

Lumbar Facet Joint Replacement

Who needs this?

Patients who have canal stenosis in the lumbar spine (narrowing of the spinal canal causing compression of the nerve roots) often have difficulty with walking. If the cause is thickening of the joints at the back of the spine (the facet joint) which can thicken when damaged and cause narrowing of the space for the nerves, this can be treated with facet joint replacement. Many other treatments are available and it is usually wise to have tried these first.

How is it done?

The patient is positioned face down under general anaesthetic on a well cushioned mattress. An incision is made on the back of the spine over the affected level typically 8 – 10cm in length. The muscles are retracted to the sides to allow exposure of the damaged joints and the bone in between. This area of bone together with both of the joints left and right are removed. This allows a very comprehensive release of the nerve roots and freeing of the spinal canal. Once this has been done screws are positioned into the bone through the pedicles above and below the damaged joints which have been removed and these are joined with a system known as the TOPS (total posterior system) which is then secured onto the screws using some nuts.

What are the results like?

Most patients are in hospital for 7 – 10 days but could be out sooner if they feel up to it. The patients are mobilised quickly within 24 hours by the physiotherapists and are taught some simple exercises to restore muscle function. They are usually provided with a lumbar support to wear for 4 – 6 weeks at which stage they are reviewed in the outpatient clinic with x-rays. If all is well on the x-rays serious physiotherapy starts on a regular basis thereafter lasting typically for 6 – 8 weeks.

Risk	Cause	% Risk (note figures vary)
Nerve injury/paralysis	Damage to the nerve whilst removing disc/bone or inserting fusion devices	<1
Fluid leak	Small tear in the nerve sheath 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
Adjacent disc damage	The stiffening effect of the fusion puts more pressure on the disc above (or below)	4 - 12% (some papers say higher)
Failure of fusion	If the bone graft does not heal, the pain may return	Up to 15%, depending on technique used
Bowel injury	Bowel is retracted during anterior surgery	<1
Bladder/ureter injury	Structures are retracted during anterior surgery	<1
Impotence	Retraction or injury to a small nerve in front of the spine leads to retrograde ejaculation in men	Approx 1 with the retro-peritoneal approach
Warm leg	The sympathetic nerve runs alongside the lumbar discs. If damaged the left leg (usually) will feel warmer for some months after the operation	1 - 5 (but higher if previous surgery)
Wound pain	Surgery	All to some extent