

## Anterior Cervical Discectomy and Fusion

### THE PROCEDURE

Your surgical procedure is an Anterior Cervical Discectomy and Fusion (ACDF). Please keep this information for reference when calling our office. On-call physicians will need to know exactly the type of surgery you have had, and the date. Your follow-up appointment is scheduled for 6 weeks after your surgery.

We discussed the risks and benefits of your surgery in the office. I have included these in your instructions, since it can be difficult to remember everything we discussed. Should you have any further questions regarding this information, please do not hesitate to contact us.

Anterior cervical discectomy is a procedure that is intended to relieve the pain, numbness and/or weakness that may be associated with cervical disc disease. *Discs* are small masses of rubbery tissue that act as natural shock absorbers between the individual bones of the spine. The procedure is performed on the upper spine to relieve pressure on the spinal cord and/or on the nerve roots. This pressure may be caused when a disc ruptures (herniates), causing some of the disc's softer nucleus to bulge through its tough fibrous outer ring and press on a nerve. Additional nerve pressure may be caused by *bone spurs*, or rough edges of bone, that sometimes develop around degenerated discs.

I understand that during this procedure, the affected disc and bone spurs are removed through an incision in the front of the neck. I understand that my surgeon will join together or "fuse" the opened space between the vertebrae with a small pre-formed bone graft. It has been explained to me that the bone used for the graft will be:

- obtained from a bone bank

In addition, my surgeon has explained that a metal plate, secured with screws, will be placed at the fusion site for additional strength.

I know that the goal of this procedure is to relieve the pain and numbness in my arm, hand or other affected areas; 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 anterior cervical discectomy, which include:

- not having the procedure
- using medication for relief of pain or muscle spasms
- using cervical-traction therapy
- performing exercises to strengthen the neck muscles;
- undergoing physical therapy that may include deep heat and massage, ultrasound and traction
- steroid injections.

I have also considered other surgical approaches, including cervical laminectomy and posterior fusion. The benefits and disadvantages of these alternative methods have been explained to me.

### RISKS OF ANTERIOR CERVICAL DISCECTOMY

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 include but are not limited to the following:

- Adverse reaction to anesthesia**—Both local and general anesthesia involve risk. There is a possibility of complication or injury from all forms of anesthesia and sedation.
- Bleeding**—It's 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, may increase the risk of bleeding.
- Blood clot development**—Blood clots may occur with *any* type of surgery. Clots can block blood flow and cause complications, including pain, swelling, inflammation, tissue damage, airway blockages due to compression of the trachea and compression of the spinal cord.

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- **Cardiac complications**—There is a small chance that having the procedure could cause an irregular heartbeat or a heart attack.
- **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 undergoing anterior cervical discectomy will not alleviate pain, numbness, weakness or other symptoms.
- **Failure of the vertebrae to fuse**—After the disc removal, the adjacent vertebrae may not fuse and may lead to spine deformity and/or pain.
- **Increased pain**—It's possible, though unlikely, that pain or other symptoms will increase following the procedure.
- **Infection**—Infection may occur in the wound, either near the surface or deep within the tissues, and may include the spine.
- **Nerve injury**—There is a small risk of injury to the recurrent laryngeal nerve, which may cause temporary or permanent hoarseness of the voice. Injury to the vagus nerve could cause paralysis of the diaphragm.
- **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.
- **Recurrence**—There is a chance that arm pain or other symptoms will recur and require additional surgery.
- **Respiratory difficulties**— Breathing difficulties, which are usually temporary, or post-operative pneumonia, may occur as a result of surgery. Pulmonary embolus (blockage of an artery in the lungs) could occur from blood clotting in the veins.
- **Spinal cord injury**—There is a slight risk of injury to the spinal cord during this procedure, which may result in paralysis.
- **Stroke**—Though unlikely, there is a possibility that a stroke will occur during the procedure, which may result from retraction and injury to the carotid artery.

### RISKS RELATED TO FUSION

Additional risks are associated with the fusion procedure, in which a section of bone or *bone graft* is harvested from the hip (*autograft*) and used to fuse the open space between the vertebrae. These include:

- Nerve damage to the side of the thigh
- Changes in gait
- Injury to the abdominal wall, which may require additional surgery to repair
- Failure of the fusion, in which the bone graft may not form a solid fusion
- Extrusion of the bone graft, which may occur if the bone graft moves out of position.

If a bone-bank graft (*allograft*) is used for the fusion procedure, there is a slightly greater chance that the bone fusion will fail.

### RISKS RELATED TO INTERNAL FIXATION (PLATING)

Additional risks associated with the use of metal plating to further strengthen the bond may include:

- Loosening and movement of the screws, which may cause a need for re-operation
- Positioning of the plates and screws may cause injury to the surrounding structures.

### IMPORTANT POINTS

**Allergies/Medications**—I have informed the doctor of all my known allergies. I have also informed my doctor of all the medications 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 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 and a greater risk of non-fusion of the graft.

**Benefits:** Your surgery is being done to relieve pain that has not been relieved with conservative measures. Weakness and numbness can take weeks to months to resolve. In fact, you may experience more numbness or tingling initially after the surgery.

