

PATIENT NAME: _____

YOUR SURGEON: _____ DATE OF SURGERY: _____

YOUR SURGERY WILL BE TAKING PLACE AT: _____

This booklet is your guide during your surgical experience. It is yours to make notes in, mark up, and highlight in any way meaningful to you.

Please take this booklet with you to:

- Every visit with your providers before and after surgery
- Your Pre-Surgical Education appointment
- The Hospital/Surgery Center when you arrive for surgery

It is important to listen to the instructions of your providers, nurses and therapists; **this booklet is only a guide**. Your provider may customize the contents to suit the specific needs of your recovery. This booklet is also a great resource for family members and friends that will be assisting you with your recovery from spine surgery. Feel free to share this with them.

Your provider will assign short video descriptions for you to view about your condition and topics related to your surgery. The videos are located on our website www.neurosciencegroup.com under the “Patient Education” tab. The videos can also be shared with family and friends easily via social media right from our website, so your loved ones can share in your spine surgery experience.



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General Information



Neuroscience Group, established in 1991 by neurosurgeon Thomas A. Lyons MD, FACS, is a multi-specialty physician practice focused on the comprehensive diagnosis and treatment of the nervous system: brain, spine, spinal cord, and peripheral nerves. Neuroscience Group provides highly-trained and well-respected specialists in neurosurgery, neurology, orthopedic spine surgery, pain management, chiropractic care, physical therapy. In addition to specialty training, many of our physicians have completed an advanced fellowship or Ph.D. which allows them to provide the most advanced medical techniques and technology available in northeast Wisconsin.

Role of Your Coordinator

Your NSG Care Coordinator will work with you and your family throughout your surgery experience.

Your Care Coordinator will:

- Be your access point
- Help navigate the surgery experience
- Educate you and your “coach” on pre- and post-surgery care
- Follow up with you after surgery and for feedback on the surgical process

You can reach your Care Coordinator at any time with questions or concerns.

Our goal is to deliver the most advanced treatment and compassionate care to patients and their families.



Angie Hanselman, RN
Neurosurgical Coordinator
for Patient Education
(920) 729-7659

After surgery you can contact your Spine Team Nurses with any medical questions or refill requests:

Dr. Bhattacharjee's & Dr. Yazbak's Nurse at 725-9373 ext. 7642

Dr. Greene's, Dr. Hawkins's, & Dr. Johnson's Nurse at 725-9373 ext 7648



Neuroscience Group provides surgery for you at several locations:

