

Nucleoplasty

Pain in the back and neck can result from a disc *herniation*. One intervertebral disc is found between each two vertebral bodies throughout the spine to provide cushion and stability.

These discs are composed of a central gelatinous material called the *nucleus*. The nucleus is surrounded by a tough, fibrous ring called the *annulus*. *Herniation* refers to a bulging nuclear material from a tear in the annular ring.

This bulging can cause back pain and nerve pain due to irritation of the adjacent nerve. The nerve irritation gives rise to typical pain in the arm or leg (sciatica).

Surgery is often performed for moderate disc herniations. However, this can result in worsening of the back pain, while relieving the nerve irritation. A search has been on for many years for a more effective and less invasive treatment for disc herniation.

Nucleoplasty is a reliable and effective treatment for lumbar or cervical disc herniation. Nucleoplasty is a brief outpatient procedure. A needle-like probe is placed in the disc under direct vision with x-ray. The tip of the probe is heated to vaporize the disc herniation. Over the ensuing weeks, the disc heals and regains some integrity and pain relief often results.

This procedure has a very favorable side effect profile compared to open surgery. However, technical risks do exist which should be discussed before the procedure.