

## **Patient Instructions: Posterior Cervical Decompression and Fusion**

### **Surgical Technique**

A posterior cervical decompression and fusion is a common surgical procedure to treat abnormal movement, pain and/or narrowing in the cervical spine (neck). Its goal is to relieve pressure on the spinal cord and nerve roots, or to help stabilize abnormal motion or neck instability. It is sometime used in conjunction with other surgery, such as an ACDF (anterior cervical discectomy and fusion) to enable additional structural support and promote fusion of the bones in the neck. It is called posterior because the cervical spine is typically reached through an incision in the back of the neck (posterior means back). During surgery, the soft tissues and muscles of the neck are often separated using less-invasive techniques.

The bone (called the lamina) overlying the spinal cord and canal is sometimes removed to remove pressure off the spinal cord and/or nerve roots (thereby completing the decompression), although this is not always needed. After removing any necessary bone (lamina) and performing microsurgery to decompress the spinal cord and/or nerves, small titanium alloy screws are placed in the bones that surround the spinal cord and attached to a titanium alloy rod. Also, during this part of the surgery, chips of your own bone (taken during the decompression) or donor bone are placed alongside the exposed bones and around the titanium screws to help promote new bone growth with the goal of achieving bony fusion where the vertebrae fuse (grow / join) together. Often, we also use bone morphogenic protein (BMP), which is a synthetic analog of our own body's 'bone-growth promoting chemical' that was originally discovered and approved for use in the lumbar spine (low back) to help promote fusion and rapid/solid bone growth. Although not approved for use in the posterior neck, many surgeons use BMP in the neck to help promote bone growth because it has been so successfully used in the lumbar spine. Occasionally, we need to extend fusion (including the screws and rods) up to the back of the skull, or down to the upper part of the thoracic spine (mid-back) depending on your specific condition.

It usually takes a few months for the vertebrae to completely fuse but can take up to a year or two. Please visit [www.bnasurg.com](http://www.bnasurg.com) for more information.

### **Before Surgery**

- Seven (7) days before surgery, do not take any anti-inflammatory NSAID medications (Celebrex, Ibuprofen, Aleve, Naprosyn, Advil, etc.), as this could have adverse effects on your spinal fusion and prolong your bleeding time in surgery.
- Do not eat or drink anything after midnight the day before surgery. This means nothing to drink the morning of surgery except you may take your normal medication with a sip of water if needed. This includes your blood pressure medicine, which in general should be taken.
- If you take insulin, consult your surgeon or primary care doctor about taking it before surgery.
- Do not be late to check in on the day of surgery or it may be cancelled.
- Bring your preoperative folder with you to the surgery and have it when you check in.
- If you have a copy of your MRI or x-rays, please bring them with you to the surgery even if your surgeon has already seen them, or might have a copy. Surgery may be cancelled if we do not have your radiographic images.
- Please be aware that smokers are recognized to have a significantly higher risk of postoperative wound healing problems as well as operative and postoperative bleeding. Smoking disrupts the normal function of basic body systems that contribute to bone formation and this could result in higher non-union rates. Smokers understand and must agree to discontinue smoking for at least two weeks before and after surgery. Although it helps to stop smoking for several weeks before and after surgery, this does not eliminate the increased risk resulting from long-term smoking.

### **After the Surgery Activity Level**

- Do not lift more than 5-10 pounds for the first few weeks after surgery. This may be increased to approximately 20 pounds after 4-6 weeks. Do not lift anything greater than 20 pounds for the first 3 months.
- Avoid prolonged upright sitting on hard surfaces or long car rides (more than 3 hours) for 2-4 weeks.
- You may drive after about a week and as soon as it is comfortable to do so and when no longer under the influence of pain medications. Avoid driving if you are in a rigid, form-fitted plastic collar.
- Limited bending or twisting of the cervical spine is advised. If physical therapy has been prescribed, you are not to perform range of motion, flexion, extension or lateral bending until fusion is documented.
- If a collar is prescribed, it should be worn at all times except while showering and should be replaced immediately thereafter.
- Avoid activities where there is the potential for a fall or physical contact until cleared by surgeon.

- Start walking as soon as possible after the surgery. Walking helps to prevent blood clots and increases muscle strength.

### **Bandage**

- Bandage (if present) may be removed the second day following surgery.
- Steri-strips should be left intact on the incision until returning to clinic or for your postoperative follow-up 7 to 14 days following surgery.

