

## Helix Anterior Cervical Plate (ACP) System Patient Information Leaflet

**Device Name:** Sterile and Non-sterile Anterior Cervical Plate

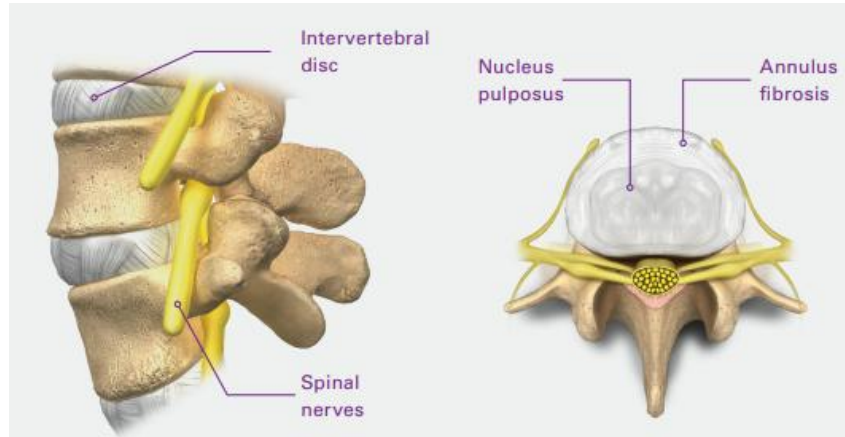
**Model:** NuVasive Helix ACP System

**Anatomy of Spine:**

The human spine is made up of 24 bones or vertebrae in the cervical (neck) spine, thoracic (chest) spine and lumbar (lower back) spine plus the sacral bones.



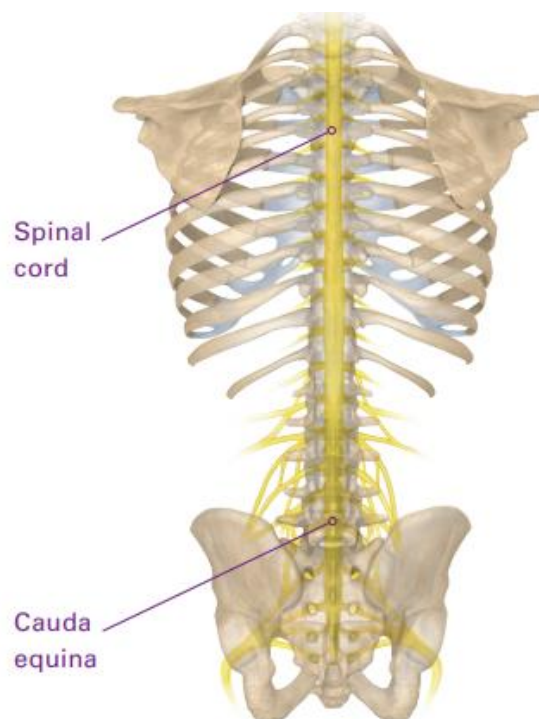
Vertebrae are connected by several joints, which allow you to bend, twist, and carry loads. The main joint between the two vertebrae is called an intervertebral disc. The disc is made of two parts, a tough and fibrous outer layer (annulus fibrosis) and a soft, gelatinous center (nucleus pulposus). These two parts work in conjunction to allow the spine to move, and also provide shock absorption.



Each vertebra has an opening (vertebral foramen) through which a tubular nervous structure travels. Beginning at the base of the brain to the upper lumbar spine, this structure is called the spinal cord.

Below the spinal cord, in the lumbar spine, the nerves that exit the spinal cord continue to travel through the vertebral foramen as a bundle known as the cauda equina.

At each level of the spine, spinal nerves exit the bony spine then extend throughout the body.



### **What causes pain?**

There are several possible causes of spine problems. The most frequent symptoms are caused by either instability or by disc, bone, or ligaments putting pressure on (compressing) the nerve roots, spinal cord, or cauda equina.

### **What are treatment options?**

Many symptoms can be treated without surgery including rest, heat, ice, medication, injections, and physical therapy.

If symptoms do not improve with conservative treatment, physicians may recommend spinal surgery. Surgery is reserved for those who do not gain relief from non-operative forms of treatment, patients whose symptoms are increasing or worsening, and/or patients that present with a spinal condition which indicates the need for surgery. It is important to speak with a physician about the best option.