St. Elizabeth Hospital

1506 S. Oneida St
Appleton, WI 54915
(920) 738-2000

OSI-Orthopedic & Sports Institute

2105 E. Enterprise Ave.
Appleton, WI 54913
(920) 560-1000

Mercy Medical Center

500 S. Oakwood Rd.
Oshkosh, WI 54904
(920) 223-2000

Theda Clark Medical Center

130 2nd Street
Neenah, WI 54956
(920) 729-3100

Bellin Health Medical Center

744 South Webster Ave.
Green Bay, WI 54305
(920) 433-3500

Berlin Memorial Hospital

225 Memorial Dr.
Berlin, WI 54923
(920)361-1313

Ministry Door County Memorial

323 South 18th Avenue
Sturgeon Bay, WI 54235
(920) 743-5566

Bay Area Medical Center

3100 Shore Dr.
Marinette, WI 54143
(715) 735-4200

The Spine Team



Dr. Sumon Bhattacharjee

Dr. Andrew Greene

Dr. Randall Johnson

Dr. Philip Yazbak

Dr. Alexander Hawkins



Your Spine Team



Sumon Bhattacharjee, MD, FACS



Christine A. Munson, APNP



Andrew R. Greene, DO



Valerie M. Albers, APNP



Alexander T. Hawkins, MD



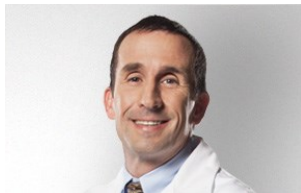
Billie A. Sturgeon, APNP



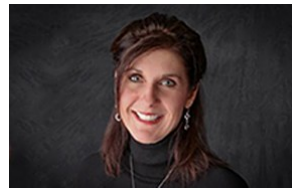
Randall R. Johnson, MD, PhD FACS



Jill M. Hietpas, PA-C



Philip A. Yazbak MD, FACS



Diane L. Vanderlin, APNP



Kristen K. Lampe, APNP

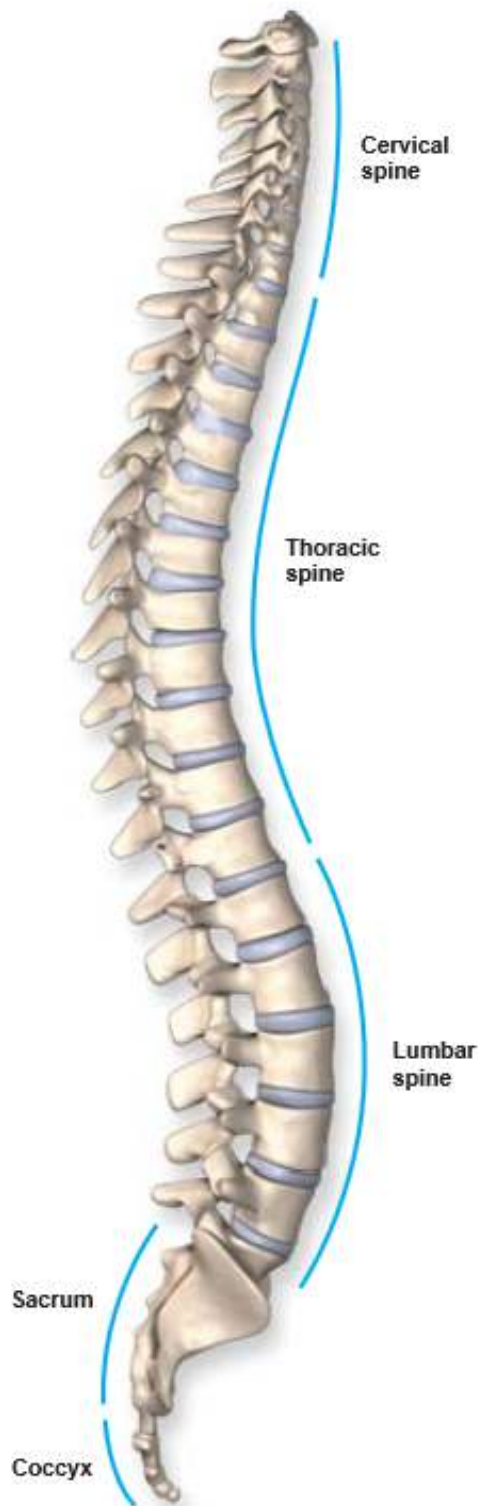


Anatomy of the Spine



excellence in brain,
spine and pain care

**neuroscience
group**



Overview

The spinal column is the body's main support structure. Its thirty-three bones, called vertebrae, are divided into five regions: cervical, thoracic, lumbar, sacral and coccygeal.

Cervical Region

The cervical region consists of seven vertebrae labeled C1 to C7. The first cervical vertebra is called the atlas. The second is called the axis. Together, the atlas and axis form the joint that connects the spine to the skull and allows the head to swivel and nod.

Thoracic Region

The thoracic region, located in the mid-back, consists of twelve vertebrae labeled T1 to T12. These vertebrae serve as attachment points for the ribcage.

Lumbar Region

The lumbar region, commonly called the lower back, consists of five vertebrae labeled L1 to L5. This is the main weight-bearing section of the spinal column.

Sacral region

The sacral region consists of five fused vertebrae labeled S1 to S5. These vertebrae form a solid mass of bone, called the sacrum, which provides the attachment point for the pelvis.

Coccygeal Region

The coccygeal region, commonly called the tailbone, consists of four small vertebrae. These tiny bones may be fused or separate. Together they form the coccyx, an attachment point for various muscles, tendons and ligaments. The coccyx also helps support the body when a person is sitting.

Vertebrae

All together, the vertebrae of the spine's five regions support the weight of the body and protect the spinal cord and nerve roots. Each individual vertebra has a complex set of structures necessary to the overall function of the spine.

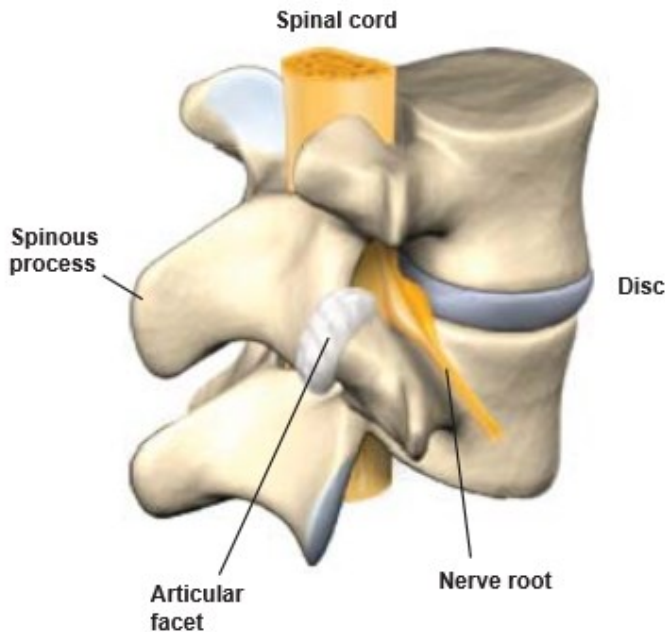
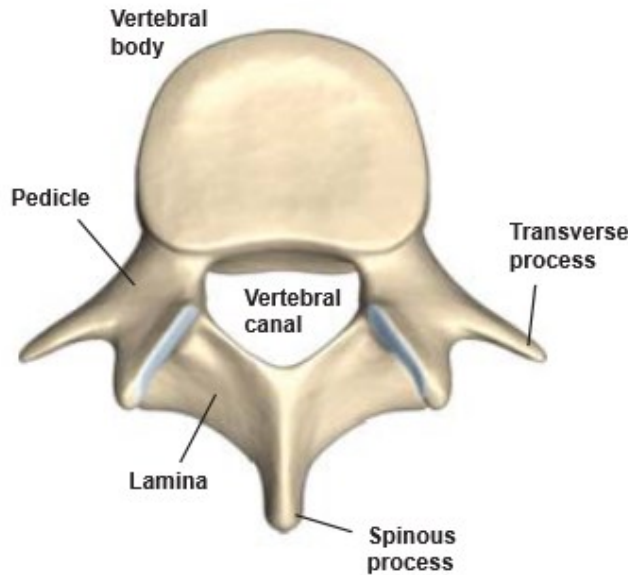
Vertebral Body

The main structure of a vertebra is the vertebral body -- a cylinder-shaped section of bone at the front of the vertebra. It is the main weight-bearing section of the vertebra.

