

## Artificial Cervical Disc Replacement

Artificial cervical disc replacement is an option for patients with symptomatic cervical disc disease. The standard approach has been to perform a discectomy (disc removal) and fuse the spine with bone and or a plate. The concern is that fusion may place added stress at the level above and below the fusion and eventually lead to additional surgery in the future.

The advantage of the disc replacement is that by allowing motion at the surgical level, there may not be added stress placed on the levels next to the replacement. This could decrease the need for additional surgery in the future.

The criteria for artificial cervical disc replacement are:

- Age between 18-60 years
- Symptomatic disc disease at one level in between C3-7
  - o With neck or arm pain and
  - o Disc herniation
  - o Disc degeneration with bone spurs
  - o Loss of disc height
- Failed non-surgical treatment
- Neck Disability Index (NDI) greater than or equal to 30%

The NDI is a 10 question rating system to determine loss of function due to symptomatic disc disease. It helps patients and doctors understand the extent of the disease, and also helps educate patients with respect to realistic expectations regarding treatment of their problem.

A recent published multicenter FDA study on the cervical Disc replacement (PRODISC-C) concluded that the disc replacement is a safe and effective surgical treatment of symptomatic disc disease in the neck. It is equal or superior to fusion. \*\*

Long term results (greater than 5 years) in the United States are still unknown. Only a few Insurance companies authorize their use at present.

\*\*Murrey, D. et al. The Spine Journal: 2009: 9: 275-286