

## An Overview on Degenerative Disc Disease

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### Commentary

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### DESCRIPTION

Degenerative Disc Disease (DDD) is a medical illness characterised by morphological alterations and variable degrees of function loss in one or more intervertebral discs of the spine, resulting in symptoms. The main reason is assumed to be a loss of soluble proteins inside the disc's fluid, which leads to a reduction in oncotic pressure, which leads to fluid volume loss. The afflicted disc loses height as a result of normal downward stresses, and the gap between vertebrae decreases.

The annulus fibrosus, a disc's stiff outer shell, deteriorates as well. Scoliosis, cervical hyperlordosis, thoracic hyperkyphosis, and lumbar hyperlordosis are all examples of scoliosis; narrowing of the space available for the spinal tract within the vertebra (spinal stenosis); or narrowing of the space through which a spinal nerve exits (vertebral foramen stenosis) with resultant idiopathic arthritis [1].

DDD can produce acute or persistent pain near the affected disc, as well as neuropathic pain if a neighbouring spinal nerve root is involved. When usual symptoms and physical evidence are present, the diagnosis is suspected

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and confirmed by x-rays of the spinal column. When a cervical x-ray, chest x-ray, or abdomen x-ray is obtained for another reason and the anomalies of the spinal column are noticed, the radiologic diagnosis of disc degeneration is made.

Because the interpreting radiologist does not know what DDD is, it is not a radiologic diagnosis. Disc space narrowing, vertebral body movement, fusion of adjacent vertebral bodies, and bone growth in nearby soft tissue are all common radiographic findings (osteophyte formation). An MRI is usually reserved for those who have symptoms, signs, or x-ray findings that point to the necessity for surgery [2,3].

Physical therapy for pain relief, ROM, and appropriate muscle/strength training with an emphasis on correcting abnormal posture, assisting the paravertebral (paraspinous) muscles in stabilizing the spine, and core muscle strengthening; stretching exercises; massage therapy; oral analgesia with Non-Steroidal Anti-Inflammatory Agents (NSAIDs); and topical analgesia with Non-Steroidal Anti-Inflammatory Agents (NSAIDs). If the symptoms are severe or come on suddenly, or if they worsen suddenly, immediate surgery may be necessary. After six months of conservative therapy with poor symptom alleviation, elective surgery may be recommended.

### Signs and symptoms

Lower back or upper neck pain can be caused by degenerative disc disease. The amount of deterioration does not appear to be related to the level of pain that patients are experiencing. Many people have little discomfort whereas others have significant, persistent pain despite the same amount of damage. The location of the damaged disc and the amount of pressure placed on the spinal column and adjacent nerve roots determine whether or not a patient experiences pain.

Degenerative disc degeneration, however, is one of the most frequent causes of back pain, affecting over 30 million people each year. The discomfort associated with symptomatic degenerative disc disease varies depending on the location of the damaged disc. Lower back pain, often spreading to the hips, as well as pain in the buttocks, thighs, or legs, might be caused by a degenerative disc in the lower back. If the exposed nucleus pulposus puts pressure on the nerves, occasional tingling or weakness in the knees and legs can ensue [2,3].

A deteriorated disc in the upper neck can cause pain in the neck, arm, shoulders, and hands, as well as tingling in the fingers if nerve impingement is present. Movements like sitting, bending, lifting, and twisting are the most prevalent causes of pain or make it worse.

### Treatment

Degenerative disc disease is frequently treatable without surgery. Physical therapy, anti-inflammatory medications such as nonsteroidal anti-inflammatory drugs, traction, or an epidural steroid injection, or a combination of these treatments, can typically offer adequate alleviation of bothersome symptoms [4,5].

If conservative treatment approaches do not produce relief after two to three months, surgery may be indicated. If leg or back pain limits normal activities, there is weakness or numbness in the legs, walking or standing is difficult, or medicine or physical therapy is ineffective, surgery, most commonly spinal fusion, may be required. Degenerative disc disease can be treated surgically in a variety of ways, including anterior and posterior methods.

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