

Dear Patient:

This booklet is your guide both BEFORE and AFTER your surgery. It contains the instructions of your providers, nurses and therapists. Your provider may customize some of the contents to suit the specific needs of your recovery. Familiarizing yourself with these tips and instructions will help you have a better surgical experience.

Feel free to make notes, mark up and highlight in any way that is meaningful to you. It is also a great resource for your family members and friends that will be assisting you with your recovery. Just ask me if you'd like an extra copy for someone on your support team.

I'm here for you:

- To be your access point
- Help navigate the surgery experience
- Educate you and your support team on pre and post surgery care

Our goal is to educate and empower you so that you can recover your health and get back to doing what you love!

Your Surgical Educator,
Angie Hanselman, RN
920-729-7659



Angie Hanselman, RN
Neurosurgical Coordinator
for Patient Education

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

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General Information





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)
- Co-surgeon (from an outside practice)
- Anesthesia
- Hospital/Facility Fee
- Neuro-Monitoring Service
- Radiology
- Bracing Services (Great Lakes Orthotics/Actra)

☐ 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. if you need help.



Neuroscience Group provides surgery for you at several locations:

St. Elizabeth Hospital

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

Theda Clark Medical Center

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

OSI-Orthopedic & Sports Institute

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

St. Mary's Hospital Medical Center

1726 Shawano Ave.
Green Bay, WI
(920) 498-4200

Berlin Memorial Hospital

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

Bellin Health Medical Center

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

Ministry Door County Memorial

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

Mercy Medical Center

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

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



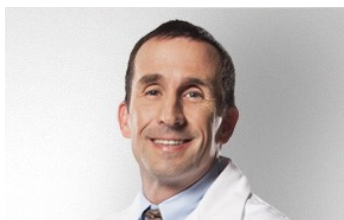
Andrew R. Greene, DO



Alexander T. Hawkins, MD



Randall R. Johnson, MD, PhD FACS



Philip A. Yazbak MD, FACS



Diane L. Vanderlin, APNP



Christine A. Munson, APNP



Ross L. Carlson, APNP



Billie A. Sturgeon, APNP



Bethany R. Rothe, PA-C



Kristen A. Brazzale, APNP

We have 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 “**Resources**” tab, then select “**Videos**”, scroll down to the ViewMedica Library and type in the name of the video you want to watch in the “**Search**” box at the top right corner. 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.

Back Related Videos

- Degenerative Disc Disease
- Herniated Discs
- Lumbar Radiculopathy (Sciatica)
- Spinal Stenosis
- Spondylolisthesis
- Lumbar Disc Microsurgery
- ALIF: Anterior Lumbar Interbody Fusion
- TLIF: Transforaminal Lumbar Interbody Fusion
- Laminectomy
- Interspinous Stabilization (Coflex)
- Spinal Fusion (Lumbar)

Neck Related Videos

- Cervical Radiculopathy
- Herniated Disc (Cervical)
- Myelopathy
- Spinal Stenosis (Cervical)
- Anterior Cervical Discectomy and Fusion (ACDF)
- Anterior Cervical Corpectomy
- Cervical Laminoplasty
- Laminectomy (Cervical)
- Laminectomy (Cervical) with Fusion
- Artificial Disc Replacement (PCM)

