

# Intervertebral Disc

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One of the most common disorders afflicting adults over 30 years of age is back pain. There are many different causes. The intervertebral disc often plays a role. Research has demonstrated a casual relationship between disc problems (discopathy) and many spinal pain syndromes.

Researchers have referred to two adjacent vertebrae, their supportive ligaments, and the adjoining intervertebral disc (IVD) as the spinal motion segment. The role of the intervertebral disc (IVD) cannot be separated from the motion segment, for it helps maintain structural (anatomic) relationships, protect nerves and contributes to the biomechanical attributes of the segment. The intervertebral disc helps maintain an adequate space between the vertebral bodies so that flexibility of the integrated spinal unit collective flexibility of the spine. The disc also acts as a shock absorber to resist compressive-type forces.

Changes in the consistency of the intervertebral disc influence the movement (biomechanics) of the disc, the spinal motion segment and subsequently the entire body. A loss of disc volume due to disc injury and/or degeneration alters structural relationships within the motion segment. Degenerative disc disease (DDD) contributes to abnormal movement between adjacent vertebrae and potentially compromises neighboring spinal nerves.

In practice it is important for the spine specialist to focus on prevention and not just intervention of disc pathology. Many of these changes can be appreciated on imaging studies such as X-ray, CT, MRI and nuclear studies. More recently MRI has emerged as the best single diagnostic imaging method to evaluate the disc. The advent of magnetic resonance spectroscopy (MRS) and other forms of tissue and chemical assessment will likely contribute to a better understanding of the process in vivo in the future.