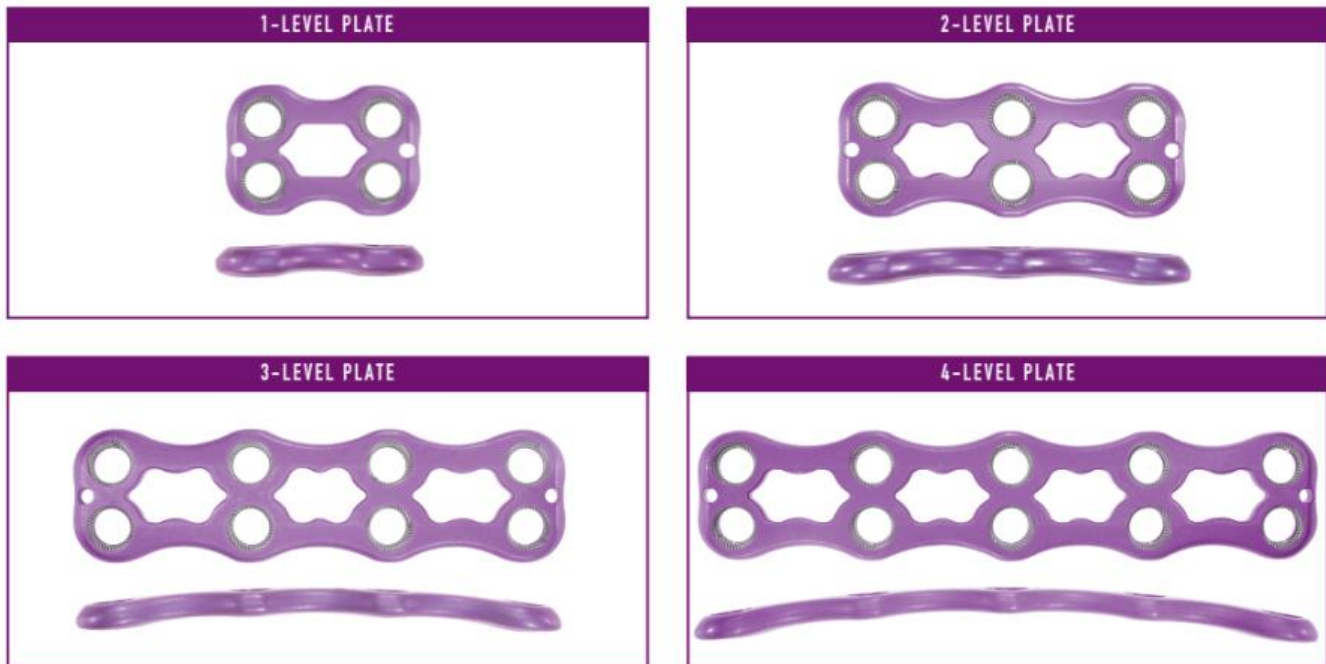
### **The surgical option**

Interbody fusion is a surgical technique that attempts to re-stabilize the spine. The purpose of spinal fusion implants is to provide short-term stability until new bone growth takes place. Spinal fusion typically occurs within 12 months of surgery. A component of an interbody fusion procedure is fixation.

The NuVasive HELIX ACP System is intended for anterior screw fixation of the cervical spine. These implants have been designed to provide stabilization as an adjunct to cervical fusion. Indications for the use of this implant system include degenerative disc disease defined as neck pain of discogenic origin with the degeneration of the disc confirmed by history and radiographic studies, spondylolisthesis, trauma, spinal stenosis, deformity, tumor, pseudarthrosis or failed previous fusion.

**WARNING:** The NuVasive HELIX ACP System is not intended for screw attachment or fixation to the posterior elements (pedicles) of the cervical, thoracic or lumbar spine.

The Helix ACP System implants are made from titanium alloy. The plates include a canted coil locking mechanism manufactured from Nickel-Cobalt-Chromium-Molybdenum alloy. In addition, the Helix-T plate also includes a Nickel-Titanium alloy component. These materials were selected for their material stability, corrosion resistance and strong mechanical properties. Long-term clinical experience of the use of these materials has shown that an acceptable level of biological response can be expected, if the materials are used in appropriate applications



**Warnings, Cautions and Precaution:**

As with any surgical procedure, complications may occur following the implantation of this device. These can include but are not limited to implant bending, breakage, failure, loosening, movement/migration, bone fracture, and allergic reaction to implant material.

Other general complications associated with any spinal surgical procedure include non-union or delayed union, vertebrae fracture, pain, neurological injury, vascular injury, infection, bursitis, dural leak, paralysis, and death.

Limiting postoperative activity should reduce the risk of bent, broken or loose implant components. To ensure the earliest possible detection of device dysfunction, the devices must be checked by a surgeon periodically postoperatively, using appropriate radiographic techniques.

**Contraindications**

Use of the NuVasive HELIX ACP System and spinal fixation surgery are contraindicated when there was recent or local active infection near or at the site of the proposed implantation. Any conditions that preclude the possibility of fusion are relative contraindications. These include but are not limited to: fever, mental illness, alcoholism or drug abuse, osteoporosis or osteopenia, neurotrophic diseases, obesity, pregnancy and foreign body sensitivity.

This list above does not include all possible contraindications, complications, warnings, or precautions. Please consult with your surgeon for additional information on this topic and how it applies to your particular medical condition.

**MRI Safety Information:**

Patients can be scanned safely immediately after implantation under the following conditions:

- Static magnetic field of 1.5 Tesla (1.5T) or 3.0 Tesla (3.0T).
- Maximum spatial gradient field less than or equal to 1,000 Gauss (G)/cm (10.0T/m).
- Normal Operating Mode: Maximum whole-body specific absorption rate (SAR) of:
  - 1.0 W/kg for 15 minutes of scanning in Normal Operating Mode at 1.5T.
  - 2.0 W/kg for 15 minutes of scanning in Normal Operating Mode at 3.0T

Consult your surgeon for further information related to magnetic field interference from magnetic resonance imaging devices.

**Incident Reporting:**

Any serious incident that occurs in relation to the device should be reported to the manufacturer and the Therapeutic Goods Administration.

**Name and Address of Manufacturer:**

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