



What is a “Disc Bulge” & How can it be treated in Physical Therapy?

McKenzie Series – Brought to you by: Capital Physical Therapy

A Brief Lesson on the Anatomy of an Intervertebral Disc

Discs are found in between most of our vertebrae in the spine. Think of them as shock absorbers/ ball bearings. They help to provide shock absorption within the spine and they also become mobile units as we move our spine. A disc has two major components:

1. Nucleus Pulposus - The nucleus is comprised of gel and water and is found on the interior of the disc. Its consistency is similar to the consistency of tooth paste.

2. Anulus Fibrosis - This is the outer wall of the disc. It forms an elastic but rigid outer wall. The anulus has pain receptors on its outer half.

What is a Disc Bulge?

Displacement of the nucleus can disturb the anulus and potentially cause the pain receptors to fire (beginning stages of a “**disc bulge**”). As a bulge / protrusion progresses, excessive migration of the nucleus through fissures can cause direct irritation of the posterior longitudinal ligament that sits directly behind the discs in our spine. More developed protrusions can begin to encroach upon neural structures and this is one reason why people may feel symptoms (pain / numbness / tingling / strength loss) in their extremities. Radicular pain occurs when nerve roots that exit off of the spinal cord are involved in symptom production, often due to disc protrusion.

Common Signs & Symptoms of Disc Bulges

When changes in position or different movements change your pain, disc pain can often be suspected. Two telling signs of a disc bulge are:

1. Centralization - This is the phenomenon by which pain in the limbs that originates in the spine, although not

always experienced there, is abolished in response to the application of loading strategies (i.e. repeated movements, specific positioning of the spine).

2. Peripheralization - This is the opposite of centralization. Leg or arm symptoms are produced or are made more severe due to repeated movements and postures of the spine.

Why do Discs Bulge?

The McKenzie Institute has identified 2 main reasons that discs can protrude / bulge. The first is **poor sitting posture**. If we sit in a forward-flexed or slumped position, this pushes discs backward and increases the chance of a protrusion. The second reason is **frequency of flexion**. If you break down the activities we perform on a routine basis (sitting, tying shoes, brushing teeth, shaving, getting dressed, making the bed etc.) they all involve repeated bending or flexing of the spine. Again, this repeated stress is going to exert backward forces on our discs and increase the likelihood of protrusion.

How Can Disc Bulges be treated?

McKenzie certified therapists are trained to diagnose and treat disc protrusions with a high rate of success. The McKenzie approach is a method of mechanical diagnosis and treatment of back and neck pain. In cases involving disc protrusions, your McKenzie therapist will work with you to identify exercises and positions that can reverse the process of disc protrusion. In addition to exercises/positioning to eliminate the symptoms, your McKenzie therapist will work to educate you about the process of developing and treating disc protrusions. Call us today at Capital Physical Therapy to get started on your road to recovery!

Capital Physical Therapy
15 N. State Street
Concord, NH 03301

Ph: 603-224-3511
Fax: 603-224-3556
www.CapitalPT.com

“The Road to Recovery Begins Here”