### **Drain**

If you are discharged with a drain, you will need to track the daily output of the drain. You will be instructed prior to hospital discharge how to care for the drain and empty it. Almost all drains are removed within 7 days after surgery, but individual cases vary. **IF YOU HAVE A DRAIN, please NOTIFY the BNA office (303 938 5700) of the drain output EVERY OTHER business day, unless instructed otherwise.**

### **Bathing**

- You may shower on third day following surgery.
- Try to limit showers to no more than 5-7 minutes.
- Do not scrub the wound. Let water run over the incision and then pat dry with clean towel.
- No soaking in bathtub, hot tub or pool for at least 2 weeks.

**Diet** (Narcotic pain medications are very constipating; be proactive with stool softeners and laxatives)

- A high fiber diet is recommended.
- Avoid straining on the toilet. Keep stools soft with a high fiber diet and/or use of prune juice, Metamucil, Fiber One cereal, etc.

### **Pain Medications**

- Do not take NSAID medications (Ibuprofen, Naprosyn, etc.) or Cox-2 inhibitors (Celebrex, etc.) for 3-6 months following surgery.
- Tylenol can be taken as needed.
- Narcotic pain medications are prescribed if Tylenol is inadequate.
- You should not allow pain get out of control before taking medication or it will be less effective.
- We will not refill pain medications over the weekend or after hours. Anticipate the need for medication refills.

## **Follow-up**

- Call Boulder Neurosurgical Associates' (BNA) office (303-938-5700) and schedule your routine post-surgical visit for 7-14 days after surgery. Other follow-ups will be scheduled as needed; we generally follow patients for at least 2 years after surgery, often longer.
- Please call your physician's office immediately with any problems or go to the emergency department with progressive difficulty swallowing, difficulty breathing, significant neck swelling, new numbness or weakness, fever greater than 101.5 degrees or any other concerns.

## **Other FAQs**

***How long will I be in the hospital?*** This varies depending on the type of surgery performed. For most surgeries in the back of the neck (posterior), many patients will go home the day after the surgery, occasionally the second day after. We have found that patients generally prefer the comforts and support that home offers. Going home sooner lowers your risk of complications, such as hospital-acquired wound infections, blood clots and urinary tract infections.

***How much time off from work?*** The amount of time needed for recovery prior to returning to work varies depending on the surgery, your job and you. Typically, 1 week is sufficient, but patients should ask their surgeon for an individual recommendation. For jobs requiring lifting and physical exertion, up to one month may be required.

***When can I resume driving?*** Driving is acceptable about 1 week after surgery, depending on pain medication. We generally recommend that you not drive while taking pain medications following the surgery. Driving after a posterior cervical fusion must be done carefully, as we do not recommend excessive turning of the head and neck. If you have a plastic fitted hard collar, it is not recommended that you drive, as this can significantly limit your ability to turn your head.

***Will I wear a cervical neck collar?*** The use of cervical neck collar varies depending on the surgeon and the patient. Most patients will at least wear a soft collar for approximately one month. The use of a collar may be longer for multilevel fusions or may even require a stiffer collar. The collar will be provided on the day of surgery. The collar should be worn at all times except while showering and should be replaced immediately thereafter.

***Will I need pain medications?*** We will prescribe pain medications and other peri-operative medications on the day of surgery or prior to your discharge from the surgery center or hospital.

***Will I need Physical Therapy?*** We usually recommend physical therapy and will refer you to a therapist at your first postoperative visit. Please limit bending and twisting of the cervical spine. No pushing, pulling, or dragging and no range of motion (ROM) exercises for 3 to 6 months or until your surgeon has determined that your fusion is solid. Refrain from whiplash like motions, high impact activities such as running, horseback riding, or any radical side-to-side motions. A good rule of thumb is, 'If it hurts don't do it'.

***What kind of follow-up is required?*** Patients return to our office for routine follow up appointments at intervals that are determined on a case-by-case basis. We typically see patients back in the office within a couple weeks following surgery and then increase this to several months followed by an annual exam. Your individual needs will be determined by your surgeon at each follow-up visit.

***Do I need antibiotic prophylaxis for dental procedures?*** We recommend avoiding routine dental procedures for 3 months following spinal and other neurological surgeries. This includes teeth cleaning at your dentist office. You should brush your teeth as you normally do.

If you must have a dental procedure within 3 months, then it would be advisable to use an antibiotic prophylaxis. We generally do not make recommendations about the choice of antibiotic when using it for prophylaxis, but we would be happy to discuss this with your primary care physician.

After 3 months, prophylactic antibiotics are not recommended prior to dental procedures to prevent infections except for specific individuals with extenuating circumstances, where the determination and prescription are made by the patient's primary care physician or dentist.

patient that are at risk for infective endocarditis should use preventative antibiotics before dental procedures after consulting with their cardiologist or primary care physician.