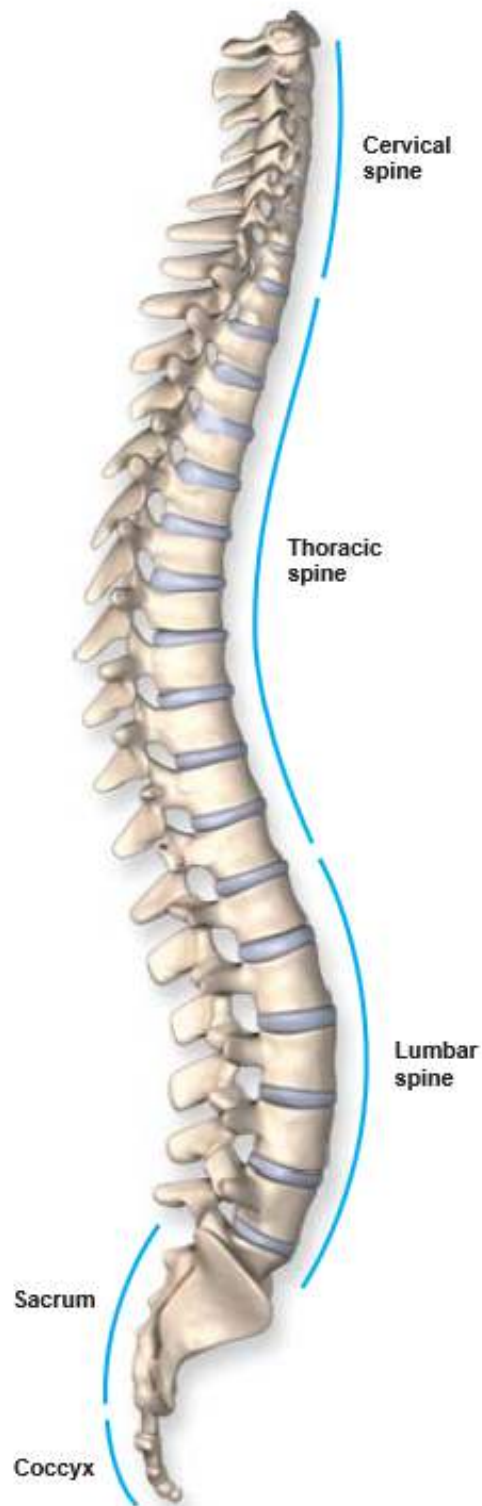
After surgery you can contact your Spine Team Nurses with any medical questions or refill requests:

Dr. Bhattacharjee’s & Dr. Greene’s Nurse at 725-9373 ext. 7648

Dr. Yazbak’s Nurse at 725-9373 ext. 7642

Dr. Hawkins’ & Dr. Johnson’s Nurse at 725-9373 ext. 1515

Anatomy of the Spine



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.

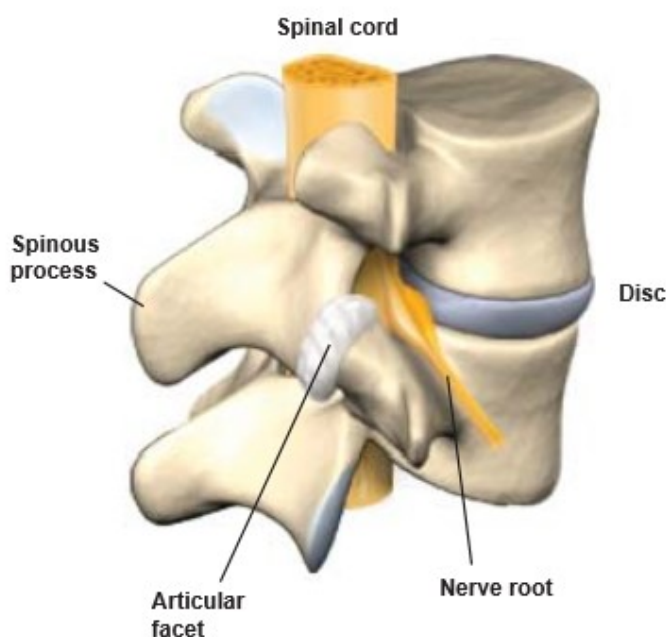
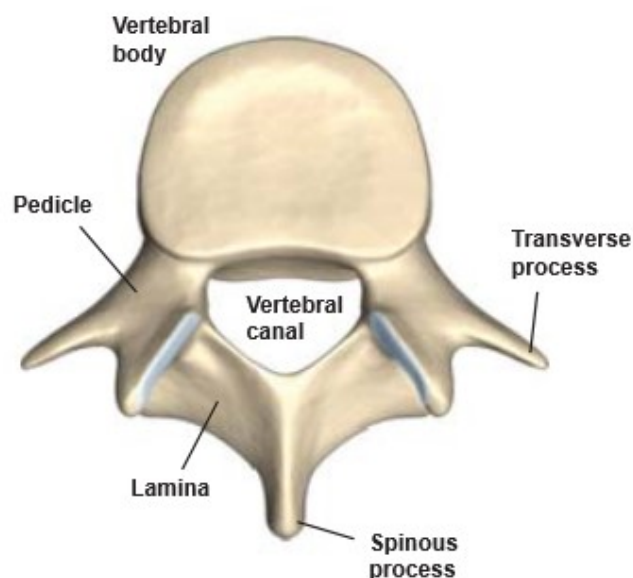
Vertebrae

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.

