

Pre and post-operative information to help guide you through surgery. Please contact our Patient Educator, Heather Gueller, with any questions or concerns.

Heather Gueller RN, BSN
hgueller@nscwi.com
(920) 882-1160

SPINE FUSION SURGERY CARE PATH



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Phone Contacts:

Patient Educator: Heather Gueller, RN, BSN
hgueller@nscwi.com
(920) 882-1160



FOR SERIOUS MEDICAL EMERGENCIES CALL 911

Office Hours are Monday – Thursday 8:00am – 5pm, and Fridays 8:00am – 4pm

William S. Bodemer, MD (920) 882-2343
Jennifer Heenan, APNP

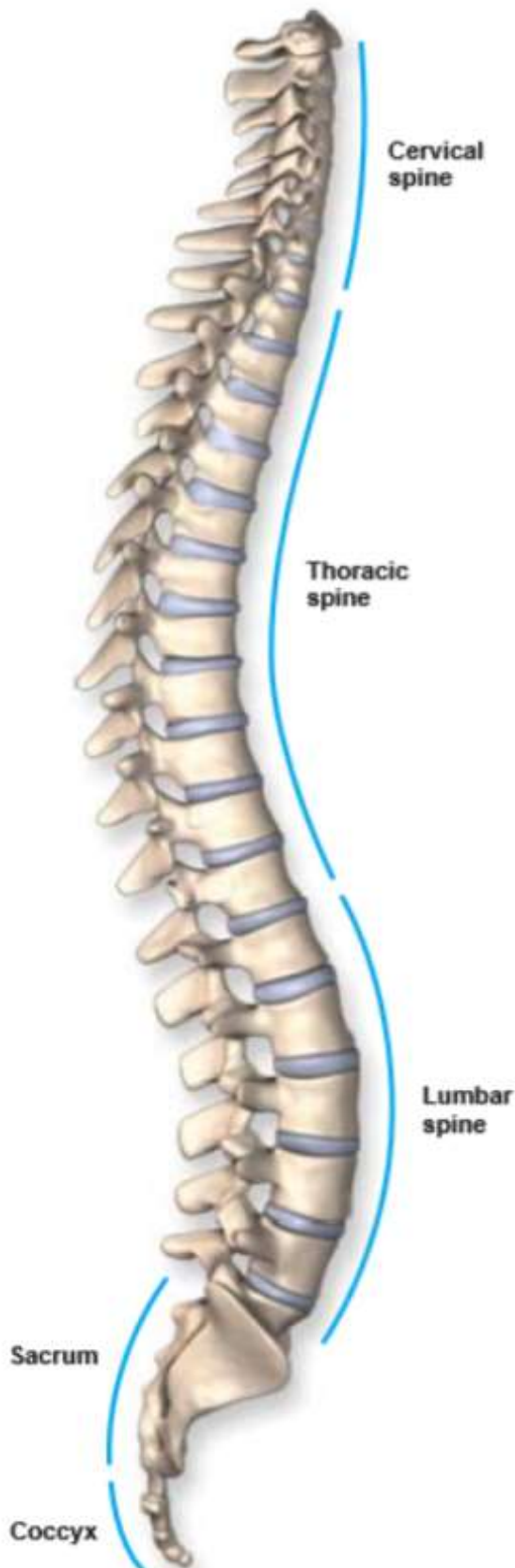
David C. DeWitt, MD (920) 882-8200
Jill Buchinger, APNP
Pamela Verkuilen, APNP

Karl A. Greene, MD, PhD, FACS (920) 882-2337
Anthony Lee, PA-C

Thomas M. Wascher, MD, FACS (920) 882-0818
David Bond, APNP

**If after hours, call (920) 882-8200 or (888) 231-5236 and ask for the
Physician on call**

Spine Anatomy:



Overview

The spinal column is the body's main support structure. Its thirty-three bones, called vertebra, 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 the 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 12 vertebrae labeled T1 to T12. These vertebrae serve as attachment points for the rib-cage.

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 Section

The sacral region consists of 5 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

Altogether 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 complete set of structures necessary to the overall function of the spine.

