

## SURGICAL TREATMENT OPTIONS

- Fusion – a procedure where the damaged disc is removed and bone or a cage is inserted between the vertebrae. This relieves the pressure on the nerve and spinal cord but it also increases the stress to the disc above and below the operated level.
- Arthroplasty (artificial spinal disc) – this is the newer approach where after disc is removed, an artificial metallic disc is inserted. This performs the same function as the disc by allowing motion at the operated level and reduces the damage to the adjacent discs.
- Laminectomy/ Laminoplasty – this is a time tested way to reduce pressure on the spinal cord over a large area by removing part of the bone. This surgery is performed from the back of the neck.
- Facet Blocks and Radio Frequency Neurotomy – this is a minimally invasive technique to reduce neck pain. A fine needle is inserted from the side of the neck and using radiofrequency to reduce the pain signals coming from the facet joints.
- Disc nucleoplasty – this is one of the latest minimally invasive methods to treat mild prolapsed disc and neck pain caused by disc degeneration. It involves using coblation technology to remove disc material.

## CONCLUSIONS

It is important to take good care of the neck by proper posture in the way we sit, work and play. Once degeneration starts, it is not reversible.

The good news is if we start taking proper care, the degeneration can be slowed down and it may be years before any intervention may be needed.

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## Neck Pain



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# The Neck (or cervical spine)

performs a very important function of supporting the head and allowing full motion of the head and neck; and at the same time, the delicate spinal cord must be protected from external trauma.

## CAUSES OF NECK PAIN

There are many structures in the neck that can cause neck ache and pain. The common causes are:

1. Degeneration (or Spondylosis) - This refers to the wearing out of the intervertebral disc that acts as cushions between the individual neck bones. When the disc wears out, it cannot support the neck as well as it used to be. The body tries to repair this by forming extra bone to act as supports and these are known as bone spurs (osteophytes).
2. Disc prolapse - When the disc wears out, it can also protrude outwards and it is this herniated disc that results in the sharp arm pain sometimes experienced by sufferers of acute disc prolapse. This may also cause tingling in the arms and hands. In more severe cases, there is even weakness in the arms and fingers.
3. Inflammation - This refers to the conditions like rheumatoid arthritis. This inflammatory condition affects the fingers as well as other big joints like the knee joint. In the neck, it usually affects the upper cervical spine resulting in loss of stability and pain.
4. Postural causes - This is the most common cause of neck pain. Prolonged bent postures of the neck in an unnatural position. For example, falling asleep on the sofa or prolonged working on the computer (especially on laptops) with the neck bent forward.
5. Traumatic injuries - This can range from minor sprains to severe injuries as in whiplash injuries in car accidents.
6. Other rare causes like infection, tumours and congenital abnormalities.

## WHEN TO SEE A DOCTOR?

Most of the time, the pain is self limiting – this means it will reduce over time with simple medications like paracetamol or NSAIDs and with simple stretching exercises. It becomes serious when you have one or more of the following symptoms:

- a. Weakness – when there is nerve compression with damage to the nerve fibres. If left untreated, paralysis may occur and be permanent.
- b. Numbness or tingling- occasional numbness that last for a short period may be a sign of early nerve pressure. If the numbness is persistent, it means nerve damage has taken place and muscle weakness will soon follow.
- c. Loss of bladder and bowel control – this is very serious, it that warrants immediate admission to hospital and surgery. The presence of sudden incontinence means severe spinal cord or roots compression that if left untreated, will result in total and permanent paralysis.
- d. Persistent pain on neck movement – the pain from neck sprains usual last from several days to one week. If the pain persists in severity and worsens over time, especially if it is associated with a fall or accident, there may be an undiagnosed neck fracture.

## WHAT SHOULD YOU DO?

We need to obtain images of the spine to determine the severity. There are several methods available:

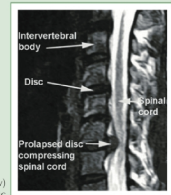
- i. X-rays – This is simple and cheap but yields limited information.

It is used to look for presence of fractures and misalignment of the spine.



X-rays showing the important role of artificial disc in allowing neck movement

- ii. CT scans – This is a good tool for looking at bony details but does not give sufficient information on the disc and spinal cord. This is usually reserved for those with metallic implants like pacemakers who cannot have MRIs.
- iii. MRI (Magnetic Resonance Imaging) – This is the preferred imaging modality as it provides a good view of the nerve roots and spinal cord, together with any prolapsed discs or tumours.



MRI image of a neck (side view) with a prolapsed disc

## TREATMENTS

### CONSERVATION TREATMENT OPTIONS

- Rest (use of collar for a few days to reduce motion)
- Painkillers like paracetamol or anti-inflammatories
- Exercises – stretching and strengthening
- Hot packs
- Modification of lifestyle
- Physiotherapy including traction, mobilisation.

Surgery is sometimes needed when the above methods fail to provide relief or when there is danger of permanent nerve or spinal cord damage.