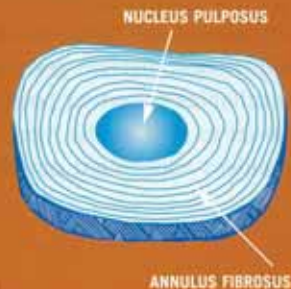


## THE INTERVERTEBRAL DISC

The vertebral column protects the spinal cord just as the skull protects the brain. While the spine protects and supports, it is also flexible due to its segmentation. Between each bony segment, or vertebra, is a cartilage pad called an intervertebral disc (with the exception of the topmost vertebra). Each of the twenty-three discs in your spine serve as connectors, weight bearers, shock absorbers and provide flexibility. The disc is composed of two portions.



The central portion is a pulpy, gel-like material called the nucleus pulposus. The nucleus serves as a pivotal ball bearing between one vertebra and another. Forming a flexible, closed container around the nucleus is the annulus fibrosus. The annulus consists of cartilage rings which adhere strongly to each adjacent spinal bone. The intervertebral discs have virtually no blood supply and rely upon motion to remain healthy. Motion in the spine causes a pumping action to each disc which allows nutrients to enter in, and wastes to be expelled out.



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*It is the goal of your Gonstead doctor  
to restore and maintain optimal health by  
locating and correcting any interference  
to the nervous system caused by  
vertebral subluxation.*

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## THE GONSTEAD DIFFERENCE

### Disc





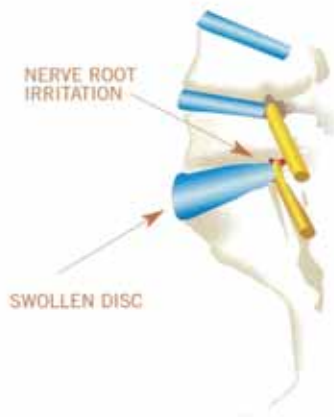
## SUBLUXATION AND THE DISC

A subluxation is a spinal misalignment which causes nerve irritation or interference (see brochure titled *Subluxation*). Trauma to the spine, either from the accumulative effects of repeated minor episodes or from a single incident, begins a sequence of events which lead to subluxation and disc damage.



- 1 Trauma misaligns a spinal vertebra.
- 2 The shifted vertebra compresses the nucleus (center) of the disc forcing it against the annulus (outer rings). The fibers of the annulus become stretched and damaged causing an inflammatory reaction.

- 3 The inflamed and swollen disc can potentially irritate the nearby spinal cord or nerve roots. To protect the area, surrounding muscles go into spasm to prevent excessive movement and damage.



- 4 The lack of motion in the subluxated segment inhibits the disc's normal pumping action causing the disc to dehydrate. The lack of water in the disc causes the annulus fibrosus to crack and fissure. This causes pain because the fibers of the annulus are richly supplied with pain-sensing nerves.



- 5 The gel-like nucleus begins to seep into the fissures in the annulus. The chemical contents of the nucleus are irritative to the nearby nervous tissues.
- 6 As more of the nucleus creeps into the annular fissures, the disc bulges, herniates, or even possibly ruptures. This causes direct pressure on the spinal cord or nerve roots.
- 7 Over time, degeneration occurs in the spinal joint, the irritated nerves and those systems which they supply.

## HOW GONSTEAD CHIROPRACTIC HELPS

The relationship of the disc and subluxation is crucial to the Gonstead practitioner. The thorough Gonstead analysis enables your chiropractor to determine specifically how a vertebra has misaligned and how the disc has been affected. Your Gonstead doctor then uses this information to determine the best approach to restoring proper position and motion of the subluxated segment. In most cases an adjustment will be warranted. The Gonstead adjustment involves great care to ensure a mechanically correct position and precise thrust to provide the most accurate and painless adjustment possible.



***"The care of intervertebral disc herniation by chiropractic adjustment is both safe and effective."***

*Research at the Royal University Hospital in Saskatchewan*