

## Thoracic Discectomy

Disc bulges or protrusions in the thoracic spine are very much less common than in other areas of the spine. This may be due to the fact that the thoracic spine is protected by the rib cage. Discs do, however, become damaged through trauma, bad working posture or simply degenerative disease and may require surgery.

Who needs it?

Patients with neurological problems caused by pressure on the spinal cord from a thoracic disc protrusion. Occasionally this technique is also used for thoracic back pain, when the disc is the source of the pain (as demonstrated by discography).

How is it done?

There are several techniques, depending upon the location of the disc protrusion and the surgeon's preference.

Posterior

The spine is approached through an incision on the back. This may be in the midline (posterior approach) or slightly off to the side (postero-lateral approach). A small amount of bone is removed from the laminae at the back of the spine and the disc is removed, taking care to avoid pressure on the spinal cord. A microscope may be used to have better visualisation during the operation. To get a better view it may be necessary to remove part of the bone at the side of the spine and a portion of the adjacent rib (costo-transversectomy).

Anterior (or antero-lateral)

Here the spine is approached through the chest. It may be done thoraco-scopically, using operating telescopes and a minimally invasive approach. Three or four small (1cm) incisions are needed. Alternatively an open approach may be used, with an incision on the side of the chest, usually sloping downwards in the line of the ribs. A piece of one rib is often removed to allow better access to the spine. The disc is clearly seen and, once the correct level has been confirmed with x-rays, the disc is removed.

Sometimes the surgeon will want to fuse the spine at the same time, which may be done by inserting a portion of the rib removed earlier into the disc space.

Recovery

Posterior operations may require a 5 - 7 day stay in hospital, unless a microscopic approach has been used, when the stay is usually shorter. There is a gradual increase in exercise after this surgery. By 6 - 8 weeks post-operatively, most patients are resuming normal daily activities.

Anterior operations may take longer to recover from and require a slower return to activities. The wound on the chest may be painful for many weeks. Deep breathing exercises are vital, as well as spinal rehabilitation.

**What are the risks of this operation?**

Risk	Cause	% Risk (note figures vary)
Nerve or spinal cord injury/paralysis	Damage to the nerve or spinal cord whilst removing disc/bone (or inserting fusion devices)	<1 - 5
Fluid leak	Small tear in the dura (containing spinal cord and nerves) allowing leakage of cerebrospinal fluid	<1 (But higher if previous surgery)
Infection	Contamination during surgery or, rarely, late infection via the blood	Approx 1
Back pain	Some patients will develop back pain due to the stretching of the spine	Transient and dependent upon fitness
Warm leg	The sympathetic nerve runs alongside the spine. If damaged the left leg (usually) will feel warmer for some months after the operation	1 - 5 (but higher if previous surgery)
Pneumothorax	One lung is collapsed to allow access during surgery. If this does not re-expand well the space may need to be drained	<1
Wound pain	Surgery	All to some extent