Intervertebral Discs

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

Vertebral Body

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

Vertebral Canal

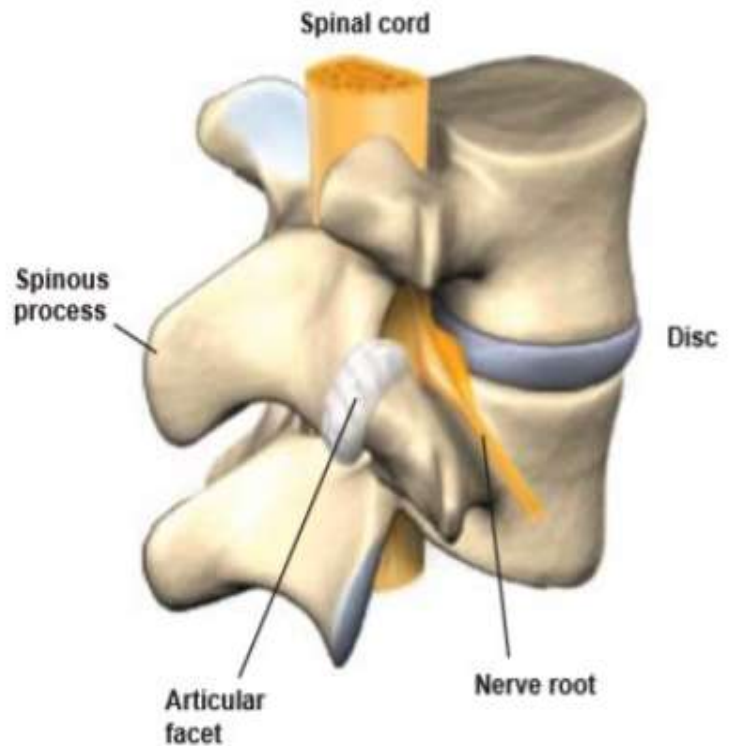
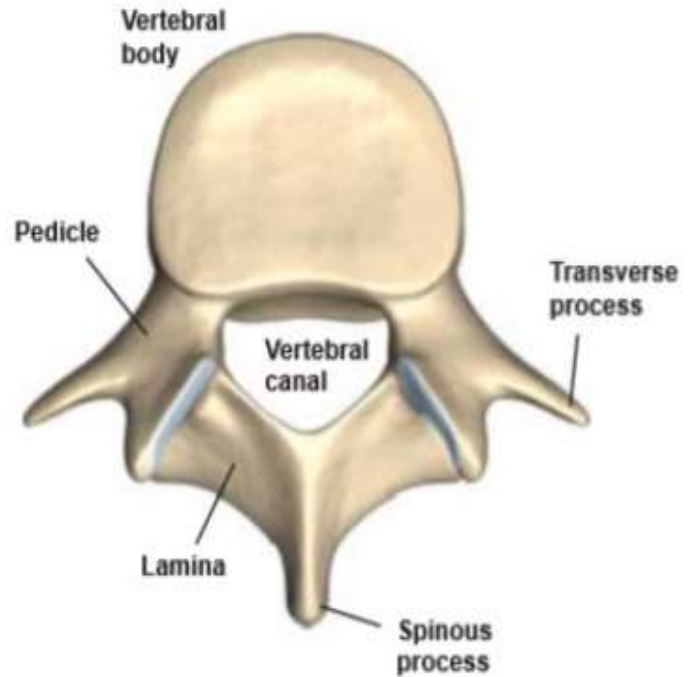
Behind the vertebral body is the vertebral canal. The spinal cord travels through this channel.

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



Frequently Asked Questions:

1. What is the recovery time?

Each patient heals from surgery at a different pace. At first, you will have lifting, bending and twisting restrictions for approximately the first few weeks. After your first post-operative follow up appointment, these restrictions will be readdressed by your surgeon based on your recovery progress. More complete recovery can range from 4-6 weeks.

2. When can I return to work?

It depends on the nature of your job. If your work is mostly sedentary, it is possible for you to return in 1-2 weeks. If your work is more active, you may require up to 4-6 weeks (or longer) before you can return to full duty. *In some cases, more or less time off will be necessary.*

3. How long will I be on pain medication?

It is not unusual to require some form of pain medication. Initially, the medication will be stronger (such as a narcotic and/or muscle relaxant). Taking it as prescribed usually provides the most effective pain relief. Most people are able to wean off their narcotic pain medication within the initial weeks following surgery and progress towards over-the-counter acetaminophen/Tylenol for pain control. You will be instructed when aspirin products can be resumed. **NSAIDs (e.g. ibuprofen) need to be discussed with your provider prior to restarting.**

If you are currently taking gabapentin, DO NOT stop gabapentin (Neurontin) until you are instructed to by your surgeon.

4. How soon can I take a shower?

Follow your surgeon's instructions when to shower. Using a shower chair may offer you extra support and comfort until you become more mobile. A hand held shower head can also be helpful and is easy to install. Do not take a tub bath without permission from your surgeon. (This also includes swimming in pools or lakes and using hot tubs.)

5. When can I travel?

It is best that you check with your surgeon, but in general you can travel (as a passenger) as soon as you feel comfortable doing so. You should get up to stretch or walk at least once an hour and stay well hydrated when taking long trips. This is important to help prevent blood clots.

If you are traveling from out of town, you may want to stay in a hotel the night before surgery. Please contact our Patient Educator, Heather Gueller, if accommodation information is needed.

Things to Avoid After Surgery:

Let pain be your guide. If any activity causes an increase in pain, STOP.

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, physical work, or heavy labor.

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 while taking narcotics.

DO NOT do any aquatic exercising until approved by your provider.

DO NOT take a bath, swim or other activities that would involve submerging the incision under water until it is well healed (2-3 weeks).

DO NOT take NSAIDS (i.e. ibuprofen, Motrin, Aleve, Advil, Naproxen, diclofenac) until talking with your surgeon following fusion surgery.