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

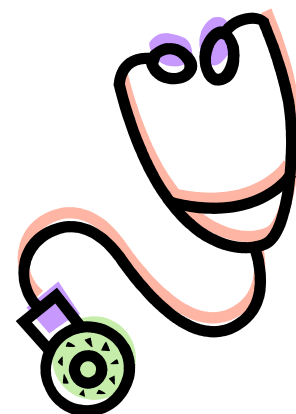
Between the vertebral bodies are the tough, elastic spinal discs. They provide a flexible cushion, allowing the vertebrae to bend and twist. Each disc has a tough outer wall called the annulus fibrosus and a soft interior called the nucleus pulposus.

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 Advance Practice Clinician 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, as they can cause increased risk of bleeding during your surgery.

STOP medications that increase bleeding

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. **If you take any of the medications listed below, you should have been given specific instructions on stopping them before surgery.**

- ⇒ **NSAIDS** (Aleve, Ibuprofen, Celebrex, Indomethacin, similar)
- ⇒ Warfarin/Coumadin
- ⇒ Clopidogrel (Plavix)
- ⇒ Rivaroxaban (Xarelto)
- ⇒ Apixaban (Eliquis)
- ⇒ Dabigatran (Pradaxa)
- ⇒ **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 may be established by your prescribing physician.

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

NOTE: If you have any specific beliefs or objections to receiving blood transfusion during or after your surgery, please let your provider know As Soon As Possible. Your specific preferences may change the original plan of care and timeframe for your surgery.

Always verify with your Spine Surgery Coordinator if you have questions at

920-729-7659

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



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

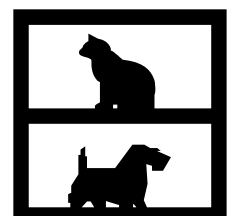
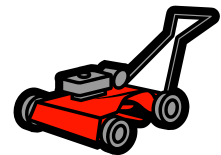
You will be required to quit smoking at least 4 weeks prior to a fusion surgery

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**
- **www.WiQuitLine.org**
- **www.Smokefree.gov**

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
- 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 slip on shoes or slippers to wear when you are discharged
- Personal hygiene products like deodorant, toothbrush, toothpaste, comb, brush
- Loose fitting clothing that is easy to get on (ie. shirts with 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
- Insurance card, Important phone numbers for loved ones
- Books, magazines , or tablet



1. **Do NOT** have hard candy or chewing gum after midnight the night before surgery
2. **NO** alcoholic beverages or smoking 24 hours before your surgery
3. **REMOVE** nail polish from fingernails
4. **DO NOT** shave area that will be operated upon within 48 hours of surgery.
5. **REMOVE** all jewelry and piercings. We may be required to cut off items if not removed prior to surgery.

NOT following the instructions for eating and drinking before surgery may cause your surgery to be rescheduled or cancelled.





PREPARING YOUR SKIN FOR SURGERY:

To reduce risk of infection, please take the steps below to thoroughly clean your body before surgery

STEP 1: *SLEEP ON FRESHLY LAUNDERED BED LINENS* the night before surgery.

STEP 2: *DO NOT* sleep with your pets the night before surgery.

STEP 3: *PERFORM* pre op cleansing per instructions below

STEP 4: *PERFORM* good oral hygiene the night before & morning of surgery

Instructions: Use Hibiclens the evening before and morning of surgery.

1. Wash face , hair & privates with your own soap/shampoo in the shower; rinse thoroughly. Do not use conditioner on your hair
2. **Turn water OFF**
3. Using 1 bottle of Hibiclens , on a clean washcloth, starting from the neck down, wash your entire body, paying close attention to the area of surgery.
Allow soap to sit on your body for 1 minute. Avoid getting soap in your eyes/mouth
4. **Turn water back on;** Thoroughly rinse soap off your skin. Gently dry off with a freshly laundered towel, put on freshly laundered clothing
5. Do not apply any lotions, powders , deodorants, or creams to skin after cleansing
6. Repeat steps 1, 2, & 3 the day of surgery as well.



NOTE: If you have an allergy to HIBICLENS please use an antibacterial soap such as Dial or Safeguard as a substitute following the same instructions listed above.

Surgery Center



Day of Surgery:

You will be asked to arrive at the Surgery Center 1 1/2 to 2 hours before surgery to ensure enough time for nursing staff to prepare you for surgery. Please check in at the desk/area you were instructed to by the NSG Surgery Scheduler or Educator.