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Anatomy of the Spine



Vertebral Canal

Behind the vertebral body is the vertebral canal. The spinal cord travels through this channel.

Spinal Cord

The spinal cord is the main bundle of nerve fibers connecting the brain to the rest of the body. The spinal cord ends near the L1 and L2 vertebrae, where it divides into bundles of nerve roots called the cauda equina.

Nerve Roots

Exiting the sides of the spine are nerve roots, thick nerve branches that transmit signals between the spinal cord and the other parts of the body.

Pedicles

On either side of the vertebral canal are pedicle bones, which connect the vertebral body to the lamina.

Lamina

The lamina create the outer wall of the vertebral canal, covering and protecting the spinal cord.

Spinous Process

Protruding from the back of the lamina is the spinous process. It provides an attachment point for muscles and ligaments that move and stabilize the vertebrae.

Transverse Processes

Transverse processes protrude from the sides of each vertebra. Muscles and ligaments that move and stabilize the vertebrae attach to the transverse processes.

Articular Facet

The articular facets form the joints where each vertebra connects with the vertebrae above and below it. Each vertebra has four facets (two superior facets and two inferior facets). The facet joints have a covering of cartilage, which allows movement.

Intervertebral Disc

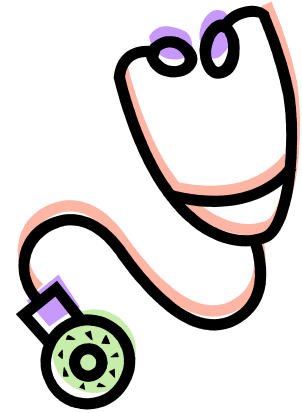
Between the vertebral bodies are the tough, elastic spinal discs. They provide a flexible cushion, allowing the vertebrae to bend and twist. Each disc has a tough outer wall called the annulus fibrosus and a soft interior called the nucleus pulposus.

Before Surgery



Pre-Operative Clearance

You will need to have a physical exam before surgery. It will most likely be with your Primary Care Physician, a medical specialist, or the nurse practitioner or physician assistant working with your surgeon. Your surgeon may order labs, x-rays and other tests in anticipation of surgery. The provider completing your exam may also order additional testing if necessary. Exam results will be shared with your spine team prior to surgery.



Pre Admission to Hospital or Surgery Center

When our office has scheduled your surgery, you may be contacted by a pre-admission screening person from your surgery center location. An appointment may be made for you to meet with a nurse. The goal of this appointment will be to:

- Obtain or update your necessary health information to better ensure a safe surgery.
- Inquire about your needs at home after surgery, including who will be able to help you.

Not **ALL** of the surgery locations require a pre-admission screening. The following is the list of places that do require it.



St. Elizabeth Hospital Pre-Admission Consultation & Evaluation Program (PACE)
920-831-8520

Mercy Medical Center Pre-Admission Testing Department (PAT)
920-223-1450

Theda Clark Pre-Anesthesia Surgical Screening Program (PASS)
920-729-2634

Bellin Pre-Patient Admission Registration & Education (PrePARE)
920-433-7984



STOP the use of ALL vitamins, diet pills and herbal or “natural” supplements

At least 1 week before your surgery you will need to stop the use of all vitamins, diet pills, herbal and natural supplements, especially Fish Oil, Vitamin E, and natural supplements beginning with “G” as they can cause increased bleeding during your surgery.

STOP medications that increase bleeding

Seven days before surgery, any “blood thinners” should be stopped, unless advised otherwise by your provider. This includes prescription and non-prescription drugs as listed below, among others:

- ⇒ **NSAIDS** (Aleve, Advil, Celebrex, Lodine, similar)
- ⇒ Warfarin/Coumadin
- ⇒ Plavix
- ⇒ Combination medicines like Vicoprofen
- ⇒ **Aspirin 325mg**—will be discontinued by your care team
OR reduced to **81mg**.



If you are taking blood thinners, a plan for thinning your blood while off of your medication will be established by your spine team or your primary care physician.

Muscle relaxers, narcotic pain medications and Tylenol (acetaminophen) are allowed until midnight the night before surgery except if specified otherwise by your provider.

Always verify with your Spine Team Nurses if you have questions at

920-725-9373

ext. 7642 or 7648



Quit Smoking

Numerous studies demonstrate that smoking and tobacco products increase the risk of post-operative complications, including:

- Increased risk of lung problems during and after surgery
- Increased risk of infection and poor wound healing
- Increased risk of delayed and compromised bone fusion

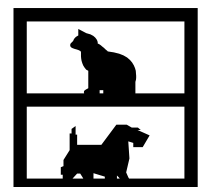


Today would be an ideal time to stop smoking. The following are some resources for quitting smoking:

- **Wisconsin Tobacco Quit Line: (toll free) at 800-Quit Now 800-784-8669**
- **Affinity™ “Call it Quits” Program 1-800-362-9900 or www.affinityhealth.org/callitquits**
- **ThedaCare Tobacco-Free Program at 920-831-5064**

