

Disc Protrusion & Herniation

What You Need to Know

What Is a Disc Protrusion or Herniation?

The discs between your vertebrae act as shock absorbers. Each disc has a tough outer ring (the annulus fibrosus) and a soft, gel-like center (the nucleus pulposus). When the outer layer is weakened or stressed, the inner material can push outward — this is called a disc protrusion or bulge. If the outer ring actually tears and the inner material pushes through, it becomes a herniation (also called a rupture or slipped disc).

These are points on a spectrum of the same process:

- Disc bulge — the disc expands outward evenly, like a burger patty squeezed too hard
- Disc protrusion — the inner material pushes outward but stays contained within the outer ring
- Disc herniation — the inner material pushes through a tear in the outer ring
- Disc extrusion — the inner material fully escapes through the outer ring

The most important factor is not the terminology — it is whether the disc material is pressing on a nerve and causing symptoms.

What Does It Feel Like?

Symptoms depend on the location and severity of the disc issue and whether a nerve is involved:

Without nerve involvement:

- Local back or neck pain — dull, aching, or sharp with certain movements
- Stiffness and reduced range of motion
- Muscle spasm around the affected area

With nerve involvement (more common with herniations):

- Pain that radiates into the arm or leg — often sharp, burning, or electric
- Numbness or tingling in the arm, hand, leg, or foot
- Weakness in the arm or leg muscles
- Sciatica — shooting pain down the leg — if the lower back disc is involved

What Makes It Worse?

- Sitting for long periods — increases disc pressure significantly
- Bending forward or lifting, especially with a rounded spine
- Coughing, sneezing, or straining
- Prolonged static postures
- Twisting motions of the spine

How Did This Happen?

Disc problems are usually the result of gradual wear and tear combined with a triggering event:

- Age-related disc dehydration and reduced elasticity
- Lifting something heavy with poor mechanics
- A sudden twisting or bending injury
- Repetitive loading — such as heavy manual labor or prolonged sitting
- Genetic predisposition to disc degeneration
- Obesity — which increases compressive load on the discs

Protrusion vs. Herniation — Does the Difference Matter?

For treatment purposes, the distinction matters less than the symptoms. A protrusion may cause just as much pain as a herniation if it irritates a nerve, and many significant-looking findings on MRI cause no symptoms at all. What matters most to your physical therapist is understanding your movement, your pain pattern, and which activities provoke or relieve your symptoms — not just what the imaging shows.

When Should I Be Concerned?

- Loss of bladder or bowel control — seek emergency care immediately
- Rapid or progressive weakness in the arm or leg
- Numbness in the groin or inner thighs
- Symptoms in both legs simultaneously

The Good News

The vast majority of disc protrusions and herniations heal or significantly improve without surgery. Research shows that disc material is often reabsorbed by the body over time. Physical therapy is highly effective — it reduces pain, restores movement, and addresses the underlying muscle imbalances and movement habits that contributed to the disc problem in the first place.

Most patients see significant improvement within **6 to 12 weeks** of focused physical therapy, and surgery is rarely necessary.

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