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**
- **Surgical area marked**
- **Hair near surgery area will be clipped if needed**
- **Meet with your anesthesiologist and operating room nurse.**



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.

If you have experienced any nausea with anesthesia or motion sickness in the past, please inform the anesthesiologist before surgery. Your surgery care team will ensure that you will be given appropriate medications before and after surgery to eliminate or reduce nausea & vomiting.

When ready to enter 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:

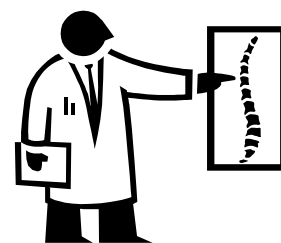
Your provider may require monitoring of your nerves during surgery, if so you may receive information from either **Neuromonitoring Associates of Milwaukee** or **Nuvasive** with details and contact information if you have questions.

This service is billed separately from Neuroscience Group. You should contact your insurance company once you receive this letter to ensure they are aware.

We have an informative video on our website with a description of the monitoring. Go to our website www.neurosciencegroup.com, click on “Resources”, then click on “Videos”, once the video main screen appears, type “Intraoperative Monitoring (IOM) of the Nerves” in the video search box.

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, if surgery will be longer than 2 hours
- 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 after back surgery
- Neck brace if you had cervical surgery

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

Nausea After Surgery

You may feel nauseous after surgery. We will give you medication as needed to help reduce the nausea before we discharge you home. Please let your provider and the surgery staff the day of surgery know if you have history of nausea with anesthesia or if you have problems with motion sickness.

Tips to Reduce Nausea: if you are feeling nauseous after surgery, consider the following:

- Take your medication with food
- Avoid food that is fried, fatty, greasy, excessively sweet, spicy, strong-smelling or acidic.
- Drink few liquids with your meals
- Eat room temperature-only food
- Contact our office to speak with a nurse if your nausea persists for more than 24 hours.
920-725-9373
- You may be prescribed anti-nausea medication or your pain medication may be changed.

Managing Discomfort During Your Stay

IF you have been taking narcotic medications for >6 month, we likely gave you weaning instructions to get you off of them before surgery. This is to help effectively manage your pain after surgery. We are devoted to managing your discomfort after surgery. Your care team will be helping set realistic goals for 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 discomfort. See below for an example of the pain scale. This will also help determine your response to the medications.
- Request pain medication when discomfort first begins so it can be managed efficiently.
- **Your care team will be prescribing post-operative pain medications for NO longer than 6 weeks after surgery. The goal will be to wean you off narcotic medications as soon as possible after surgery.**

<h2>Numeric Pain Intensity Scale</h2> <p>The typical numeric scale to gauge pain is from 0 to 10, with 0 being no pain and 10 being very severe, intolerable level of pain. The scale below explains the numbers.</p>		
0	No Pain	Refer to Menu of Comfort Items.
1-2	Slight Pain 1 Very minor annoyance – occasional minor twinges. 2 Minor annoyance – occasional strong twinges.	Mild painkillers are effective.
3-4	Mild Pain Pain does <u>NOT</u> interfere with activities of daily living 3 Annoying enough to be distracting. 4 Can be ignored if you are really involved in your work, but still distracting.	Mild painkillers relieve pain for 3-4 hours.
5-7	Moderate Pain Pain <u>could</u> interfere with activities of daily living 5 Can't be ignored for more than 30 minutes. 6 Can't be ignored for any length of time, but you can still go to work and participate in social activities. 7 Makes it difficult to concentrate, interferes with sleep. You can function with effort.	Stronger painkillers are only partially effective. Strongest painkillers relieve pain.
8-10	Severe Pain Pain <u>stops</u> you from doing your activities of daily living 8 Physical activity severely limited. You can read and converse with effort. 9 Unable to speak. Crying out or moaning uncontrollably. 10 Unconscious. Pain makes you pass out.	Strongest painkillers are minimally or only partially effective.