Prepare Your Home for Your Recovery

- Clean and remove all clutter--place extension cords and telephone cords out of walkways
- Remove throw rugs and secure loose carpeting
- Cut grass, take care of the garden and complete other yard work
- Wash and put away laundry
- Prepare meals and freeze them
- Organize closets and drawers so clothes worn the most are within easy reach. Do NOT use bottom drawers or keep shoes on the closet floor.
- Arrange frequently used items at waist level throughout the house to avoid bending and reaching
- Put clean linens on your bed
- Purchase or borrow any medical equipment to assist with activities of daily living, ie—bathtub grab bar, toilet riser, bath or shower chair/bench, shoe horn, step stool, extended length grabber, etc.
- Prepare to have someone get your mail and care for your pets and/or loved ones, as necessary.
- Place no-skid mats inside and outside of the shower.



Packing for Surgery: What to bring

- This Spine Surgery Guide
- Comfortable slippers to wear when you are up in your room, bathroom or in the halls
- Personal hygiene products like deodorant, toothbrush, toothpaste, comb, brush
- Comfortable, short robe—avoid bringing one that has to be “stepped into”
- Loose fitting clothing that is easy to get on. Shirts that have buttons/zipper down the front
- A list of your current medications with dosages
- Your CPAP machine if you have one
- A copy of your Power of Attorney paperwork
- Important phone numbers of family and friends
- Books, magazines , or tablet
- Glasses—do not bring contact lenses
- A positive and confident you!



What to do the Day and Night Before Surgery

- **NO** alcoholic beverages or smoking 24 hours before your surgery
- Eat a light, healthy dinner the evening before
- Remove nail polish from fingernails
- **DO NOT** shave area that will be operated upon—avoiding this will help **PREVENT** infection; if necessary this will be done in the prep area or operating room
- If you develop a cold, fever, rash or other concerning conditions, contact your provider **BEFORE** the day of surgery
- Our office will contact you 1-2 days before your surgery to give you your expected arrival and surgery times. If you have not received it by the morning before your surgery, please call our office at:



920-725-9373 ext. 1143



What to do the Night Before Surgery:



Shower Prep: Hibiclens Antibacterial Soap

1. Wash face and hair with your own soap/shampoo in the shower; rinse thoroughly.
2. Starting from the neck down, wash your entire body with Hibiclens, paying close attention to the area of surgery. **AVOID CONTACT WITH EYES.** Only use half of the bottle, saving the second half for the morning of surgery. Rinse thoroughly.
3. Do not apply any lotions, powders or ointments to skin after cleansing.

DO NOT eat or drink anything after midnight, INCLUDING WATER AND COFFEE, unless otherwise directed by your provider.

Eating or drinking the day of surgery may cause your surgery to be rescheduled or cancelled.

YOU MAY TAKE any medications you were instructed to with a sip of water the morning of surgery.

DO NOT chew gum



Surgery Center



Day of Surgery:

- Repeat showering process with the **Hibiclens** soap...See **“SHOWER PREP”** on the previous page for exact directions if needed.
- Take any medications you were directed to take with a sip of water. If you are unsure of what medications to take please clarify with our office at 920-725-9373.
- Avoid wearing makeup, nail polish, deodorants, lotions or colognes

You will arrive at the Surgery Center. Make sure you have the following for registering:

- A copy of your Advanced Directive
- Your insurance card, driver’s license or photo ID
- Any co-payment if necessary for your insurance



You will be directed to the surgery “prep” area. Once there you will:

- **Change into a hospital gown**
- **Sign your surgical consent**
- **Have an IV started**
- **Meet with your anesthesiologist and operating room nurse.**

Your family may or may not be permitted in the prep area during this time.

When you meet your anesthesiologist s/he will have reviewed your medical information and current medications in order to determine an appropriate anesthesia plan. S/He will then review your anesthesia plan and answer any questions you may have.

When ready to roll to the operating room, your family will be directed to the waiting area. The OR nurse will update them during surgery, and the surgeon will speak with them after surgery. The waiting area may have real-time electronic tracking board for your family to “follow” your progress, and your family may be provided with a cell phone or other device to allow them to leave the waiting area yet still remain accessible to the care team.

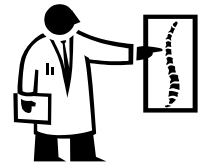


Day of Surgery:

Your provider may require monitoring of your nerves during surgery. You will receive a letter from **Neuromonitoring Associates of Milwaukee** with details and contact information if you have questions. We also have a nice video on our website with a description of the monitoring. Go to our website www.neurosciencegroup.com, click on “Patient Education”, then click on “Videos”, once the video main screen appears, select “Neurological”, then “Spine”, then “Surgical Procedures” and lastly select the title of the video “Intaroperative Montioring (IOM) of the Nerves”.

After surgery you will be taken to the (PACU) (Post Anesthesia Care Unit); typical stays are 45 to 120 minutes. In PACU:

- **Your pain, blood pressure, and nausea will be managed**
- **Your vital signs and neurological exam will be monitored closely**
- **You MAY have an X-ray and/or labs done**



Equipment attached to you after surgery may include:

- IV for fluids and medications, including pain medications
- A wound drain (Hemovac, JP) to drain fluid from the surgical site
- A Foley catheter to drain your bladder
- Oxygen prongs in your nose to allow adequate oxygen delivery to your tissues
- TEDS and/or SCDs (leg wraps) to help prevent blood clots
- Cryocuff (ice pack) to your low back to reduce surgical site pain
- Neck brace if you had cervical surgery

Once you have recovered adequately from anesthesia, you will be moved to the outpatient surgery or inpatient surgery unit where you will spend the rest of your time until discharge. Your care team will outline a plan with goals for discharge and a positive recovery.

