Cervical Spinal Fusion

Introduction
Based on your clinical symptoms, physical examination findings, diagnostic tests and the past treatments you have tried, your doctor has determined that you are a candidate for Cervical Spinal Fusion surgery.

Indications for Surgery
Cervical Spinal Fusion surgery is a treatment option that may be considered when persistent symptoms of pain and/or impairment in ability to function have failed to respond to other treatments. There are several conditions that may contribute to these symptoms such as arthritis, disc degeneration, herniation, deformities or the slippage of one spinal bone (vertebrae) on another which is known as spondylolisthesis.

Description of Procedure
The purpose of Cervical Spinal Fusion surgery is to fuse or “weld” the vertebral bones together to eliminate movement at the painful or affected levels in your spine. To accomplish this, your surgeon will place pieces of bone, and/or bone regenerating materials, along the sides and/or between the vertebrae. The bone cells grow and mature. When the bone becomes solid and the vertebrae are fused together it will eliminate movement at that level of your spine. Those spinal levels which were not surgically fused will continue to move as before. The spinal levels next to the fusion are under greater stress and future degeneration at these levels may be accelerated.

Additional bone used at the time of surgery may be your own bone or bank bone. This is usually determined prior to surgery. Your own bone is usually taken from the pelvis usually through a separate incision. Bank bone is obtained from the American Red Cross or one of several other certified tissue banks from across the country, where it has been carefully processed and sterilized. Depending on your particular case, either your own bone, bank bone, or a combination of the two will be used. If you have a preference, please discuss it with your surgeon. If removal of bone from the pelvic area results in a substantial defect, bank bone may be used to reconstruct the area.

Your spine surgeon may need to access the front (anterior) part of your cervical spine through an incision on the front of your neck. This anterior approach allows the surgeon to visualize the front of the cervical spine, remove the diseased disc and to place bone graft materials and/or instrumentation.

Your spine surgeon may need to access the back (posterior) part of your cervical spine through an incision on the back of your neck where the surgeon may place additional pieces of bone graft materials and/or instrumentation.

Your surgeon will talk with you about your specific surgical plan.

Instrumentation
Based on your individual case, your doctor may recommend the surgical placement of rigid hardware or instrumentation. The instrumentation would consist of plates attached to the vertebrae by screws. Wires may also be used. These are placed to immediately stabilize those vertebrae being fused and increase the likelihood of a solid bony fusion occurring. The surgical risks associated with instrumentation are the same as those of the spinal fusion with an increase in surgical time of approximately one half hour.

Until the bony fusion has become solid, great stress is placed on the instrumentation which may cause it to loosen or even break, although breakage is rare. For this reason, patients with instrumentation may be required to wear a neck brace to minimize the stress placed on the fusion site. Loose or broken instrumentation can be associated with neck pain and/or arm pain. When warranted, the instrumentation can be surgically removed.
Risks
Your clinical symptoms, physical examination findings and diagnostic tests indicate that Cervical Spine Fusion surgery is an appropriate treatment option for you. However, your surgeon cannot guarantee relief of pain or other symptoms following surgery.

X-ray may be used during your surgery. If you are pregnant, this could be unsafe for your baby.

All surgery has associated risks. There is a risk with general anesthesia, or being put to sleep. Lung problems, blood clots, fluid accumulation near the wound, and wound infections can occur. Unexpected complications, such as allergic reaction to the anesthesia or injury to a major blood vessel, can result in death.

There are additional risks with spinal surgery. If a spinal nerve is injured, it could result in permanent pain, numbness, weakness in a limb and/or loss of bowel or bladder control. If the spinal cord is injured, it could result in permanent paralysis of the arms and/or legs.

The spinal nerves and spinal cord travel through the vertebrae in a sac filled with spinal fluid. If the sac is punctured, spinal fluid will leak out. This is known as a dural leak. If this occurs, you may be advised to remain flat in bed for 48 hours to prevent a spinal headache and allow the puncture site to heal. On rare occasions, an injection or future surgery may be required to seal the puncture site.

Unfortunately, there is no way to guarantee the bone in your fusion will mature and become solid. Factors such as metabolism, age, and activity level play a role in your body’s ability to “weld” together the pieces of bone placed during surgery. The progress of your fusion will be monitored with x-rays at your follow-up appointments.

