

## ***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***

You will be placed in the prone position and a midline incision in the back will be made near the area of your injury. A laminectomy will be performed and the covering of your spinal cord (dura) will be opened to identify the back of the spinal cord. An electrode will be placed into the dorsal root entry zone in the spinal cord to produce multiple lesions.

I understand that the goal of this procedure is to relieve limb pain, pain after a tumor removal, or spinal cord injury. 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
- Nerve graft, nerve transfer, or muscle transfer surgery
- Alternative medical approaches including acupuncture
- Alternative surgical approaches including seeking another opinion
- Physical rehabilitation 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 or Nutrition therapy
- Orthotics / Splinting
- Electrical nerve stimulation (TENS Unit)

### ***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
- **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.
- **Cardiac complications** – There is a small chance that having the procedure could cause an irregular heartbeat or a heart attack.
- **Cauda equina syndrome** - There is a risk of developing loss of perineal sensation and the inability to void urine or stool after a lower back surgery.
- **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.
- **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.
- **Increased pain** - It is possible, though unlikely, that pain or other symptoms will increase following the procedure.
- **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.
- **Injury to structures near the vertebral bodies** – It is possible, although rare, that structures near the vertebral bodies including the aorta, ureters, and bowel may be injured and result in fatal hemorrhage or bladder and bowel problems.
- **Nerve root injury** - Injury to the nerve roots may result in weakness in the arm, paralysis in the affected muscle group or loss of sensation in the affected area.

- **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 new weakness or sensory loss, and new paresthesias or dysesthesias occur as a result of the surgery, including limb ataxia and weakness.
- **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.
- **Scar Formation** - It is possible that scar tissue could form in the area where the operation was performed and cause pain and other symptoms.
- **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.
- **Spinal cord injury** - There is a slight risk of injury to the spinal cord during this procedure, which may result in paralysis and loss of normal bowel and bladder functions.
- **Stroke** – Though unlikely, there is a possibility that a stroke will occur during 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.

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Signature of Patient/Next of Kin/Guardian

Date

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Witness

Date