Depending on the type of surgery, personal needs, and progress you may reach your goals sooner or later than anticipated.



Pain Management During Your Stay

We are devoted to managing your pain after surgery. The care team will be asking you about your pain level frequently and helping set realistic goals for pain relief so you can actively participate in your recovery.

As a spine surgery patient, you will be expected to:

- Share with your care team what has and hasn't worked for in the past for pain control.
- Have realistic pain control goals.—being PAIN FREE immediately after surgery is not a realistic goal.
- Communicate with your care team about your pain. The staff will be asking you to rate your pain on a scale of "0-10". See below for an example of the pain scale. They will also be monitoring you to determine your response to the medications.
- Request pain medication when pain first begins so pain can be managed efficiently.






Pain Management Medications:




There are many medications used to manage pain after spine surgery. The options your providers use are:

- **IV (intravenous)**: Morphine, Dilaudid and Fentanyl are the most commonly used medications right after surgery. During the first 12-24 hours after surgery you may receive IV pain medication through a PCA (patient controlled analgesia) pump. A PCA is programmed to give you the medication in a specific dose at a specific frequency. Muscle relaxants may also be given IV to help with your discomfort.
- **Oral**: You will be transitioned to oral pain medication as soon as possible after surgery. The oral forms of pain medications will give you a more sustained pain relief. It is important to make a plan with your care team about staying “ahead” of your pain which allows you to participate in your recovery. Commonly used oral pain medications after spine surgery are: Hydrocodone/acetaminophen (Vicodin, Lortab, etc) and Oxycodone/Acetaminophen (Percocet). Oral muscle relaxants (Valium, Flexeril, Zanaflex) may be used as well.

Pain medications may cause side effects. Make sure that you alert your care team if you experience **any** adverse symptoms after taking **any** of the pain medications prescribed.



REASON FOR MEDICINE	MEDICINE NAMES Generic (Brand)	MOST COMMON SIDE EFFECTS
<p>Pain Relief</p> 	<p>Fentanyl hydrocodone/acetaminophen (Vicodin, Lortab) hydromorphone (Dilaudid) morphine oxycodone/acetaminophen (Percocet) Tramadol (Ultram)</p>	<p>dizziness/drowsiness constipation queasiness/throwing Up rash confusion</p>
<p>Muscle Relaxer</p> 	<p>diazepam (Valium) cyclobenzaprine (Flexeril)</p>	<p>dizziness/drowsiness headache Confusion</p>
<p>Prevent Infection</p> 	<p>cefazolin (Ceftin) ceftriaxone (Rocephin) clindamycin (Cleocin) piperacillin/tazobactam (Zosyn) vancomycin (Vancocin) ciprofloxacin (Cipro)</p>	<p>stomach Upset diarrhea rash/flushing headache</p>

REASON FOR MEDICINE	MEDICINE NAMES Generic (Brand)	MOST COMMON SIDE EFFECTS
Nausea or Throwing Up 	ondansetron (Zofran) promethazine (Phenergan) scopolamine patch	headache constipation tiredness/ drowsiness
Heartburn or Reflux 	lansoprazole (Prevacid) pantoprazole (Protonix) ranitidine (Zantac)	headache diarrhea
Blood Thinner to Stop or Breakdown Blood Clots 	enoxaparin (Lovenox)	risk of bleeding

Non-Drug Pain Relief Methods:

Pain medication is only part of managing your pain; there are many other methods you may find helpful in making you more comfortable during your recovery from surgery.

- **Ice:** Ice has many benefits after spine surgery including: reducing bleeding and swelling, helping control pain and muscle spasms. You may receive an ice pack while you are in the Recovery Room. The care team will assist you with placement and refilling of the ice pack.
- **Relaxation/Distrraction:** Discomfort after surgery can be physically as well as emotionally draining. Relaxation exercises and deep breathing can help relax you and your muscles to help your healing body. Also, reading, listening to soft music or watching TV can help distract you from focusing only on your discomfort.
- **Exercise:** You will be up and moving with the nursing staff and/or therapy everyday during your recovery to help decrease stiffness and discomfort. Frequent changes in position often are recommended.



- **Rest:** Along with the activity you need to participate in, you also need to give your healing body rest and recovery time. Let your discomfort be your guide as you increase your activity and take short frequent rest periods as needed.

Your Lungs after Surgery:

It will be important to prevent respiratory infections after your surgery. You will be instructed by your care team on how to use an Incentive Spirometer for breathing exercises. Breathing exercises should be done 10 times an hour while awake.



**Incentive
Spirometer**

Diet:

You may be given ice chips in the PACU or upon arrival to the neuro/surgical unit, if you have not had any problems with nausea.

Your diet will be advanced depending on how you are tolerating oral intake. Most often patients are started on clear liquids and advance to a regular diet. It is important that you let your nurse know if you have any nausea—this can be treated. You will be encouraged to drink fluids to help prevent dehydration and constipation.

* If you are **diabetic** you will transition to a diabetic diet and most likely restart your home diabetic medications. We will monitor your blood sugars during your stay to keep them under good control.