Studies have suggested that smokers have a significantly lower rate of successful solid fusions as compared to non-smokers. For this reason, it is strongly recommended that all patients contemplating a spinal fusion stop smoking prior to their surgery. Also, it should be noted that solid fusions will not always eliminate your pain.

Fusion surgery may include harvesting bone from the patient’s pelvis. Immediately following surgery this area may be the greatest source of pain. In most cases the pain subsides over time but may not completely go away.

Some fusions require the use of bone plugs. During the first several months following surgery and before the fusion is solid, these bone plugs can become dislodged. Depending on the amount of movement that occurs, additional surgery may be required to reposition the bone plug.

The incision for an anterior (front) cervical fusion is made toward the side of the neck. The surgery requires tissues in the front of the neck to be pulled to the side. This may result in temporary or permanent hoarseness and/or difficulty with swallowing. There is also a risk of breathing problems as a result of swelling or bleeding after surgery.

While these are the most likely complications, this list is not complete as other complications can occur. These risks should not be taken lightly; however, the possibility of any of these happening is very low.

Bracing
Before your surgery your provider may recommend that you be fitted with a rigid brace. This will immobilize the area of the fusion and allow the fusion to heal.

After Surgery
Although most patients remain in the hospital one to three days after surgery, some patients remain longer. When you are discharged following surgery, you would typically be self sufficient in your personal care. However, depending upon your home situation, arrangements may need to be made for additional help.

Medications
When you are released from the hospital, a prescription for a pain medication will be provided. It is recommended that you use this medication sparingly and only when Tylenol® (acetaminophen) does not give enough pain relief. Daily limit of Tylenol® (acetaminophen) is 4000 mg per day. Nonsteroidal anti-inflammatory medications such as ibuprofen (Advil, Motrin) and naproxen (Aleve) should not be taken for approximately six to twelve months after surgery as they can interfere with the fusion process. Prescription pain medication will be carefully monitored to guard against overuse and addiction. Non-addicting medication will be recommended as soon as possible.

Long term use of prescription pain medications is discouraged as these medications may interfere with the body’s natural ability to produce substances to help control pain. There are substances produced in the brain, called endorphins, which are similar to morphine. Endorphins help increase our tolerance to pain. When prescription pain medications are used, the brain slows down the production of endorphins. Over time, more and more pain medication is required to receive the same pain relief because of the loss of endorphins. For this reason, it is important to use prescription pain medication for only a short period of time. This will minimize their interference with the body’s natural pain relievers.
Special Needs / Equipment

Social Services or a discharge planner will meet with you before your discharge from the hospital. Please let them know if you will need home care services or medical equipment, such as a hospital bed, at that time.

Paperwork

Please do not bring any paperwork that needs to be completed by our office to the hospital with you. All paperwork related to disability, FMLA or other medical legal forms should be mailed to our Stillwater office, Attention Medical Legal Department, 1950 Northwestern Avenue Suite 102, Stillwater, MN 55082. Please allow 1-2 weeks for forms to be completed. Midwest Spine & Brain Institute does charge an administrative fee for such paperwork to be completed. You may leave a message for our Medical Legal Department at 651-259-4545.

Questions

If you have any questions regarding your surgery, contact our office at 651-430-3800 to schedule an appointment or talk with your care team.
Fusion Post-Op Prescription Information

**Calcium and Vitamin D**
Calcium and Vitamin D need to be taken to promote healing of the fusion. Please fill the prescriptions before your surgery so you can begin taking them as soon as possible prior to your surgery.

You will need to take the Calcium and Vitamin D until your physician asks you to discontinue the medications.

**Colace**
Colace is a stool softener used after surgery to help keep your stools soft. Please fill the prescriptions before your surgery so you have it available after your return home from the hospital. Sometimes your stools can get hard after surgery due to narcotics, anesthesia and decreased activity. The stool softener, plus drinking plenty of water and other liquids, can help the stool to come out easier. You should take the Colace for about two weeks after surgery. You can obtain refills if stools continue to be hard.

