

Lumbar Scheuermann's disease

Scheuermann's kyphosis of the thoracic spine is a well-defined entity, although its exact etiology is unknown. In the thoracolumbar or lumbar spine however, the criteria are much less strict for the application of this eponym.



Two forms of this disorder have been described, based on their radiographic features.

Type I or classic Lumbar Scheuermann's disease has a hallmark wedging deformity of the vertebrae. Five degrees of anterior wedging (toward the front of the body) in three consecutive vertebrae is required to make the diagnosis. These findings are similar to what is seen in Thoracic Scheuermann's kyphosis except they are present in the lumbar spine. Symptoms of back pain are not required for this diagnosis as most of these patients are not symptomatic.

The true cause of classic Lumbar Scheuermann's disease is not known. Theories include mechanical compression during growth, acute disc injuries, hormonal variations, and genetic factors as the cause. None of these theories have been proven.

Type II or atypical Lumbar Scheuermann's disease does not have a wedging deformity of the vertebrae. Instead the vertebrae maintain their normal squared shape. The Lumbar spine, which normally has a gentle curve towards the back of the body (lordosis) becomes straightened. It occurs in athletic, mostly male teenagers who perform strenuous physical activity, especially heavy lifting. Patients normally present with low back pain and may have a mild scoliosis (spinal curvature). Evaluation includes x-rays which show several characteristic features. The endplates (hard bone at the top and bottom of each vertebral bone) which are normally flat and smooth become irregular. The space between the vertebrae becomes smaller than normal. Finally, the soft discs between the vertebrae

bulge into the bone causing characteristic indentations called Schmorl's nodes.

A variant of Type II Lumbar Scheuermann's is known as "acute traumatic intraosseous disc herniation." This is characterized by a history of a traumatic event – usually a fall – and includes a fracture of the bony endplate with disc material herniating into the bone. These patients will have severe pain after their injury and can pinpoint when their symptoms began.

Treatment for all types of Lumbar Scheuermann's disease is symptomatic. Treatments include mild pain medicine, avoiding activities that worsen the pain, and bracing if necessary. This disease does not typically cause symptoms into adulthood and does not require surgical treatment ¹⁾.

A [retrospective review](#) of all the cases of lumbar Scheuermann's disease seen at the Texas Scottish Rite Hospital revealed two distinct radiographic pictures. These consisted of a "classic" Scheuermann's and an "atypical" type characterized by vertebral end plate changes, disc space narrowing, and anterior Schmorl's nodes, but not otherwise fulfilling [Sorenson's criteria](#). This group tended to occur in more athletic adolescents or those with a history of increased axial stress to the spine. A subgrouping of atypical Scheuermann's disease is proposed and includes acute traumatic intraosseous disc herniation. Based on these findings, a classification of lumbar Scheuermann's disease is proposed ²⁾

six patients affected with the atypical form of lumbar Scheuermann's disease and diagnosed by us. All patients had a repeated history of back pain with associated Schmorl's hernias, and a very high increase in lateral diameter in radiographic views of the lumbar spine. Involvement of a single vertebral body was the most prevalent (50% of cases), and the 4th lumbar vertebra was the most commonly affected. All patients returned to normal activities after conservative treatment with temporary immobilization and NSAIDs during pain episodes ³⁾.

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[https://www.understandspinesurgery.com/Articles/Read/-Lumbar-Scheuermann's-Disease#:~:text=Schuermann's%20disease%20produces%20an%20increased,spine%20\(lumbar%20and%20thoracolumbar\).](https://www.understandspinesurgery.com/Articles/Read/-Lumbar-Scheuermann's-Disease#:~:text=Schuermann's%20disease%20produces%20an%20increased,spine%20(lumbar%20and%20thoracolumbar).)

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