Managing Discomfort After Surgery

There are different medications used to manage discomfort after spine surgery. Your providers may use:

- **IV (intravenous)**: Morphine, Dilaudid and Fentanyl may be used in the Recovery Room after surgery. During the first 6-12hours after surgery you **MAY** receive IV pain medication through a PCA (patient controlled analgesia) pump if needed. A PCA is programmed to give you the medication in a specific dose at a specific frequency.
- **Oral**: You will be transitioned to oral medications **as soon as possible** after surgery. The oral forms of medications give you more sustained relief. It is important to make a plan with your care team about staying “ahead” of your discomfort, which allows you to participate in your recovery. **Make sure to communicate any problems you have had with medications in the past so that your surgical team is aware before they prescribe you medications for your postoperative discomfort.**

Non-Drug Pain Relief Methods:

Pain medication is only part of managing your discomfort; 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 refreshing the ice pack and show you how to use it when you go home. The first week after surgery use the ice pack regularly (20 minutes at a time, every 1-2 hours, do not put ice pack directly on your skin) **NO HEAT near your incision**
- **Relaxation/Distraction:** 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 at least every 2-4 hours during your stay to help decrease stiffness and discomfort. Frequent changes in position are recommended and short, frequent walking is key. **If** you have had neck surgery, try doing some shoulder rolls (**SLOWLY**) several times daily. This will help relieve that feeling of stiffness and reduce spasms between your shoulder blades. **AVOID** raising your arms high up over your head.
- **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. We encourage you to continue the breathing exercises at home.



**Incentive
Spirometer**

REASON FOR MEDICINE	MEDICINE NAMES Generic (Brand)	MOST COMMON SIDE EFFECTS
Pain Relief 	Fentanyl hydrocodone/acetaminophen (Vicodin, Lortab) hydromorphone (Dilaudid) morphine oxycodone/acetaminophen (Percocet)	dizziness/drowsiness constipation queasiness/throwing Up rash confusion
Muscle Relaxer 	diazepam (Valium) cyclobenzaprine (Flexeril) tizanidine (Zanaflex) methocarbamol (Robaxin)	dizziness/drowsiness headache Confusion
Prevent Infection 	cefazolin (Ceftin) clindamycin (Cleocin) piperacillin/tazobactam (Zosyn) vancomycin (Vancocin)	stomach upset diarrhea rash/flushing headache
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
Stool Softeners/Laxatives 	Polyethylene glycol (Miralax) Senna (Senokot) Docusate Sodium (Colace) Milk of Magnesia	Stomach upset Diarrhea Stomach cramping
Blood Thinner to Stop or Breakdown Blood Clots 	enoxaparin (Lovenox)	risk of bleeding

Diet:

Your diet will advance slowly depending on how you tolerate oral intake. Most 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 may have a decreased appetite for a bit of time after surgery, this is normal. Increase protein for healing and take in extra fluids to 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. You may require insulin during your stay to manage your blood sugars; this does not mean you will go home on insulin.

- If you have **neck surgery** and your incision is in the front of your neck you may experience some inflammation and irritation in your throat. You will want to eat softer foods for comfort and avoid foods that are dry or require lots of chewing. Throat lozenges are also a good way to help with any throat discomfort. Popsicles are a great way to soothe a sore, swollen throat.

Activity: (SPINE PRECAUTIONS: No Reaching Overhead, No Bending, No Twisting & No Lifting more than 10lbs)

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 potential surgical complications**



It is expected that you stand at the side of the bed about 2-3 hours after arriving to your room, unless otherwise ordered by your provider. The nursing staff, 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.

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 lying 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.

**PRACTICE THESE MOVEMENTS BEFORE SURGERY SO YOU FEEL COMFORTABLE
PERFORMING THEM AFTER SURGERY**

Getting up from a Chair:

While holding onto the arms of the chair, scoot yourself to the front edge of the seat. Lean forward slightly 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; tighten your stomach & buttocks as well to help support your back.— 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.



NO



YES



YES

Physical Therapy:

If your provider orders physical therapy (PT) during your hospital stay, they will most likely begin working with you the day after surgery. PT will assess your needs for discharge 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.

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.

Brace is to be worn whenever you are UPRIGHT, STANDING, SITTING AND/OR WALKING, unless instructed otherwise by your surgeon.

Collar:

If you were instructed to wear a cervical collar after neck surgery you will wear the collar at **ALL TIMES**, except for showering, unless otherwise instructed by your provider. The length of time you will wear the collar will be determined by your surgical team.

You will be seen for your first postoperative appointment with your surgeon's midlevel about 2 weeks after surgery. Call to clarify with our office if you are uncertain as to the date, time, or location. It is important that you attend this appointment.