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### AFTER YOUR SURGERY

As you recover from your surgery, you should experience progressive improvement in your preoperative pain. It is not unusual to feel some pain, numbness, tightness, burning or other "funny" feelings for a while following your operation. Usually these sensations will lessen and mostly go away with time. Numbness can last for weeks to months. Swallowing difficulty is common and may last several weeks. You may find it necessary to consume liquids only during this time, gradually taking solids as you tolerate it. It is not uncommon to experience pain in the back of your neck and/or between your shoulder blades. This comes from opening up the collapsed disk spaces and should improve over 4-6 weeks.

At the time of discharge, the hospital nurse should give you prescriptions and a follow-up appointment. You should be given an order for X-rays of your cervical spine. These will need to be performed the week of your follow-up visit. Be certain that you have the actual x-rays when you return to my office. If you were not given a return appointment, please call our office upon arriving home to schedule this visit. Please call between 9:00 a.m. and 5:00 p.m., Monday through Friday.

**Wound Care:** If your wound has been closed with Dermabond, please follow the care instructions from the Dermabond handout. Do not scratch the Dermabond. It will begin to slough off 7-10 days after your surgery. At this time you may use a warm wet washcloth to rub the rest of it off. If your wound has been closed with steri-strips (butterfly-like skin closures over your incision), you should remove them 7-10 days after your operation, if they have not fallen off on their own.

If your wound has been closed with Dermabond, you may get your incision wet in the shower, as soon as you wish, since this closure is waterproof. If your wound has been closed with staples, sutures or steri-strips, you may remove your dressing two days after the surgery and, at that time, you may get your incision wet in the shower. New bandages or dressings are not necessary. Use only soap and water to gently clean the area around your wound. Do not soak your incision for four weeks following the operation. During this time, bathtubs, hot tubs, swimming pools, whirlpools, and the like, are not

allowed. Do not let the shower water "beat" on your incision.

You should not put any salve, lotion, ointment or Vitamin E on your incision during the first month after surgery. If you notice any problems with your incision, such as severe redness, drainage, swelling, etc., please call the office as soon as possible for instructions. It is not uncommon to have mild redness with staples.

**Activities & Driving:** You are not permitted to drive a motor vehicle for several weeks following the surgery. You may not drive while taking pain medication. It is unlikely that you will feel comfortable enough in the first 30 days to drive. Most people will not require a collar after surgery. However, if you are one of those people who I tell will require a collar, please bring your collar with you for your surgery. If you have been given a cervical collar you should wear it at all times until I take it off. This will usually be done when you return to the office 4 weeks after surgery. If you have been given 2 collars, you may shower with one and change collars after showering. This allows you to have a clean collar on at all times. You should not do any lifting, bending, straining, stooping, or twisting. You should not lift anything heavier than ten pounds. The only exercise permitted, and in fact encouraged, is walking. After you have been up and around for several days, begin a walking program, gradually progressing to one mile, two to three times a day. When you return for your first postoperative visit (1 month), I will give you more exercises to do.

**Prescription Refills:** You have been given several medications. One is a pain medication and the other is a muscle relaxant. Take them both regularly for the first 3 days, then reduce dosages to an **As Needed** basis. You have been given a 30-day supply of these medications from the time of surgery and you should not require any more. If you require medication refills, please call the office between 9:00 and 4:00 p.m., Monday through Friday. We will try to expedite your request but please allow 24 hours after your call for us to process your refill request. Please call your pharmacy after 24 hours first, before calling our office again about the prescription. ***The on-call physician will not refill any prescriptions at night or on weekends.***



## PATIENT INFORMATION

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You may NOT take **anti-inflammatory** medications such as Ibuprofen, Advil, Motrin, Aleve, Celebrex, Nuprin or Vioxx in the first 3 months following surgery. These medications will interfere with the fusion process and can limit your progress. Tylenol or Acetaminophen is okay to take and will not affect your fusion process. You should NOT smoke or use any **tobacco** during the first 6 months following your surgery. The nicotine in tobacco severely blocks the fusion process. Your fusion takes approximately 6-12 months to take place. If your fusion does not heal, you could require more surgery.

**Sexual Activities:** You may resume sexual activities once your post-operative pain subsides. For females, take necessary precautions to avoid pregnancy until your fusion is solid and you have discussed pregnancy with me.

**Out of Work:** You can expect to be out of work for a minimum of one to six weeks following your operation, depending on your healing progress and type of work you do.

We want your surgical experience to go smoothly. If you have any questions or problems, please do not hesitate to call the office at 508.771.0006.

You may find the following websites to be helpful regarding your surgery: [www.allaboutneckpain.com](http://www.allaboutneckpain.com), [www.spineuniverse.com](http://www.spineuniverse.com), [www.neurosurgery.org](http://www.neurosurgery.org), [www.spinehealth.com](http://www.spinehealth.com), [www.allaboutbackpain.com](http://www.allaboutbackpain.com).

Thank you for letting me to participate in your care,

Paul J Houle, MD  
Achilles Papavasiliou MD  
Patrick Murray, MD  
G. Kenji Nakata, MD