

Question

Herniated disk vs. bulging disk: What's the difference?

What's the difference between a bulging disk and a herniated disk?

Answer

from Randy A. Shelerud, M.D.

Disks act as cushions between the vertebrae in your spine. They're composed of an outer layer of tough cartilage that surrounds softer cartilage in the center. It may help to think of them as miniature jelly doughnuts, exactly the right size to fit between your vertebrae.



Bulging and herniated disks

A bulging disk extends outside the space it should normally occupy. The bulge typically affects a large portion of the disk, so it may look a little like a hamburger that's too big for its bun. The part of the disk that's bulging is typically the tough outer layer of cartilage. Usually bulging is considered part of the normal aging process of the disk and is common to see on MRIs of people in almost every age group.

A herniated disk, on the other hand, results when a crack in the tough outer layer of cartilage allows some of the softer inner cartilage to protrude out of the disk. The protrusion of inner cartilage in a herniated disk usually happens in one distinct area of the disk and not along a large component of the disk, which is more typical of a bulging disk. Herniated disks are also called ruptured disks or slipped disks.

Bulging disks are more common. Herniated disks are more likely to cause pain. But many people have bulging disks or herniated disks that cause no pain whatsoever.

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References

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CSF Leak

Overview

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Cerebrospinal Fluid Leak

A CSF leak is an escape of the fluid that surrounds the brain and spinal cord.

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REFERENCE FROM A.D.A.M.

Alternative Names

Intracranial hypotension

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Causes

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Any tear or hole in the membrane that surrounds the brain and spinal cord (dura) can allow the fluid that surrounds those organs to leak.

This fluid is called the cerebrospinal fluid (CSF). When it leaks out, the pressure around the brain and spinal cord drops.

Causes of leakage through the dura include:

- Certain head, brain, or spinal surgeries
- Head injury
- Placement of tubes for epidural anesthesia or pain medications
- Spinal tap (lumbar puncture)

Sometimes, no cause can be found. This is called a spontaneous CSF leak.

Symptoms

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Symptoms may include:

- A headache that is worse when you sit up and improves when you lie down. It may be associated with:
 - Light sensitivity
 - Nausea
 - Neck stiffness
- Drainage of CSF from the ear (rarely)
- Drainage of CSF from the nose (rarely)

Exams and Tests

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Diagnosis is usually based on your history of injury, surgery, or lumbar puncture.

Tests may include:

- CT scan of the head with contrast dye
- MRI of the head
- Radioisotope test of the CSF to track the leakage

Treatment

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Depending on the cause of the leak, many cases go away on their own after a few days. Complete bed rest for several days is usually recommended. Drinking increased fluids, especially drinks with caffeine, can help slow or stop the leak and may help with headache pain.

Headache may be treated with pain relievers and fluids. If the headache lasts longer than a week after a lumbar puncture, a procedure may be done to block the hole that may be leaking fluid. This is called a blood patch, because a blood clot can be used to seal the leak. In most cases, this makes symptoms go away. Rarely, surgery is needed to repair a tear in the dura and stop the headache.

Symptoms of infection (fever, chills, change in mental status) that occur after surgery on the brain or spinal cord or a lumbar puncture

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are a medical emergency and need to be treated with antibiotics.

Outlook (Prognosis)

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The outlook is usually good depending on the cause. Most cases heal by themselves with no lasting symptoms.

Possible Complications

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Complications may occur if the cause is surgery or trauma. Infections after surgery or trauma can lead to meningitis and serious complications, such as swelling of the brain.

When to Contact a Medical Professional

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Call your health care provider if:

You have a headache that gets worse when you sit up, especially if you have recently had a head injury, surgery, or childbirth involving epidural anesthesia.

You have a moderate head injury, and then develop a headache that is worse when you sit up, or you have a thin, clear fluid draining from your nose or ear.

Prevention

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Measures such as wearing a helmet when riding a bicycle or motorcycle can help prevent head injuries that can lead to CSF leak.

References

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