DO NOT have any dental procedures done within 3 months of your surgery unless approved by your surgeon. This includes routine cleanings.



Things To DO For a Positive Recovery:

Movement can help keep your joints and muscles flexible, reduce pain, and improve balance and strength. Balance rest with activity.

DO increase physical activity as tolerated. Regular physical activity helps prevent constipation, makes you feel better about yourself, helps manage your weight, improves large back muscle tone and core strength and can prevent future episodes of back pain. The goal is 1-3 miles per day or walking for 1 hour. You can divide this up during the day as tolerated.

DO let pain be your guide and balance activity with rest.

DO use ice or a cooling device to help with post-operative pain, and inflammation.

DO if given a brace or collar, follow instructions given by your provider. Make sure you are fully aware of the instructions before you are discharged. If you need further instructions for any medical equipment while at home contact our Patient Educator- Heather Gueller.

DO change positions about every 30 minutes; hourly walking (even short distances) is a goal.

DO sleep on your side or your back if comfortable; use pillows for support and extra comfort.

DO make sure you contact our office at least 24 hours 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 every day to help prevent constipation.

DO take stool softeners and or laxatives as prescribed to prevent constipation which can lead to increased discomfort.



Pre-surgical Clearance:

Clearance appointments help providers determine that overall health conditions are optimal for surgery, or if additional interventions are required to decrease surgical risks.

Our office will assist you in scheduling all necessary appointments before surgery. It is important to have your exam and tests completed prior to your surgery to prevent possible delays.

Your Physical Exam:

You will need to have a physical exam within 30 days of your surgery. Our surgery coordinators will schedule an appointment most likely with your primary care physician, or another provider in their office.

Other Tests before Surgery:

Labs, x-rays and other tests may be ordered in anticipation of surgery. The provider completing your physical exam may also order additional testing if necessary. Exam results will be shared with your spine team prior to surgery.

Medications before Surgery

Following instructions from your care team will prevent your surgery from being delayed. Several medications, herbal supplements, and vitamins can have effects on bleeding, swelling, increase risk of blood clots and cause other problems if taken around the time of surgery.

A complete list can be found in the Pre-op folder on the yellow "Medication to Avoid Before Surgery" sheet.

Medications to discontinue 1-2 weeks prior to surgery

- ❖ **ALL ASPIRIN PRODUCTS**
- ❖ **ALL NSAIDS** (Nonsteroidal anti-inflammatory medications) including:

- | | | |
|------------------------|-------------------|--------|
| *Motrin (Ibuprofen) | *Aleve (Naproxen) | *Advil |
| *Voltaren (diclofenac) | *Excedrin | |



You may also be required to stop other anticoagulation medications such as Plavix, Coumadin, and Warfarin. You will receive a phone call from Heather, our patient educator, to ensure medications have been discontinued appropriately prior to surgery. If you have questions, please contact Heather at 920-882-1160.

Neurological Monitoring During Surgery:

Your surgeon **MAY** determine the need for neurological monitoring during your surgery.

We use Neurological Monitoring Associates of Milwaukee and National Neuromonitoring Services to provide these services. A neurological monitoring team assists in your surgical care to monitor nerve function throughout your procedure and provide a safer experience for you. If your surgeon requires their services, you will be informed of this at the visit with your surgeon.

If you have any insurance coverage questions or cost of their care during your procedure, please call their office directly.

For surgeries performed at:

Theda Care-Neenah and Aurora Medical Center, Oshkosh

Neurologic Monitoring Associates of Milwaukee

414-351-6666

<http://neuromonassoc.org>

Orthopedic Sports Institute, Appleton and Mercy Medical Center, Oshkosh

National Neuromonitoring Services

855-598-2800

www.nationalneuro.net

On the morning of your procedure, the Neurologic Monitoring Physicians will meet with you prior to surgery to explain the neurologic monitoring selected, answer any questions or concerns you may have, and obtain your consent.

If you are unsure whether neuromonitoring is needed for your procedure, please contact Heather Gueller, our patient educator, at 920-882-1160.

Smoking Cessation:

Nicotine and tobacco products increase the risk of postoperative complications.

Quit Smoking before Surgery

Smoking before surgery increases risk after surgery and slows the healing process. It can lead to:

1. Lung problems during and after surgery, including pneumonia.
2. Infection and poor wound healing
3. Degeneration of your spine and discs

Most fusion surgeries require patients to be nicotine free for *at least 6 weeks*. This includes tobacco products, smokeless tobacco products, chewing tobacco, nicotine patches and nicotine gum.

Your surgeon may decide to postpone or cancel surgery if you have NOT adhered to smoking cessation as directed.