This appointment will include:

- ◇ Removal of sutures or staples/inspection of incision
- ◇ Recommendations for activity restrictions and/or return to work
- ◇ Evaluation of pain control/ refill of pain medications if needed
- ◇ Evaluation of symptoms
- ◇ Review XRAYs if needed



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 or without an assistive device

_____ Urinating without any problems

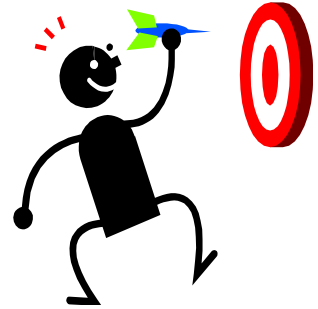
_____ Getting in and out of bed, on and off the toilet either independently or with minimal assistance from another person (using **SPINE PRECAUTIONS**)

_____ Understand Brace/collar instructions. How to put on/take off, when to wear

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

If needed, a Discharge Planner will meet with you during your hospital stay to discuss your discharge needs. 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.

We encourage you to have someone stay with you at home for the first **24-48 hours** after discharge to ensure you are getting around safely and have assistance if needed while you adjust at home to your activity restrictions.



Caring For Yourself at Home



Caring for Your Incision at Home:

Your incision will be closed with sutures, staples, Dermabond, or steri strips (small pieces of tape). They will be removed at your first follow up appointment. The steri strips may fall off on their own, do NOT pull them off.

You will be given specific incision and dressing care instructions during your education visit before surgery and by hospital care team upon discharge. 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 ask questions and assist when needed.

- Some shadowing on your dressing is normal.
- Most patients may shower 48hrs after surgery. Do not wash directly over incision. Make sure to thoroughly rinse incision area and pat dry with CLEAN towel.
- Avoid submerging your incision in water, (no swimming pools, baths or hot tubs) until incision is completely healed(2-3 weeks), showering ONLY.
- Keep your incision clean and dry. **Do NOT** pull on sutures, Dermabond, staples or steri-strips. **Follow specific dressing instructions from your provider**
- **NO** lotions, ointments, creams or powders on skin on or around incision
- Keep your pets away from your incision
- **Change into clean clothing daily**
- **ALWAYS** wash your hands before and after caring for your incision/wound

HAND HYGIENE

1. Wet your hands
2. Apply Soap
3. Vigorously rub hands together for 20 seconds
4. Rinse thoroughly
5. Dry your hands completely with a clean towel or paper towel
6. Using a towel, turn off the faucet



Activity at Home:

You may 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 getting up and walking short distances at a comfortable speed, every 30 minutes while you are awake . The goal is to walk for **MINIMUM** of 30 minutes TOTAL, once per day
- 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.
- **Do NOT use a treadmill until after your first follow up appointment for your safety.**

Days After surgery	Minutes of each walk	<u>MINIMUM</u> Total Minutes for the Day
1 –5	1-5	30
6-10	10	35
11-15	15	40
16-20	30	45

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).

Keep an ACTIVITY LOG to keep track of your walking to ensure you are getting the exercise you need for your recovery. Bring this to your first follow up so we can see your progress.

****See NSG Walking Log in your Education Packet****



Controlling Your Pain at Home:

Keep a Pain Medication Log to keep track of what you are taking when (we've provided this in your Surgery Education Packet)

- You will be prescribed oral pain medications to take as needed at discharge.
- Schedule your pain medications based on your activity; your **GOAL** to stay “ahead” of the discomfort.
- Change positions about every 30-45 minutes while awake for the 2 weeks after surgery to prevent stiffness.
- Ice can decrease discomfort; use an ice pack 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.

Preventing Potential Postoperative Complications

Surgical Site Infection:

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

Symptoms of Infection:

- Redness, warmth, and increased pain at the incision site
- Fever >101
- Cloudy or foul smelling drainage from incision
- Increased swelling at surgical site



Infection Prevention:

- **Wash** your hands frequently throughout the day
- **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**

Preventing Potential Postoperative Complications (continued)

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 recommended OTC medications (Miralax & Senokot), as long as you are taking the pain medications
- Walk as much as you can tolerate during your recovery time
- Chew gum to help stimulate gastric juices
- 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:

After surgery, your body is at risk for blood clots. Blood clots are caused by slow circulation. If you have a blood clot after surgery, you may be admitted to the hospital and prescribed blood thinners. 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. Preventing blood clots is one of the many reasons we want you walking frequently after surgery.

