

# BACK NECK & JOINT



## PERCUTANEOUS PLASMA DISCECTOMY

Many Australians experience agonising and debilitating back pain due to contained herniated discs. Commonly referred to as a 'pinched' nerve, this injury can be accompanied by intense pain in and around the lower back and referred into the legs. The discs are sandwiched between spinal vertebrae and are composed of a firm protective outer shell (annulus) and a soft, spongy centre (nucleus).

### WHAT CAUSES CONTAINED HERNIATED DISCS?

A healthy joint acts as a shock absorber, providing a cushion against jolts caused by simple movements like running or jumping. If the annular ring, or the protective shell of the disc is damaged by injury or weakened with age, some of the shell can give way to pressure from the spongy nucleus, causing an outward bulge. It is the unnatural bulge, or herniation, that is often responsible for the pain.

### WHY ARE THEY PAINFUL?

The bulge can put pressure on adjacent nerve roots, which compresses the nerve pathway against the bony structure of the spine. Irritating this nerve may cause pain in different parts of the body served by the nerve.

- Where the disc is damaged, pain may be felt in the back and can refer to the leg
- Where a nerve root is compromised, pain is felt in the legs (sciatica) and may be felt in the back

### DISC DECOMPRESSION

Decompressing the nucleus of the disc is a proven technique for relieving disc herniations and treating its subsequent pain symptoms. Similar to removing air from a bike tire, removing tissue from the disc centre reduces pressure within the disc. This subsequently reduces pressure that the disc applies to other parts of the body, such as nerve roots or the spinal cord.

Some forms of disc decompression are performed through a minimally invasive catheter or needle. This procedure is performed through the skin (percutaneously), minimising trauma and enabling shorter hospital stays and faster recovery. Percutaneous plasma discectomy has been used for over 40 years on over half a million patients. Whilst a variety of disc decompression methods have been used, including chemical, mechanical and thermal, each has its limitations.

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## THE PROCEDURE

The procedure is conducted using a minimally invasive catheter to create an accurate one-millimetre pathway into the disc. It is a fast-acting alternative to drug therapies and steroid injections.

You will be under sedation as a micro-engineered alloy transmitter is introduced into the disc. Radio wave signals are sent through the transmitter into the nucleus of the herniated disc. The waves produce a temperature ionised gas, which breaks up molecular bonds in the spongy nucleus, removing tissue volume.

## WHAT RESULTS CAN I EXPECT?

The removal of the nucleus tissue relieves pressure on the disc shell, causing it to return to its natural shape and easing nerve root irritation, allowing normal, daily activities to resume.

Percutaneous plasma discectomy has been clinically proven with over 35,000 patients worldwide. More broadly, radio wave technology has successfully been used in over 2.5 million procedures, including for knees, shoulders and tonsillectomy.

Overall disc compression success with this procedure is around 79%, with significant reduction in pain scores and substantial improvements in sitting, standing, and walking times. Greater than 95% of patients report minimal discomfort during the procedure. There are no significant complications reported to date.

## MORE ON THE PAIN CHART

You should rate your pain between 0 and 10 before your injection, and after for 6 hours, firstly in 30 minute intervals and then hourly intervals. Ratings should be conducted in terms of movements and how you feel doing the things that most aggravate the pain.

## FOR MORE INFORMATION



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