Resources to Help You Quit

- ❖ Wisconsin Tobacco Quit Line: (toll free) at 800-Quit Now 800-784-8669
- ❖ The National Alliance for Tobacco Cessation provides the latest information on how to quit smoking with its program called “Become an EX.” Proven methods to teach smokers how to quit and stay quit are provided.
- ❖ ThedaCare Tobacco-Free Program at 920-831-5064

Home Preparation:

Setting up your home to make recovery environment as safe and functional as possible

1. Clean and remove all clutter. Place extension cords and telephone cords out of walkways, or secure down with tape.
2. Remove throw rugs and secure loose carpeting.
3. Prepare a room on the main living level if you sleep upstairs, or set things up so climbing stairs is minimal during the day.
4. Stock up on toilet paper, shampoo, and other personal items.
5. Wash and put away laundry. Change linens on your bed.
6. Recovery time can vary. Prepare meals in advance and freeze them to provide extra convenience during this time.
7. Store frequently used items between hip and shoulder level to avoid reaching or bending throughout the day.
8. Have night lights placed in hallways or dark rooms.
9. Purchase or borrow any medical equipment you feel would assist with activities of daily living. This may include bathtub grab bar, toilet riser, bath or shower chair/bench, shoe horn, step stool, extended length grabber, etc.
10. Arrange for a family member or friend to check on you in your home to help get through the first couple of weeks after surgery. It may be helpful to coordinate help for mail pick up, lawn care, yard work, and pets.



About Your Procedure:

To view educational videos describing your procedure, please go to SPINE-HEALTH.com or visit us at Neurospinewi.com >> Learning Center



Preparing Operative Site for Your Procedure:

Following these instructions will reduce your risk of infection.


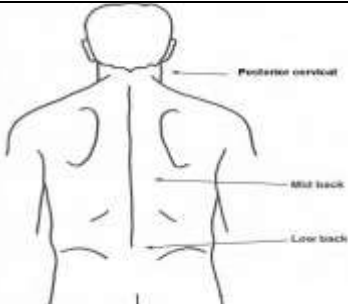
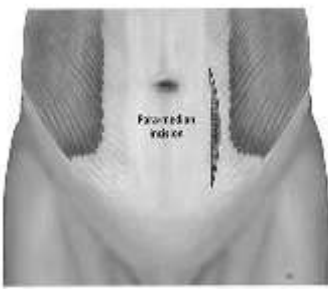
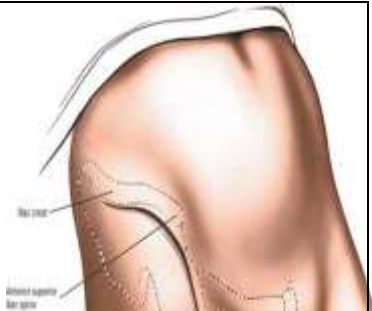
Instructions: Use an antimicrobial liquid soap, CHG 4% or Hibiclens, for 2 consecutive days prior to surgery. (Unless otherwise instructed)

1. Wash face, hair & body with your own soap/shampoo in the shower; rinse thoroughly.
2. Using your antimicrobial soap and a clean washcloth starting from the neck down, wash your entire body for a minimum of three minutes. Pay close attention to the area of surgery. Let soap stand for an additional 60 seconds. **AVOID CONTACT WITH EYES.** Rinse thoroughly. Dry off with a clean towel.
3. Do not apply any lotions, powders, or creams to the surgical area after cleansing morning of surgery.
4. Repeat steps the day of surgery as well.
5. *If rash or allergic reaction occurs, stop using.*
6. Dress in clean clothes when shower is completed.



Hibiclens/CHG 4% can be purchased over the counter in the pharmacy area at many major retail outlets and drug stores.

Shaving: Do not shave operative site within 48 hours of surgery

			
<p><i>Cervical: tip of chin to clavicle</i></p>	<p><i>Lumbar: mid to low back</i> <i>Cervical: Posterior neck</i></p>	<p><i>Anterior Lumbar Approach: Umbilicus to pubic bone</i></p>	<p><i>Bone Marrow Aspirate: Iliac crest</i></p>

What to Bring to the Surgery Center:

Bring your SURGERY PACK with you if you are staying overnight.

- ❖ Personal hygiene products (deodorant, toothbrush, toothpaste, comb and brush)
- ❖ List of current medications and with time and dosage information
- ❖ A CPAP machine if applicable
- ❖ A copy of your Power of Attorney paperwork
- ❖ Important phone numbers of friends and family
- ❖ Creature comforts such as books, magazines, lip balm and ear plugs
- ❖ Form of ID & insurance card
- ❖ Walker **IF** you are using one prior to surgery
- ❖ Wear loose fitting, comfortable clothing that does not fit tightly over area of surgery
- ❖ Do **NOT** bring non-essential valuables to surgery center/hospital
- ❖ Do **NOT** wear contacts the day of surgery; wear your glasses

The Day before Surgery

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.

DO NOT chew gum after midnight.

NO alcoholic beverages or smoking 24 hours before your surgery.

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

Remove nail polish from fingernails.

Remove all jewelry, and piercings. Your surgeon may be required to cut-off items during surgery if not previously removed.



If You Get Ill Morning Of Surgery:

What to do if you are not feeling well the morning of surgery

When having surgery or anesthesia, it is important that you are in the best possible health. If you have a new illness or a flare up of an old condition not related to the reason for your surgery, sometimes the safest practice may be to delay the procedure until you are well.