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
- SCDs (leg wraps) during hospital stay



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 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 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 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 every-day 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.

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

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



PLEASE CALL US IF:

- 1. You develop increased pain not improved by pain medication**
- 2. You develop a fever 101 F or more**
- 3. You develop abnormal redness/swelling/drainage at your surgical site**
- 4. You develop increased or new neurological symptoms (confusion, weakness, numbness, tingling, etc.)**
- 5. You develop difficulty emptying your bladder**
- 6. You develop any adverse reactions to your medications**
- 7. You have ANY other questions not answered in this booklet**

The Neuroscience Group 920-725-9373 or 1-800-201-1194 (ask for your surgeon's nurse)

We've Got Your Back

Proper “Spine Health” Body Mechanics after Surgery

Body Mechanics After Surgery NO Bending, Twisting, Lifting (NO BLT)

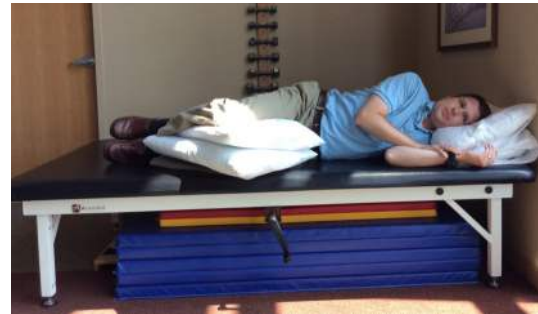
DO NOT bend at the waist, **DO** bend at the hips and knees

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

DO NOT twist your trunk.

Sleeping/Lying:

- 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, under your arm pits when resting in a recliner after neck surgery.
- Avoid lying on your stomach as it puts too much pressure on your low back.



Sitting: Keep your chin up and head level

- 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.
- Do NOT allow feet to dangle when sitting, have feet firmly supported on the floor or on a stool to prevent pulling in the back.



- After neck surgery when sitting in a chair rest your arms on some pillows for comfort & to help support them



Standing and Using Steps

- Change positions frequently by weight shifting, placing one foot up on a low stool or walking around
- Look forward, keep shoulders over your hips
- Tighten your stomach muscles (pull in your stomach), this relieves stress on your spine
- Wear comfortable, supportive shoes
- Use a handrail or assistance
- If one leg feels weaker, **lead** with your stronger leg when going **UP** steps and your weaker leg when going **DOWN** steps. **“Up with the Good, Down with the Bad”**
- Take your time, don’t hurry, take one step at a time if needed.
- **If** wearing a cervical collar, the collar may obstruct your vision below you. Make sure to hold the handrail and use your foot to feel for the next step.



NO



YES



NO



YES

Pushing/Pulling:

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



YES



NO

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 avoid twisting when grabbing for toilet paper or place toilet paper in more accessible place to reach
- Avoid twisting when wiping. If necessary toilet tissue aids are available to assist with reaching.

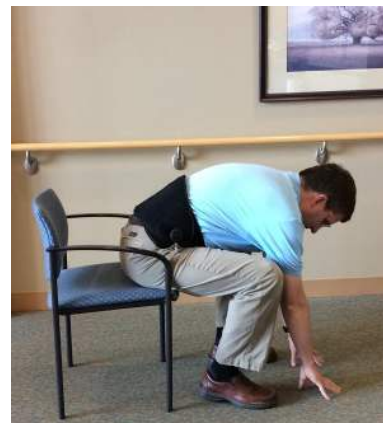


Avoid Bending/Reaching:

- Keep your back straight and bend at the hips rather than at the waist when attempting to reach something that is at lower or higher than counter height.



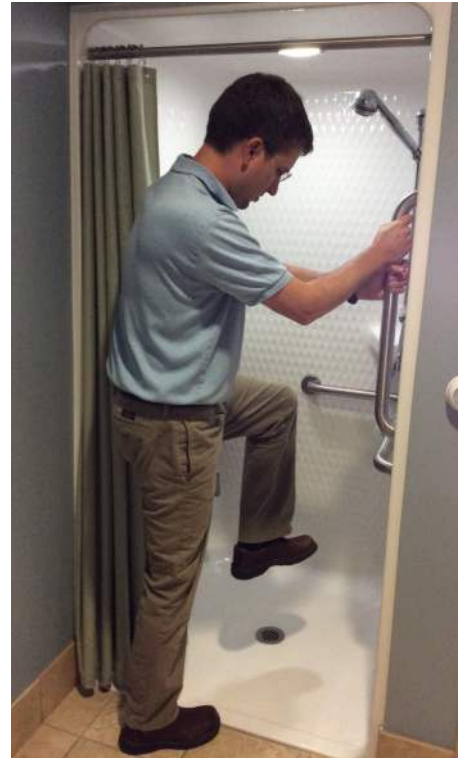
NO



NO

Bathing:

- Consider a no skid mat in tub and on the floor outside of the tub/shower to prevent falls
- Place bathing supplies at an easily accessible height in the shower
- Have someone nearby when you shower, until you feel completely safe
- Make sure to hold on to the wall or a grab bar when stepping into the tub/shower
- Your brace/collar will be removed for showering unless otherwise instructed
- Use a long handed bath brush or hand held shower head to assist with reach
- Utilize a shower chair if necessary for safety until you feel comfortable



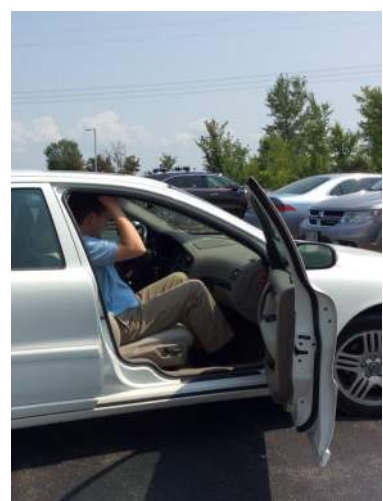
Dressing:

- 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

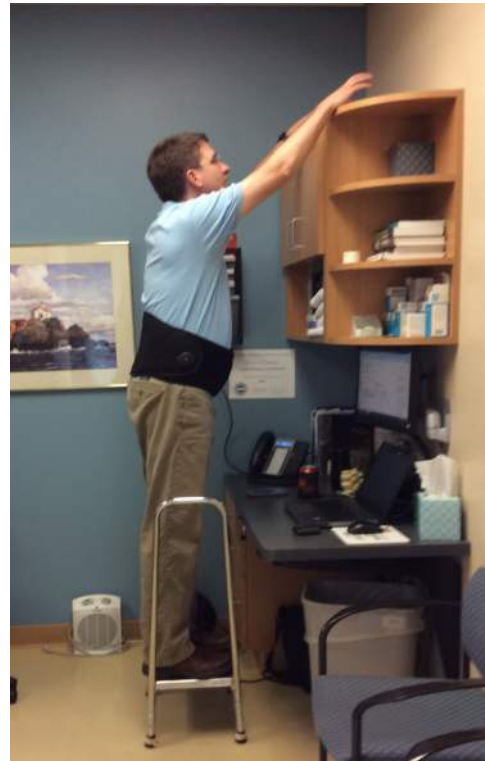


Overhead Cabinets

- Do not over-reach to high cabinets
- Use a step stool to assist so the overhead items are closer/lower



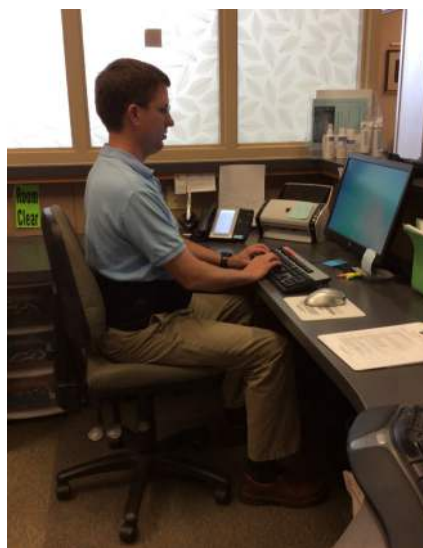
NO



YES



NO



YES

Computer Ergonomics

- Keep computer screen at eye level
- Adjust chair height so the keyboard is level with your fore-arms
- Maintain good sitting posture
- Take frequent standing breaks while working

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- Pain Scale on page 19 was retrieved from <http://valis.com/andi/painscale.html> (copyright 2000 by Andrea Mankoski , reprinted and adapted with permission from Thedacare (Mankoski Pain Scale)

If you have ANY questions or concerns after you go home please call our office and speak with one of our Spine Team nurses at:

920-725-9373