This prescription has been sent electronically to your pharmacy.
General Informed Consent of Patient

Patient’s Name: ______________________________________________________ DOB: ____________________________

Proposed Procedure/Treatment: ___________________________________________________________________________________

______________________________________________________________________________________________

Reason for Treatment: ______________________________________________________________________________________

Scheduled date of procedure/treatment (if known at this time): __________________________________________________

I authorize the physician listed below and such assistants or consultants as he may select to perform the procedure/treatment identified above:

Daryll C. Dykes, M.D.

The procedure and the reason for it have been explained to me in terms that I understand. I have talked to my doctor or my health care team about all of the following: (Please initial each statement)

___________ (a) The diagnosis and nature of my illness or condition;

___________ (b) The proposed treatment, described above;

___________ (c) Any alternative forms of treatment, including my option of receiving no treatment;
___________ (d) The potential benefits and risks of the proposed treatment and alternative forms of treatment, including those of no treatment;

___________ (e) The type and likelihood of complications resulting from the treatment and alternative treatments;

___________ (f) The possible use of hardware or other implants;

___________ (g) The possible use of bone or other tissue from a tissue bank;

___________ (h) Post operative pain management and plan to taper and reduce use of prescription pain medications over 3 months.

___________ (i) Other information:__________________________________________________________________________

I have had the opportunity to ask questions and have received answers to all of my questions. I acknowledge that no guarantee or assurance as to the results of any treatment or alternative has been given.

N/A  Yes  I have received and reviewed a copy of the general information entitled _______________________________ and have discussed its contents with my physician and/or my health care team.

It a health care worker is accidentally exposed to my blood or body fluids, I have my permission to have my blood tested for hepatitis and human immunodeficiency virus (HIV). I authorize release of these test results to the Employee Health Nurse at Midwest Spine Institute as well as to the exposed person. I understand the results will become part of my health record.

I further authorize my physician and his assistants and/or consultants to perform such procedures as are deemed necessary to remedy unforeseen acute conditions with might be revealed during the course of my treatment.

I also consent to the presence of a technician from a surgical or medical device manufacturer during my procedure to consult with my physician.

I understand I can change my mind at any time. If I do so, I will tell my physician or health care team as soon as possible.

________________________________________________________________________

Physician or Physician Designee Signature / Relationship to Patient  Date  Time

Note: If the patient is a minor, the patient’s natural or legal guardian may sign for the patient. If patient is unable to consent/sign (i.e. physically or mentally incompetent), state the reason the patient is unable to consent and relationship or legal authority the representative has with the patient:

________________________________________________________________________

The procedure and information stated above has been discussed with the patient (or patient’s representative) by me and/or my staff and we have answered the patient’s questions. The patient (or representative) consented to the procedure.

________________________________________________________________________

Physician or Physician Designee Signature  Date  Time

________________________________________________________________________

Interpreter Name (if used)  Language/Organization  Time

I was present when the patient/patient’s representative signed this form and I verified their identification. I certify that this form was signed before the procedure was performed.

________________________________________________________________________

Witness  Date  Time

Refusal of Treatment
I acknowledge that I have been fully informed of the information stated above and have decided to receive no treatment or to transfer my care to another physician. I acknowledge that I am making this action at my own initiative. I have been informed of the risks involved in my decision not to receive treatment and acknowledge that I am acting against medical advice. I hereby release Midwest Spine & Brain Institute, its physicians, employees, and agents, from any responsibility or liability for any damages or injuries resulting from my decision.

__________________________________________________________
Patient (or Representative) Signature / Relationship to Patient

Note: If the patient is a minor, the patient’s natural or legal guardian may sign for the patient. If patient is unable to consent/sign (i.e. physically or mentally incompetent), state the reason the patient is unable to consent and relationship or legal authority the representative has with the patient:

__________________________________________________________
Witness

I was present when the patient/patient’s representative signed this form and I verified their identification.

__________________________________________________________
__________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
1950 Northwestern Avenue Suite 102
Stillwater, MN 55082-7615
Phone: 651-430-3800
Fax: 651-430-3827
www.midwestspineandbrain.com

Notice of Disclosure

The following disclosures may apply to the treatment you receive at Midwest Spine & Brain Institute (MSBI). Please contact your MSBI physician or Administration if you have any questions about any of the following disclosures.