Don't assume that your surgery will be delayed if you are sick. If the procedure is urgent or your illness is related to the surgical problem, then it might be best to go ahead with the procedure as planned.

Contact our office as soon as you think you may have an illness that may delay surgery.

If you get sick on the day of your surgery, call (920)882-1160 or the Surgery Center where your surgery is scheduled and ask to speak to the nurse in charge.

If you are ill the morning of surgery and unable to reach staff at the NeuroSpine Center, you may contact the Surgery Center where you are scheduled.

Theda Clark Medical Center: 920-729-3336

Aurora Medical Center: 920-303-8708

Orthopedic and Sports Institute of the Fox Valley: 920-731-3111

Mercy Medical Center: 920-223-1486

Examples of Conditions that May Delay Surgery Include:

Cold or sinus infection within two weeks of surgery

Pneumonia or bronchitis within a month of surgery

Stomach virus or flu

Fever

Wheezing

Chest pain which is worse than usual

Diabetes severely out of control

Infected skin, lesions or rash in the area of surgery

If your surgery is canceled, contact our office to reschedule. Preoperative testing may or may not need to be repeated.

When You Arrive at the Surgical Facility:

When you arrive to the surgical facility you will be brought back to the pre-operative area. Things to anticipate while you are there:

- ❖ You will be asked to remove clothing (including socks and underwear) and change into a gown.
- ❖ Before going back to the surgical area, you will also need to remove any contact lenses, dentures, jewelry, or any other removable items. Your personal belongings will be stored in a safe place and returned to you after surgery, or they can be given to your visitors to hold while you are in surgery.
- ❖ An IV will be started and vital signs taken. Any additional lab work or testing will be done if requested by your surgeon.
- ❖ You will be asked to complete and sign your Surgical Consent and other required paperwork.
- ❖ You will meet your Anesthesiologist and Operating Room Nurse.
- ❖ You will then be taken to the surgical area on a patient cart. At that time, if any visitors are still with you, the nurse will direct them to the waiting area. When surgery is done, your surgeon will communicate how surgery went with family/friends that may come with you that day.
- ❖ Once in the operating room, monitors will be placed to help observe your blood pressure, oxygen levels and cardiac activity. Anesthesia will then be started.



Anesthesia and You:

To help ensure your comfort, anesthesia will be administered before and during your procedure. Your anesthetic will induce sleep with medications given through your IV.

Ensuring that you're well-informed

The anesthesiologist will meet with you prior to surgery. This is a great time to discuss past experiences with anesthesia or questions and concerns you may have.

If you have experienced motion sickness and/or nausea in the past, please inform our anesthesiologist before your surgery.

Post-operative nausea

Recently introduced drugs help prevent post-surgery nausea. If you are at high risk for experiencing nausea and vomiting, rest assured that you will be given appropriate medication before and after your surgery.



Recovering After Surgery:

Post surgical recovery happens in stages:

You will wake up and recover in the post-anesthesia care unit (PACU) until stable. You will then be moved to a step down recovery area or, if staying overnight, to your hospital room.

Discharge times can vary from patient to patient. Goals to achieve prior to discharge:

<ul style="list-style-type: none"> ❖ Tolerating fluids and food ❖ Passing gas/bowel sounds present 	<ul style="list-style-type: none"> ❖ Pain controlled with oral medication ❖ Urinating 	<ul style="list-style-type: none"> ❖ Walking (with or without assistance) as directed ❖ No other medical issues present
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Pain Management after Surgery:

Controlling pain is important for reduced stress, and increasing mobility after surgery.

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

- ❖ Share with your care team what has or has not worked in the past for pain control.
- ❖ **Have realistic pain control goals.** Being PAIN-FREE immediately after surgery is not a realistic goal.
- ❖ Reporting pain as a number will assist your care team to determine how effective your treatment plan is working, and whether adjustments need to be made.

Hospitals and clinic staff will use the 0-10 scale below to help rate your current pain levels.

Severity	Description of Experience
10 Unable to Move	I am in bed and can't move due to my pain. I need someone to take me to the emergency room to get help for my pain.
9 Severe	My pain is all that I can think about. I can barely talk or move because of the pain.
8 Intense	My pain is so severe that it is hard to think of anything else. Talking and listening are difficult.
7 Unmanageable	I am in pain all the time. It keeps me from doing most activities.
6 Distressing	I think about my pain all of the time. I give up many activities because of my pain.
5 Distracting	I think about my pain most of the time. I cannot do some of the activities I need to do each day because of the pain.
4 Moderate	I am constantly aware of my pain but I can continue most activities.
3 Uncomfortable	My pain bothers me but I can ignore it most of the time.
2 Mild	I have a low level of pain. I am aware of my pain only when I pay attention to it.
1 Minimal	My pain is hardly noticeable.
0 No Pain	I have no pain.

Pain Medications:

For post-operative pain management, follow the medication plan provided to you by your surgeon.

If you have an allergic reaction or intolerance to the prescribed medications, contact our office to have your current treatment plan adjusted.

