

# Posterior Calcified Disc Herniation at T1

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Most Common [Approach](#) for Posterior [Calcified Disc Herniation](#) at [T1](#) The most used approach for posteriorly calcified disc herniations at T1 depends on the degree of [spinal cord compression](#) and the surgeon's preference, but in general:

### 1. Anterior Approach (Transcervical or Transsternal) – Preferred

Why? Direct access to the disc without excessive spinal cord manipulation.

Techniques:

Transcervical approach: Used if the herniation is limited to the upper part of T1 and the exposure is adequate.

Transsternal or manubriotomy approach: Needed if the T1-T2 disc is difficult to reach through a simple cervical incision.

Procedure:

Partial or complete T1 corpectomy if necessary to reach the herniated disc safely.

Discectomy with meticulous decompression of the spinal cord.

Reconstruction with anterior cage or bone graft if significant bony removal was done.

Advantages:

Avoids spinal cord manipulation.

Direct visualization of the pathology.

Disadvantages:

May require sternotomy if access is difficult.

Close proximity to the subclavian vessels, carotid artery, and thoracic duct increases risk.

### 2. Posterior Approach – Less Common, But Used in Certain Cases

### Indications:

If the calcified disc is lateralized and not centrally located.

If there is an associated compressive lesion on the posterior elements.

If an ossified posterior longitudinal ligament (OPLL) is present.

### Procedure:

Laminectomy of T1 ± T2 to decompress the spinal cord.

If the herniation is hard and ventral, a posterior approach alone is risky due to the need for cord manipulation.

### Advantages:

Familiar approach for many spine surgeons.

No need for sternotomy.

### Disadvantages:

Spinal cord must be retracted to access the ventral herniation, risking neurological injury.

Limited ability to reconstruct the anterior column if needed.

### 3. Combined Approach (360° Surgery) – In Complex or Severe Cases

If the herniation is massive, calcified, or associated with significant spinal instability, a combined anterior and posterior approach may be necessary.

Typically done in two stages:

Anterior approach (corpectomy or discectomy) for decompression.

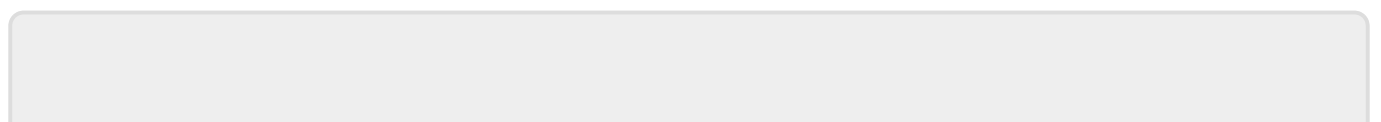
Posterior approach for additional stabilization.

### Which Approach is Best?

Most surgeons prefer an anterior approach for posteriorly calcified disc herniations at T1 to avoid spinal cord manipulation.

A posterior approach is avoided unless absolutely necessary due to the difficulty of safely removing the calcified herniation without injuring the spinal cord.

In severe cases, a staged combined approach is the safest option.



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