- **If you have neck surgery:** with an incision is in the front of your neck you will initially want to stick to liquids and softer foods for comfort. Avoid foods that are tough or require lots of chewing. Throat lozenges are also a good way to help with any throat discomfort.

Activity:

Your care team will make you aware of the specific activity ordered by your provider. **Early activity is very important after your surgery.** Activity such as walking will:

- * **Increase blood flow**
- * **Reduce Pain**
- * **Improve bowel and bladder function**
- * **Prevent blood clot formation**
- * **Minimize muscle spasm and swelling**
- * **Decrease ALL surgical complications**

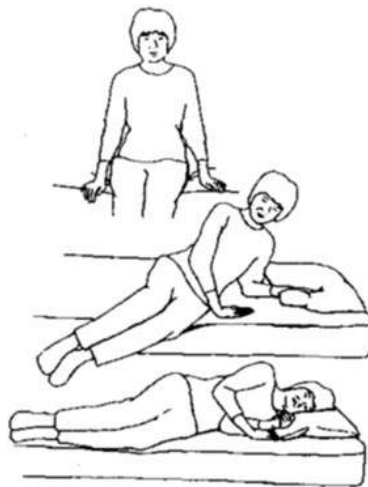


It is expected that you will be up and out of bed the day of surgery unless otherwise ordered by your provider. The nursing staff and possibly physical therapy and/or occupational therapy will assist you with mobility and safety when getting in and out of bed/chair, getting up to the restroom and performing activities of daily living (ADL's). Assistive devices may be used depending on your needs.

During the day you should change positions or get up and move around every 20-30 minutes during the first week after surgery (not required at night)

Getting up from a laying position

Turn on one side, draw knees up and drop feet over the edge of the bed. Sit up by pushing up with your hands.



LOG ROLL:

When moving in bed or getting in/out of bed you will be asked to “**log roll**” to keep your body aligned as you move.



Getting up from a Chair:

While holding onto the arms of the chair, scoot yourself to the front edge of the seat. Lean forward at your hips. Move one foot just under the edge of the chair and move the other foot about half a step forward. Use your arms to push up to standing— do this in one continuous motion. Remember to breath out while standing up. If the chair does not have arms place your hands on your thighs for support when pushing upwards.

Physical Therapy:

If your provider orders physical therapy (PT) during your stay, they will most likely begin working with you the day after surgery. PT will assess your needs for discharge, review spine precautions with you and teach you how to move about safely at home. If there is assistive equipment that therapy feels would benefit your recovery they will make appropriate recommendations upon discharge. They will also assist with proper use of your brace. You may also be set up for therapy after your first follow up appointment or as directed by your provider.

Brace:

Your provider may prescribe a brace for you based upon the type of surgery. The brace is designed to support and protect your spine while you heal. It is possible the brace will be fitted before surgery. You will need to wear the brace as ordered by your provider. If you have any questions regarding your brace during your stay, please communicate with your nurse . At your first follow up appointment your provider will outline further instruction regarding brace usage.

Your Discharge to Home:

You will be scheduled for a postoperative appointment at the time your elective surgery is scheduled. Call and clarify with our office if you are uncertain as to the date, time, or location. It is important that you attend this appointment.



Discharge Goals

There are several goals that need to be reached prior to being discharged home: *(check off and date when completed if you'd like)*

_____ Drinking and eating well

_____ Tolerating oral pain medications with adequate pain relief

_____ Walking independently with no assistive devices

_____ Urinating without any problems

_____ Getting in and out of bed and in and out of the bathroom either independently or with minimal assistance from another person

_____ Passing gas—it is not necessary to have a bowel movement before discharge



A Discharge Planner will meet with you during your hospital stay to discuss your discharge needs, if necessary. It is a good idea to start thinking about discharge needs before surgery takes place. Knowing ahead of time what your needs are and who you have available to assist you will help when your discharge day arrives.

Caring For Yourself at Home



Incision Care:

You will be given specific incision and dressing care instructions upon your discharge. Your provider and care team nurse will go over the instructions with you before you leave.

Make sure you **FULLY** understand how to care for your incision **PRIOR** to leaving. It may be helpful to have your support person there when the discharge instructions are being discussed, so they can assist in your recovery and ask questions if needed.

Care tips for your healing incision are listed below:

- Avoid submerging your incision in water, (no swimming pools, baths or hot tubs) until incision is completely healed
- Keep your incision clean and dry. Do not pull on sutures, staples or steri-strips. **Follow specific dressing instructions from your provider**
- **ALWAYS** wash your hands before caring for your incision/wound
- Keep your pets away from your incision
- Notify your provider immediately if you have chills and/or fever >101 degrees
- Notify your provider's office immediately regarding wound drainage, odor, redness and/or increased pain **(920) 725-9373 ext. 7642 or ext. 7648 (triage nurses)**

Controlling Your Pain:

- You will be prescribed oral pain medications at discharge. You may be required to take the paper prescription to your pharmacy depending on what type of medication is ordered.
- Schedule your pain medications based on your activity, the first few days take them on a scheduled basis to stay "ahead" of the discomfort. Try to take pain medications 30 minutes before activity.
- Change positions about every 20-30 minutes while awake for the first week after surgery to prevent stiffness.
- Ice can decrease discomfort; use an ice pack or the cryocuff for 20 minutes at a time. Do not apply ice directly to skin.
- Put yourself in comfortable positions, and use pillows for support while lying on your side, your back or while sitting up.