Narcotic pain medications are effective in diminishing pain perception and can effectively manage acute pain, such as surgery. The goal is for short term use.

Patients taking narcotic pain medications can experience nausea, confusion, drowsiness, and constipation. Use these medications only as prescribed and *as needed*. The goal will be to switch to or supplement with over-the-counter pain medications as soon as appropriate to decrease the amount or need for narcotic pain medication. Icing and ambulation/walking should be done whenever possible for additional pain control. **Make sure you eat 5 minutes before taking narcotic pain medicine**



*** **Percocet, Hydrocodone, Oxycodone, OxyContin, Vicodin, Morphine and Dilaudid all require a hand-written prescription for refills. They can NOT be called in. Refills should be requested at least 24HOURS PRIOR. NeuroSpine Center hours are Monday - Thursday 8 AM - 5 PM and Fridays 8 AM - 4 PM**



Wisconsin healthcare providers are taking a step in the right direction! The number of prescribed opioids declined 18% from 2010 to 2015.

Never flush or drain unused narcotic medication. Whenever possible, take unused prescription drugs to a collection program or event. To find the nearest location go to:

<http://doseofrealitywi.gov/drug-takeback/find-a-take-back-location/>

Caring for Your Incision Site:

Some shadowing on your dressing is normal. Change the dressing as needed. You should note a decrease in dressing changes over the first few days. When drainage discontinues, you may leave dressing off.

How to Care for Your Incision

- ❖ Monitor and keep the incision clean and dry daily.
- ❖ Check for increase in redness, swelling or drainage. (Some mild or minor redness/swelling is normal).
- ❖ A small amount of slightly blood tinged drainage from the incision is normal.
- ❖ Do not wash directly over the incision.
- ❖ Wash around the incision gently with soap and water, and pat gently dry with clean towel.
- ❖ Avoid submerging your incision until it is completely healed. This includes hot tubs, baths, and swimming pools.
- ❖ Do not use creams, lotions, ointments or alcohol near or on the incision.

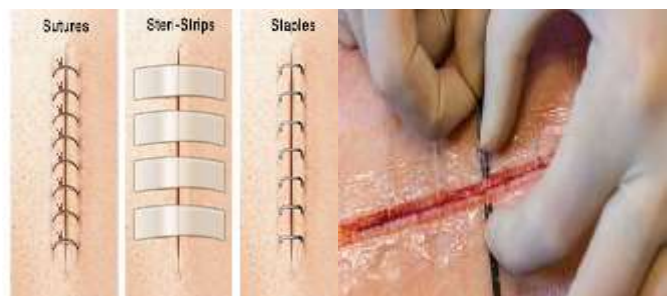
Always wash your hands before caring for your incision.

Your incision may be closed with sutures under the skin which will absorb over time and not need to be removed. Steri-strips (small pieces of tape) covering the incision will slowly peel up at the edges as they get wet in the shower. *Do not remove your steri strips. They will be removed during your first post-operative appointment.*

If your incision is closed with sutures or staples do not pull on them. They will be removed at your first follow-up appointment. As the incision heals it is normal for this area to itch slightly. Be careful not to scratch the area to the point of opening your skin.



If discharged with a Prevena wound-vac, and the unit begins beeping, TURN OFF. Contact our office during business hours for assistance.



Walking Instructions:

Walking is the best activity you can do after surgery and will help with your recovery progression. Movement will help keep joints and muscles flexible, reduce and improve strength and balance.

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.

The goal is to walk 1-3 miles over the course of the day, but this may take some time to achieve.

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 surgical complications







Change positions about every 20-30 minutes while awake to prevent stiffness

Ice can decrease inflammation and help alleviate pain. Use an ice pack or cryocuff (if available) for 20 minutes at a time. Do not apply ice directly to skin.



Mobility and Range of Motion Activities:

Try these activities when sitting or lying down. **Additionally, shoulder rolls, shoulder shrugs, and gentle arm swings can be used for upper extremity mobility and range of motion.**

<p>Elevate leg, gently flex and extend ankle. Alternate each leg, repeat as tolerated.</p> 	<p>Slowly rotate foot and ankle clockwise, and then counter clockwise. Gradually increase range of motion. Alternate each leg, repeat as tolerated.</p> 
 <p>Raise toes keeping heels on the floor. Repeat as tolerated.</p>	 <p>Raise heels, keeping toes on floor. Repeat as tolerated.</p>
 <p>Bring leg out to side and return. Alternate each leg, and repeat as tolerated.</p>	 <p>Tighten buttock muscles. Repeat as tolerated.</p>

Using Proper Body Mechanics after Surgery:

Proper body mechanics during everyday activities helps reduce incisional discomfort and promotes a strong healthy spine preventing future injury.

General 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. (about a gallon of milk).
- ❖ **DO** Let pain be your guide.

Everyday Activities After Surgery

Pushing/Pulling

Always PUSH, rather than PULL.
Keep your back straight and shoulders back.

Hold objects close to your core to avoid stress on lower back.