Disclosure of Ownership in Ambulatory Surgery Centers
If your MSBI physician refers you to Maplewood Surgery Center, Ridges Surgery Center, Greenway Surgery Center or Maple Grove Center for Restorative Surgery, the following disclosure applies:

Your health care provider is referring you to a facility or service in which your health care provider has a financial or economic interest. The MSBI physicians who are listed below have an ownership interest in these ambulatory surgery centers. You are free to choose a different ambulatory surgery center. If you would like to do so, please notify your physician and we will be happy to accommodate your request.

The disclosure applies to the following MSBI Physician for Maplewood Surgery Center: Thomas V. Rieser, MD

This disclosure applies to the following MSBI Physician for Ridges Surgery Center: Stefano M. Sinicropi, MD

This disclosure applies to the following MSBI Physicians for Greenway Surgery Center: Stefano M. Sinicropi, MD; Daniel W. Hanson, MD; Glenn R. Buttermann, MD; David T. Chang, MD, Daniel P. Sipple, DO

This disclosure applies to the following MSBI Physicians for Maple Grove Center for Restorative Surgery: Daniel W. Hanson, MD; Mark A. Janiga, MD

Disclosure of Advanced Medical Imaging Services
If your MSBI provider refers you for Advanced Medical Imaging Services (MRI or CT) at our Burnsville office, the following disclosure applies:

Your health care provider is referring you to a facility or service in which your health care provider has a financial or economic interest. You are not required to obtain your imaging services through MSBI. If you wish to choose a different provider, please let us know and we will be happy to accommodate your request.
Disclosure of Reimbursement for Medication Dispensing
MSBI can directly provide eligible patients with certain medications prescribed by MSBI providers. Please note that if you choose to receive your prescription directly from MSBI, your physician will receive a profit interest from the dispensing of such prescription. You are not required to receive your medications from MSBI; you are free to choose a different provider to fill your prescription. If you wish to use a different provider, please let us know, and we will be happy to accommodate your request.

Insurance Coverage for Other Facilities
Some facilities may be out of network for certain health plans. Please contact the facility as well as your insurance plan for details regarding your coverage. These facilities may include, but are not limited to: Greenway Surgery Center, Maple Grove Center for Restorative Surgery, Woodbury Surgery Center.

Patient Name (printed) ____________________________________________________
Patient Signature _________________________________________________________ Date:_________________________________

Attention: Medical Facilities Performing Pre-Op Examinations
Please fax a copy of the pre-op exam to the hospital where the patient is having their surgery performed. Also, please fax a copy to Midwest Spine & Brain Institute. It is imperative that the hospital and Midwest Spine & Brain Institute have a copy before the surgery can be performed. Many times the surgery is early in the morning and the clinic where the pre-op was performed has not opened making it difficult to obtain a copy of the pre-op if necessary. Please ask the patient what particular hospital they will utilize.

Midwest Spine & Brain Institute fax number: 651-430-3827

Fax Numbers to commonly used Hospitals and Surgery Centers:

Abbott Northwestern Hospital 612-863-3514
Fairview Lakes Regional Medical Center 651-982-7446
Fairview Northland Hospital 763-389-6389
Fairview Ridges Hospital 952-892-2078
Fairview Ridges Surgery Center 952-898-3482
Fairview Southdale Hospital 952-924-8422
Gillette Children’s Hospital 651-726-2643
Greenway Surgery Center 612-728-2660
Lakeview Hospital 651-430-8572
Maple Grove Hospital 763-581-1325
Maple Grove Center for Restorative Surgery 763-432-7501
Maplewood Surgery Center 651-232-7786
Mercy Hospital 763-236-8645
North Metro Surgery Center 763-755-6516
St. Croix Regional Medical Center 715-483-0519
Preoperative Instruction

Dear Patient: Please take this preoperative instruction sheet to your family physician when you have your pre-op examination.

Dear Health Care Provider,

Thank you for your assistance in helping us to evaluate and prepare our mutual patient for spine surgery. Please perform pre-operative evaluation and testing based on patient’s health condition(s) and current evidence-based guidelines.

We have included suggested testing guidelines by procedure below for your reference.