Post Operative Exercises:

You will see a physical therapist when you return to Neuroscience Group for your post-operative visit. At this time, the therapist will give you an individualized exercise program, but to improve your recovery start walking as soon as you get home.

Walking:

- When you return home, start walking for 5 minutes at comfortable speed, six times per day, for a total of 30 minutes per day. The goal is to walk for 30 minutes once per day, but that takes time to achieve.
- The progression should follow the table below. **(EASY=no increase in back or leg pain and no shortness of breath.)** You should be able to carry on a conversation while walking; if not, you are working too hard and need to slow down your speed.
- You can add incline if you are using a treadmill, as you are able; the maximum incline should be 2%. A nice progression for increasing the incline is .5% every week.

Days	Minutes of Walking	Times per Day	Total Minutes for the Day
1-5	6	5	30
6-10	10	3	30
11-15	15	2	30
16-20	30	1	30

This is a "Sample" chart for your walking progression. Only increase your minutes of walking when it is EASY (no increase in back or leg pain and no shortness of breath).



Body Mechanics After Surgery

DO NOT bend at the waist, **DO** bend at the hips and knees

DO NOT lift objects heavier than 10 lbs. (a gallon of milk)

DO NOT twist your trunk.

Sleeping:

- You can sleep in the position of choice. **EXCEPT:** if you have had NECK surgery then you should avoid sleeping on your stomach.
- Use pillows to help with positioning—under your knees while lying on your back or between your legs when lying on your side.



Sitting:

- To assist in proper sitting position, keep a lumbar roll or a towel in the small of your back.
- Keep your buttocks fully back in the chair.
- Avoid deep, low chairs; it's challenging to get out of when you have had recent low back surgery..



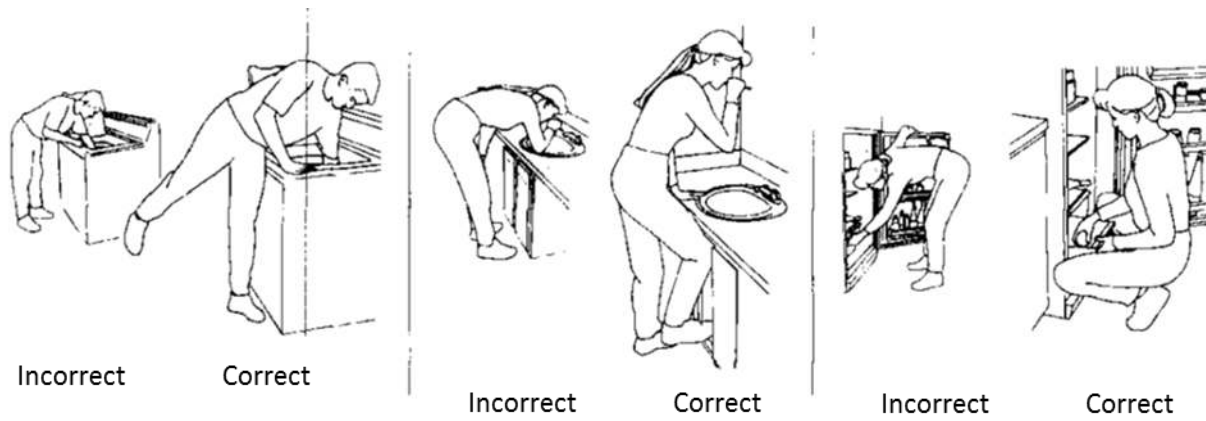
Incorrect



Correct

Standing:

- Change positions frequently by weight shifting, placing one foot up on a low stool or walking around
- Wear comfortable, supportive shoes



Pushing/Pulling:

- Always PUSH, rather than PULL
- Keep your back straight and head up
- Keep knees and elbows slightly bent

Toileting:

- Don't allow yourself to fall to the toilet seat
- Use a toilet riser to keep from bending when sitting on the toilet. Bend your knees and use a grab bar or walker to ease yourself down onto the toilet.
- Make sure you are not twisting when grabbing for toilet paper
- Avoid twisting when wiping. If necessary toilet tissue aids are available to assist with reaching.

Bathing:

- Consider a no skid mat in tub and on the floor outside of the tub/shower to prevent falls
- Consider placing a shower caddy over the shower head to easily reach bathing supplies
- Have someone nearby when you shower, until you feel completely safe
- Your brace/collar may be removed for showering unless otherwise instructed
- Use a long handed bath brush to assist with reach
- Utilize a shower chair if necessary for safety until you feel comfortable
- Use a hand held shower head if possible



Dressing:

- Put pants, socks and shoes on while sitting in a chair
- You can use a reacher to put your pants over your feet and slide them up past your knees, then stand to get them up over your hips
- Wear clothing that is simple to put on and that is not tight on your waist or at your incision
- Slip on shoes, loafers or canvas tennis shoes are the easier to get on and off. Avoid shoes with laces —if you have shoes with laces, you may need someone to assist you with tying the laces.