Sleeping

You can sleep in any position you find most restful. Keeping your body in a “mid-line” **position**, where both your head and neck are kept as straight as possible, usually will provide the most comfort.

Bending the knees and placing another pillow between the knees keeps the spine in the neutral position.

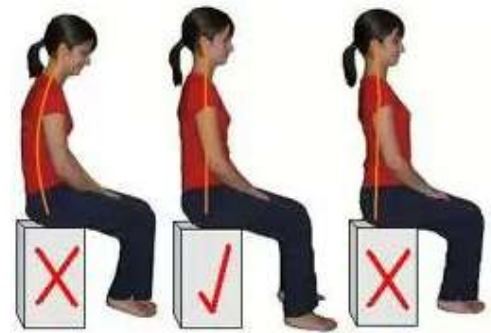


Using Proper Body Mechanics after Surgery:

Sitting

Keep your feet and knees pointed straight ahead, not turned in or out. Your knees should be either stretched out or bent in a way you find comfortable. Placing a small pillow in the lower back area may give you extra lumbar support.

If you are having difficulty changing positions, it may be best to sit in a firm chair with a straight back & armrests, avoid stools, sofas, soft chairs, rocking chairs, and chairs that are too low.



Bathing

Prevent slips and falls by using nonslip bathmats on your bathroom floor and in your tub or shower. Watch out for hazards, such as wet floors.

Use grab bars in your shower or tub for support as you get in and out. **DO NOT** grab towel bars, as they cannot dependably support weight.

Installing a hand-held shower hose can give extra post-operative convenience.

Keep the soap and shampoo within reach. Sit on a bath bench or shower chair while you shower. Use a long-handled sponge to wash hard-to-reach areas.



Dressing

Lie on back to pull socks or pants over feet, or sit and bend leg while keeping back straight.



Proper Body Mechanics during Other Daily Activities:



Log roll in and out of bed: Avoid bending/twisting which can cause discomfort. While lying on your back, bend your knees. Roll onto your side. Keep your shoulders and hips together as a unit as you roll. Place your bottom hand underneath your shoulder. Place your top hand in front of you at chest level. Your shoulder and knees should always point in same direction. Reverse order for getting out of bed.



Emptying dishwasher and washing/drying machines: Keep your spine in a neutral (straight) position, and use your legs to bring you closer to your target. Let your arms interact with the work to be done. Keep all objects close to your core when lifting. Remember any objects being lifted should be within your restrictions given by your provider.



Grocery shopping: Do not use any hand held shopping baskets until your provider removes weight lifting restrictions. Opt for the larger rolling shopping carts.

Proper Body Mechanics during Other Daily Activities:



Correct posture

Wrong posture

Activities requiring standing in place:

Avoid “hunching over”. Keep spine straight and shoulders back. Using a step stool and transferring weight from foot to foot can add additional comfort.



Picking up objects off the floor: Use the “Partial Golf Pickup”. With one foot planted, keep back straight and pivot at hips while extending opposite leg backwards when reaching an object.



Child care: Although it can be difficult, lifting children during weight restrictions must be avoided.



Climbing stairs: Keep head forward, spine straight and shoulders back when climbing stairs. ALWAYS use railings to avoid post-operative slips, trips, and falls.

Post-operative Constipation

It is common to be constipated after surgery.

Following surgery, difficulty having a bowel movement may occur, especially if you are taking narcotic pain medications. You will most likely be prescribed at least one type of stool softener and or laxative (Miralax and/or Docusate sodium). Contact your primary care physician if you have not had a bowel movement for 3 or more days.

Tips to Prevent Constipation

- 1) Drink plenty of water.
- 2) Chewing gum post-operatively will also help speed up gastric and bowel activity.
- 3) Decrease narcotic pain medication as much as possible.
- 3) Get moving!
- 4) Consider using an enema or suppository.

Venous Thromboembolism (VTE):

When you have surgery, your body is at risk for blood clots (VTEs).

Deep Vein Thrombosis (DVT):

- ❖ Swelling in one or both legs
- ❖ Warmth, pain, or tenderness
- ❖ Red and discolored skin in one leg

Pulmonary Embolism (PE)

- ❖ Shortness of breath
- ❖ Problems breathing
- ❖ Chest pain, worse during breathing
- ❖ Heart palpitations

To prevent VTEs make sure to drink plenty of fluids during the day, avoid tight clothing, do not cross your legs, and stay active. Avoid prolonged bedrest during the day. Inactivity causes blood to collect in the lower part of the body. Walking and range of motion exercises such as ankle rolls, and foot flexion will help with lower body circulation. If activity level is decreased after surgery, compression stockings can be utilized until activity returns to baseline.

Infection Prevention:

You play a very important role in preventing post-surgery infection. *Hand washing is the single most effective way to prevent the spread of infections.*

Signs of Surgical Site Infection

- ❖ Redness, warmth, and increased pain at incision site
- ❖ Fever above 101
- ❖ Cloudy or foul smelling drainage from your surgical site

Call your provider immediately if you notice any of the above signs of infection (920)882-8200

Smoking:

Research shows that those who smoke or are exposed to second-hand smoke have a significantly increased risk of developing an infection.