Discectomies / Decompression (Lumbar) and Cervical Fusions to Include:
- CBC
- POTASSIUM
- CHEST X-RAY
- EKG

Male 40 years of age or greater – Females 55 years of age or greater

Lumbar Fusions (One or Two Levels) to Include:
- CBC
- POTASSIUM
- UA
- CHEST X-RAY
- EKG

If on diuretics, anti-hypertensive or cardiac medications

Male 40 years of age or greater – Females 55 years of age or greater

Lumbar Spinal Fusions (Greater Than 2 Levels) and Thoracic Fusions to Include:
Information Regarding Blood Thinning Medications

Please do not stop taking any “blood thinner” anticoagulant medication such as Coumadin (warfarin) or Plavix without first consulting the medical doctor who prescribed it for you. You will need to stop taking these types of medications prior to surgery as they can interfere with your surgery. If you have any questions, please contact a member of the surgery care team at 651-430-3800.

It is recommended that you stop taking these medications 10 days prior to surgery.

If you are taking anti-inflammatory medications such as but not limited to:

- Advil
- Aleve
- Anaprox

It is recommended that you stop these medications 7 days prior to surgery.

If you are taking any of the following herbal supplements:

- Vitamin E
- Danshen
- Dong quai
- Echinacea
- Ephedra
- Feverfew
- Garlic
- Ginger
- Gingko
- Ginseng
- Goldenseal
- Kava

Male 40 years of age or greater – Females 55 years of age or greater

Male 50 years of age or greater – Females 55 years of age or greater
Spine Surgery Information Sheet
Care Team: Dr. Dykes

Care Team Approach
Your post-operative care will be supported by a care team comprised of your surgeon, physician assistants, nurse practitioners, registered nurses and clinical support staff. The physician assistant and/or nurse practitioner will assist during surgery, make hospital rounds, see you for your post-operative clinic visits, manage your clinical care questions and address prescription medication questions and refill requests. The RN and other clinical care team members are resources to call when you have questions about your care in addition to your regular clinic visits. You may work with other Midwest Spine & Brain Institute team members when your provider(s) are scheduled out of the office, on weekends or after hours.

Care Team Members:
- Daryll C. Dykes, MD
- Phillip C. Stewart, PA-C

Preparation for Surgery
If the surgery center or hospital has a Pre-Surgical Patient Education program, please plan on completing this to optimize your surgical experience. If you are on any type of narcotic or other medications it is important to ensure your medications are monitored carefully. Midwest Spine & Brain Institute will assist you and collaborate with surgery center and hospital personnel throughout your care experience.

You may be provided prescriptions prior to your surgery. These prescriptions may include:
- A special soap-to use the day before and the morning of your surgery for the purpose of reducing risk of infection.
- Stool softener- to begin taking after surgery to prevent post-operative constipation.
- Vitamins and/or minerals-to support bone health.

Plan to have a family member or friend assist you when you return home following your surgery. During your hospital stay, you will receive options from the hospital’s social services staff about being discharged to your home or to a transitional care facility. If you return to your home and there is medical necessity, your provider may recommend home health services. Please inquire with your provider or hospital personnel if you have questions about managing your care at home.

What to Expect Following Surgery:
Your post-operative visits will be scheduled with the physician assistant or nurse practitioner who assisted in the operating room during your surgery. The physician assistant or nurse practitioner is a key member of your care team and communicates frequently with your surgeon. If there is any priority or urgent concern, the physician assistant or nurse practitioner will notify your surgeon.

Medication Management
Midwest Spine & Brain Institute provides each patient with a copy of the Narcotic Medication Policy. This information is also available on the clinic website at www.midwestspineandbrain.com. This policy explains how pain medications may be used as part of an overall treatment program before and after surgery. Upon discharge from the surgery center or hospital you will be provided a prescription for pain medication. You will meet with a provider from your surgical team approximately 2 weeks after surgery. After that your progress will be closely monitored throughout your recovery. Post-operative pain medications are prescribed for a period of time appropriate to your surgical procedure. In most cases, this typically does not exceed three
months after your surgery. If your pain continues beyond the typical post-op period you may be referred to a provider who specializes in the medical management of pain.

**Successful Outcome**
We hope you are confident that you have made a wise decision by choosing our practice for your spine care needs. Our goal is that you have a positive experience as we work together to improve your spine health and quality of life.