Getting into a Vehicle:

- To sit, have your back to the seat
- Slowly lower yourself to the seat by using the back of the seat and the door for support
- Bring legs into the vehicle one leg at a time as you shift your shoulder and head to face the front and move your shoulders and hips in one motion
- Limit riding in a car to short distances,; if you need to be in a car on a long trip you should get out of car at least every hour to stretch and diminish the stress caused by sitting
- Check with your provider about when you may return to driving yourself



Potential Postoperative Complications

To Avoid Constipation:

- Drink at least eight glasses (8oz) of water daily, avoid drinking a lot of water before bed though to prevent getting up in the night
- Eat 2-3 servings of fruit a day; fresh fruits with the skin on are preferred to get the fiber needed
- Take the prescribed stool softeners (as long as you are taking the pain medications)
- Walk as much as you can tolerate during your recovery time
- Contact your provider if you have not had a bowel movement 2-3 days after you arrived home from the hospital. **Call 920-725-9373** and ask for your care team nurse.

Blood Clots in Your Legs:

When you have surgery, your body is at risk for blood clots in your legs. Blood clots are caused by slow circulation. You may be admitted to the hospital and prescribed blood thinners if a blood clot has developed. Your provider may put you on a medication during your stay that will help prevent blood clots— this will depend on your history, your type of surgery and your length of hospital stay. The SCD (leg pumps) that are used during your stay help prevent blood clots as well.

Signs of a Blood Clot in your Leg:

- Swelling in the ankle, calf or thigh that doesn't improve with elevation
- Leg is hot to touch
- Heat, pain and tenderness in the calf, groin area or back of leg

Prevention of Blood Clots:

- Early and Frequent Walking
- Sufficient Hydration
- Performing Foot/Ankle Pump Exercises
- TEDS and/or SCDs (leg wraps)



Surgical Site Infection:

Preventing infection after surgery is a top priority for our spine team. Most patients that have surgery never develop any type of surgical site infection, but we want to share with you the symptoms of an infection and ways you as the patient can help prevent infection during your stay and once you are home.

Symptoms of Infection:

- Redness, warmth, and increased pain at the incision site
- Fever
- Cloudy or foul smelling drainage from your surgical site



Infection Prevention:

- **ALWAYS** wash your hands before and after contact with your surgical site
- Inspect your incision often for signs of infection, if you cannot see your incision ask a loved one to look
- Make sure you fully understand any dressing or incision care needed **BEFORE** you leave the hospital
- Keep pets away from your incision
- **Call your provider immediately if you notice any of the above signs of infection. (920) 725-9373**



DOs and DON'Ts for a Positive Recovery

Above all , if any activity causes an increase in pain, *STOP* doing it!

DO wear your collar or brace as directed by your provider. Make sure you are fully aware of the instructions regarding the brace or collar you were prescribed before you are discharged.

DO NOT stay in bed all day once you are home; doing so puts you at risk for several complications that will slow your recovery .

DO NOT use your time off after surgery to catch up on household chores and physical work.

DO change positions about every 30-45 minutes; if you're sitting, get up and walk around a bit, even if it is just to the bathroom.

DO NOT bend, twist or lift more than 10 lbs (about a gallon of milk) until your follow-up with your provider.

DO NOT drive until cleared to do so by your provider; minimize long trips in the car until you have followed up with your provider.

DO sleep on your side or your back if comfortable; use pillows for support. You may choose to sleep in a recliner during the first few days home after neck surgery for comfort.

DO remember to use the "log roll" technique when getting in and out of bed. Keep your knees bent when rolling. See the proper technique on page 23.

DO NOT do any exercising other than walking until you are cleared to by your provider.

DO make sure you contact our office 3-4 days before you run out of any pain medications to ensure that you have enough when you need them. We do **NOT** refill prescriptions on the weekends.

DO be sure to drink at least **8 glasses** of water daily. Increase your intake of fruits and vegetables everyday to help prevent constipation.

DO take all stool softeners as prescribed to prevent constipation which can lead to increased discomfort.

DO use this guidebook as a reference throughout your entire surgery recovery, clarify any questions you have with your Neuroscience Group Spine Team.

***No matter what the question or concern is contact your
provider's office as the FIRST step. (920) 725-9373***



Insurance Information:

The following are some useful reminders about the financial element of your surgery process. It is our goal to assist you with all aspects of your surgical experience. Our financial advocates are here to help you!

☐ Review Your Coverage

Make sure to take time and review your insurance coverage. Our office will find out your insurance benefits prior to your surgery. Please contact us at **(800) 201-1194 ex. 1205** if you have any questions regarding your bill or insurance coverage.

☐ Coverage Paperwork

If you have paperwork that needs to be completed (FMLA, AFLAC, disability, etc) please direct them to our office. Your provider's care team will complete the forms as soon as possible. The following are the fees for completing forms:

FMLA \$20.00

Short Term Disability: \$10.00

Please make sure your portion of the paperwork is complete and signed (if applicable) before directing it to our office.

☐ Billing Department

Based on the guidelines of your surgery, you will receive bills from different specialists that are involved in your surgery care. The following are some of the departments you may get a bill from in regard to your surgery.

- Neuroscience Group (Surgeon, Assistant, brace)
- Anesthesia
- Hospital/Facility Fee
- Neuro-Monitoring Service
- Radiology
- Bracing Services (Great Lakes Orthotics)

☐ Payment Options

Our office has several ways for you to pay your bill:

1. Mail your payment
2. Pay your bill over the phone
3. Pay your bill online at the Neuroscience Group website. Our user friendly instructional video explains the process if you need help.

