

Nucleus Caudalis Dorsal Root Entry Zone (DREZ)

We have provided the following important information for you to better understand your surgery and to give you the opportunity to ask, and have answered, any questions that may be important to you.

Procedure

An incision in the back of the neck will be made to locate the nucleus caudalis in the brainstem. A laminectomy will need to be done to access this region. The nerve tissue will then be heated with an electrode.

I understand that the goal of this procedure is to relieve facial pain or spasm. However, I am aware and accept that no guarantees about the results of the procedure have been made. I also recognize that unforeseen conditions may require my surgeon and his/her associates and assistants to use different procedures than those indicated above.

Alternatives

I have considered the non-surgical alternatives to a dorsal root entry zone procedure, which may include:

- Continue medical therapy for relief of pain or muscle spasms
- Peripheral nerve ablation or neurectomy
- Peripheral nerve stimulation
- Motor cortex stimulation
- Percutaneous rhizotomy
- Complete sectioning of nerve
- Alternative medical approaches including acupuncture
- Alternative surgical approaches including seeking another opinion
- Physical therapy that may include deep heat and massage, ultrasound and traction
- Radiation therapy including focused or stereotactic radiotherapy/radiosurgery/biopsy
- A series of follow-up visits with repeat neuro-imaging or other tests
- Injections (i.e. steroid)
- Chiropractic adjustment
- Self-hypnosis or meditation
- Biofeedback
- Vitamins
- Nutrition therapy
- Electrical nerve stimulation

Risks Related to the Procedure

I agree that the decision to have this procedure includes weighing the risks of surgery as well as the benefits. I understand and accept possible risks and complications that include but are not limited to the following:

- **Adverse reaction to anesthesia** – Both local and general anesthesia involves risk. There is a possibility of complication or injury from all forms of anesthesia and sedation. The anesthesia team will discuss these with you prior to surgery.
- **Air embolism** – Air may enter the blood stream and cause a stroke, heart attack or death.
- **Ataxia** – Difficulties with coordinated movements should be expected for a few days, but can last longer and even be permanent.
- **Balance problems** – Difficulties with balance or vertigo may occur as a result of the surgery. Nausea and vomiting may also occur after surgery.
- **Bleeding** – It is possible, though unusual, to experience an episode of bleeding, which may be excessive, during or after surgery. Bleeding may require additional treatment or transfusion. Certain medications, such as anti-inflammatory drugs, Aspirin, Coumadin/Warfarin, Plavix/Clopidogrel, Heparin, and Enoxaparin/Lovenox may increase the risk of bleeding. Please notify your physician if you are taking or plan to take any of these medications.
- **Blood clot development** – Blood clots may occur with *any* type of surgery. Clots can block blood flow and cause complications including pain, swelling, inflammation, neurological deficits, or tissue damage. This may require additional procedures for treatment of the blood clot.
- **Brain injury** – There is a risk that the procedure will cause injury of the surrounding brainstem. The symptoms that result from the injury depend on the location of the injury.
- **Cardiac complications** – There is a small chance that having the procedure could cause an irregular heartbeat or a heart attack.
- **Cerebrospinal fluid leak** – A cerebrospinal fluid leak may occur and present as fluid drainage from the incision, mouth, nose, ear, or as a syrinx formation. Treatment may include reoperation or lumbar drain placement.
- **Complications related to positioning during surgery** – Although rare, complications such as compression on various nerves or cervical spine injuries may occur as a result of positioning during surgery. You will be positioned with a Mayfield clamp and do face unintentional risks of penetrating sinus cavities, skull fracture, intracranial hematomas, scalp lacerations, air embolism, and other complications due to previous intracranial pathology.
- **Death** – Although the risk is remote, death may occur during or soon after *any* surgical procedure.
- **Failure of the procedure** – There is a chance that the symptoms will not go away as a result of the procedure.
- **Functional Loss** – It is possible to experience problems such as difficulty opening the mouth or chewing after surgery. Also, speech, language, and memory difficulties may occur after surgery.

- **Hydrocephalus** – Postoperatively, acute hydrocephalus or pneumocephalus may develop resulting in a decline of neurological status. This may require reoperation or other treatment.
- **Infection** – Infection may occur at the incision site. Infection-related risks also include the development of meningitis, an infection that causes inflammation of the membranes covering the brain and spinal cord. Infection may occur in other locations as well. Treatment of the infection may require additional procedures.
- **Lesioning** – It is possible to under-lesion or over-lesion. Complications of under-lesioning include no decrease in pain or incomplete pain relief. Complications of over-lesioning can range from sensory deficits to motor deficits.
- **Paralysis** – It is possible that some paralysis or numbness may occur as a result of the surgery, including limb ataxia and weakness.
- **Post-Operative neurologic decline** – There is a small risk that neurologic function will decline following surgery. These problems are sometimes caused by postoperative bleeding into or on the surface of the brain or cerebral edema, which is the accumulation of fluid that results in swelling, and pressure on the brain.
- **Post-Operative pain** – It is possible, though unlikely, that pain or other symptoms will increase following the procedure.
- **Recurrence** – There is a chance that the signs and symptoms may reoccur.
- **Respiratory Difficulties** – Breathing difficulties, usually temporary, or postoperative pneumonia may occur as a result of surgery. Pulmonary embolus could occur from blood clotting in the veins. This may be life threatening and require further therapy.
- **Seizure Activity** – It is possible that abnormal electrical activity in the brain may develop after the procedure and cause seizures. Seizure activity may result in the restriction of your driving privileges.
- **Stroke** – Though unlikely, there is a possibility that a stroke will occur during the procedure.
- **Visual Disturbances** – It is possible that there may be some changes in visual function resulting from the procedure.

Important Additional Points

Allergies/Medications – I have informed the doctor of all my known allergies. I have also informed my doctor of all the medications and drugs I am currently taking, including prescription drugs, over-the-counter medications, herbal/homeopathic therapies, nutritional supplements, illicit drugs and alcohol. I understand the advice I have been given about using any or all of these medications and drugs on the days before and after the procedure.

Smoking – It has been explained to me that if I smoke in the days or weeks before or after my surgery, I may be impeding my own recovery. I understand that if I smoke, I will have a greater risk of wound-healing complications. I understand that I may request from my physician a consult to help me stop smoking.

Technology Failure – It is possible during the surgical procedure that machines and technology will fail.

Medical Conditions – I have informed the doctor of all my known medical conditions and understand that certain conditions such as diabetes, obesity, long-term steroid use and heart and lung disease can increase the risks of this procedure.

I have been given the opportunity to ask questions and have explained to me the areas of information that I did not understand.

Signature of Patient/Next of Kin/Guardian

Date

Witness

Date