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**Patient Guidelines Following Neck Fusion/ Neck Decompression Surgery**

Please follow these general guidelines after your surgery. If you have any questions regarding your particular situation, please don’t hesitate to ask your doctor or one of his/her assistants.

**Care of incision-Bathing:**
For the next three to six weeks, you will need to shower and avoid tub baths. Initially, you may want a stool to sit on as you have done in the hospital. Have everything at a height you can reach and do not attempt to pick up what you have dropped. For at least one week after surgery, you will need to cover your incision with plastic wrap, e.g. Saran Wrap and tape, unless otherwise instructed by your physician.

**Care of incision-Bandages/Dressings:**
You should change your dressings daily. Using a light gauze dressing is fine. Keeping it dry is very important. After showering is the best time to change it, but if it becomes wet between showers, change it as needed. If you have staples along your incision, they will be removed the first time you are seen in the office. Small strips of tape, Steri-Strips, may be across your incision. They will eventually fall off. They do not need to be replaced. Notify the office if there are any openings in the incision.

**Notify the office if:**
- You have a temperature of 101 degrees or higher.
- You have yellow or green drainage from your incision or more than a slight amount of bloody drainage.
- You have redness, swelling, or warmth around your incision.
- You have new or unusual pain, numbness, or tingling.
- You have any bowel or bladder changes.
- You have calf pain or pressure in legs.

**IF YOU ARE EXPERIENCING CHEST PAIN, SHORTNESS OF BREATH OR DIFFICULTY BREATHING, PLEASE DIAL 911.**

**Walking:**
Initially, walking will be your best form of exercise to regain strength and endurance. Begin slowly by walking inside your home. Gradually increase the distance and number of times per day that you walk. If soreness or pain develops, decrease slightly the amount of walking until you are more comfortable. Do not stop walking. Walk outside, as weather permits, or use local shopping malls or schools.

**Sitting:**
You may increase your sitting time as tolerated. Use fatigue as a reminder to rest. If you are working in this position, raise your work surface. Remember to practice good posture:
- Sit up straight with hips and knees level.
- Keep neck and back in as straight a line as possible.
- Sit in a firm chair or stool with arm rests to help with posture and assist in getting up.
Bending:
All bending should be done with a straight back and bent knees. Bend slowly and carefully with something to hold onto if possible. Get a “reacher” to pick things up off the floor. Squatting down to pick things up will quickly tire you out. Don’t hesitate to ask someone for help during this important healing phase.

Lifting:
Limit your lifting to light household items, weighing 5 pounds or less. Ideally, lifting should be limited to items at waist level, not items on the floor or in overhead places. After lifting, carry objects close to your body. As stated above, do not hesitate to ask for help when needed.

Standing:
You may increase your standing time as tolerated. Use fatigue as a reminder to rest. Remember to practice good posture...

Steps:
Limit steps to just a few initially, using a hand rail or support. Gradually increase the number of steps you climb as tolerated. Steps may likely be challenging due to your decreased ability to view where your feet are placed. Take your time and be certain your feet are firmly placed on each step. Never hesitate to ask for help.

Driving:
Do not drive during your first six weeks at home. You may be a passenger during this time for short trips of 15 to 30 minutes. Use a support pillow at the neck as needed for comfort. Driving must be approved by your provider.

Lying Down:
You may feel most comfortable using a small pillow under your head or neck when in bed. A recliner may also be comfortable for resting.

Sexual Activities:
You may resume sexual activities as your symptoms allow.

Twisting:
Avoid twisting activities such as raking, sweeping, or vacuuming.

Bracing
Your surgeon team may recommend that you wear a brace after surgery. Remember that your brace is to be worn at all times unless otherwise directed by your provider. Your provider will discuss gradually stopping the use of your brace typically about six weeks after surgery. Your brace is a very important part of your healing process. Don’t stop using it until instructed by your provider.
To keep your skin under the brace healthy, always wear a dry and wrinkle free cotton undershirt underneath the brace. Apply Witch Hazel with brisk but gentle slapping movements until dry. Powders may be used sparingly. ZBT or cornstarch are good choices. If you develop redness, pressure areas or sores, contact your orthotist for adjustments to the brace. Wash your brace and pads daily using damp cloth and clear water.