Diabetes:

This disease can slow down your body's ability to fight infection. High blood sugar (glucose) leads to high levels of sugar in your body's tissues. When this happens, bacteria grow and infections can develop more quickly.

It's important that you maintain your glucose level within the recommended range. It is common to notice an increase in your blood sugar levels after surgery due to stress on your body and medication you may be taking.

Home Environment:

Although they are not visible, bacteria are everywhere. While you recover, it's important to keep your home environment as clean as possible. Pets can be a source of infection for patients who have open surgical wounds. Air polluted with second-hand smoke, or with germs of someone who may be sneezing and coughing, can also be a source of infection.



Post-Surgical Nutrition:

Resume any dietary restrictions you may have such as Diabetic, Low Sodium or Cardiac/Heart Healthy following surgery.

<p style="text-align: center;"><u>Soft Diet</u></p> <p><i>After cervical surgeries, a soft diet, ice chips and cool fluids can help with throat soreness and inflammation. Consider:</i></p> <p>*Oatmeal *Pasta *Applesauce *Eggs *Soups *Cooked vegetables *Mashed potatoes *Protein shakes *Ensure/Glucerna (diabetic)</p> <p>Yogurt/ice cream/pudding/cheese. However, dairy products may increase post-operative phlegm</p>	<p style="text-align: center;"><u>Bland Diet</u></p> <p><i>Decreased appetite or nausea can be experienced and a bland diet will be recommended. Consider:</i></p> <p>*Eggs *Soup *Crackers *Pudding *Cooked pasta *Milk or dairy *Lean meats *Protein shakes</p> <p>Consider supplementing diet with Ensure/Glucerna (diabetic) to have adequate caloric intake during this time</p>
<p style="text-align: center;"><u>High Protein</u></p> <p><i>Protein helps with tissue healing, and provides energy and strength after surgery. Consider:</i></p> <p>*Eggs *Milk *Cottage Cheese *Oats *Greek Yogurt *Nuts *Lean Meats *Protein Shakes</p>	<p style="text-align: center;"><u>High Fiber</u></p> <p><i>Fiber can help with post-operative constipation. Consider:</i></p> <p>*Oranges *Apples *Bananas *Broccoli *Carrots *Whole Grains *Bread *Cereal *Beans</p>
<p style="text-align: center;"><u>Carbohydrates</u></p> <p><i>Eating the right kind of carbohydrates after surgery can help restore energy levels. Consider:</i></p> <p>*Whole Grains *Fruits *Vegetables *Beans</p>	<p style="text-align: center;"><u>Vitamins/Minerals</u></p> <p><i>Essential for bone growth and tissue repair. Consider:</i></p> <p>*Eggs *Fruits/Vegetables *Fish *Liver *Milk/Dairy *Lean Meats *Fortified Cereal</p>
<p style="text-align: center;"><u>Fats</u></p> <p><i>Healthy fats can improve the immune system and aid the body's absorption of vitamins. Consider:</i></p> <p>*Olive Oil *Coconut Oil *Avocados *Nuts</p>	<p style="text-align: center;"><u>Water</u></p> <p><i>Stay hydrated after surgery! Proper hydration isn't only necessary for healing, but may also be necessary to help your body absorb medications following surgery. Be sure to drink at least eight glasses of water every day after surgery to stay hydrated.</i></p>

Commitment to Outcome Improvement:

Research & Data Collection for improved quality outcomes

NeuroSpine Center of Wisconsin, S.C. is one of several leading neurosurgical groups participating in the **National Neurosurgical Quality Outcomes Database (N²QOD)**, a national clinical registry sponsored by the American Association of Neurological Surgeons. The main objective of this registry is to assess the benefits neurosurgery provides to patients and to determine to what extent surgery improves pain, disability and quality of life.

Participating groups gather information regarding the care of individual patients. This information is used to identify areas where practices can improve their quality of care and treatment. All data collected in this process will be kept strictly confidential and will be handled according to federal guidelines for the protection of personal healthcare information.

If your specific case history meets the criteria for inclusion, a member of our staff may contact you both before and after surgery to ask you questions about your symptoms, pain, satisfaction with care, and your quality of life. We hope to determine whether your outcome from surgery met your expectation. Your participation in answering these questions is voluntary. Whether or not you choose to participate will not affect your medical care, surgery or follow up in any way. If you have any questions about this process, please do not hesitate to contact Heather Gueller at 920-882-2260.



Road to Recovery:

What if your recovery is taking longer than anticipated?

- ❖ Discuss symptoms or concerns with your spine team to determine if additional interventions are needed.
- ❖ Remember everyone recovers differently. Allow yourself time to heal.
- ❖ STAY POSITIVE! Do not become discouraged.
- ❖ Don't stop doing things if you still have pain. Make adjustments to find an easier way of doing them. Inactivity will cause you to stiffen up and will lead to more pain and discomfort.



Thank you for choosing the NeuroSpine Center of Wisconsin