Diet
Narcotics may cause constipation. Avoid straining to have a bowel movement. You may use milk of magnesia or stool softener as directed on an as needed bases. Include fresh fruit, vegetables, and bran cereal in you diet. Drink six to eight glasses of water and juice.

Medications
When you are released from the hospital, a prescription for a pain medication will be provided. It is recommended that you use this medication sparingly and only when Tylenol® (acetaminophen) does not give enough pain relief. Daily limit of Tylenol® (acetaminophen) is 4000 mg per day.

IF YOU HAVE HAD A SPINAL FUSION—Nonsteroidal anti-inflammatory medications such as ibuprofen (Advil, Motrin) and naproxen (Aleve) should not be taken for approximately six to twelve months after surgery as they can slow bone healing. Prescription pain medication will be carefully monitored to guard against overuse and addiction. Non-addicting medication will be recommended as soon as possible.

Long term use of prescription pain medications is discouraged as these medications may interfere with the body’s natural ability to produce substances to help control pain. There are substances produced in the brain, called endorphins, which are similar to morphine. Endorphins help increase our tolerance to pain. When prescription pain medications are used, the brain slows down the production of endorphins. Over time, more and more pain medication is required to receive the same pain relief because of the loss of endorphins. For this reason, it is important to use prescription pain medication for only a short period of time. This will minimize their interference with the body’s natural pain relievers.

Summary
The symptoms you had before surgery may take weeks or months to improve. Be patient and allow your body time to heal. If you have any questions regarding your surgery, contact our office at 651-430-3800 to schedule an appointment or talk with your care team.
Hospitals

- **Abbott Northwestern Hospital**
  800 East 28th Street
  Minneapolis, MN 55407
  (612) 863-4000

- **Fairview Lakes Regional Medical Center**
  5200 Fairview Blvd.
  Wyoming, MN 55092
  (651) 982-7000

- **Fairview Northland Medical Center**
  911 Northland Drive
  Princeton, MN 55371
  (763) 389-1313

- **Fairview Ridges Hospital**
  201 E. Nicollet Blvd
  Burnsville, MN 55337
  (952) 892-2000

- **Fairview Southdale Hospital**
  6401 France Avenue South
  Edina, MN 55435
  (952) 924-5000

- **Gillette Children’s Hospital**
  200 University Avenue East
  St. Paul, MN 55101
  (651) 291-2848

- **Lakeview Hospital**
  927 W. Churchill Street
  Stillwater, MN 55082
  (651) 439-5330

- **Maple Grove Hospital**
  9875 Hospital Drive
  Maple Grove, MN 55369
  (763) 581-1000

- **Mercy Hospital**
  4050 Coon Rapids Blvd NW
  Coon Rapids, MN 55433
  (763) 236-6000

- **St. Joseph’s Hospital**
  69 W. Exchange Street
  St. Paul, MN 55102
  (651) 232-3000

- **United Hospital**
  333 Smith Avenue N
  St. Paul, MN 55102
  (651) 241-8000

- **Unity Hospital**
  550 Osborne Road
  Fridley, MN 55432
  (763) 236-5000

- **Westfields Hospital**
  535 Hospital Road
  New Richmond, WI 54017
  (715) 243-2600

- **Woodwinds Hospital**
  1925 Woodwinds Drive
  Woodbury, MN 55125
  (651) 232-0100

Surgery Centers

- **Greenway Surgery Center**
  2020 28th St. E, Suite 100
  Minneapolis, MN 55407
  (612) 728-7000

- **Restorative Surgery**
  13601 80th Circle N, Suite 100
  Maple Grove, MN 55369
  (763) 432-3666

- **Maplewood Surgery Center**
  1655 Beam Avenue
  Maplewood, MN 55109
  (651) 232-7780

- **Minnetonka Surgery Center**
  15450 Highway 7, Suite 200
  Minnetonka, MN 55345
  (763) 581-8951

- **Ridges Surgery Center**
  14101 Fairview Dr., Suite 400
  Burnsville, MN 55337
  (952) 658-8000

- **Woodbury Surgical Suites**
  587 Bielenberg Dr., Suite 100
  Woodbury, MN 55125
  (651) 493-0343