

Spine Surgery Patient Guide

Pre-Surgery Education

Ascension Borgess Hospital



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Objectives

- **Introduction to the spine**
- **Prepare for the day of surgery**
- **Learn how to prevent post-op complications**

Introduction to the Spine

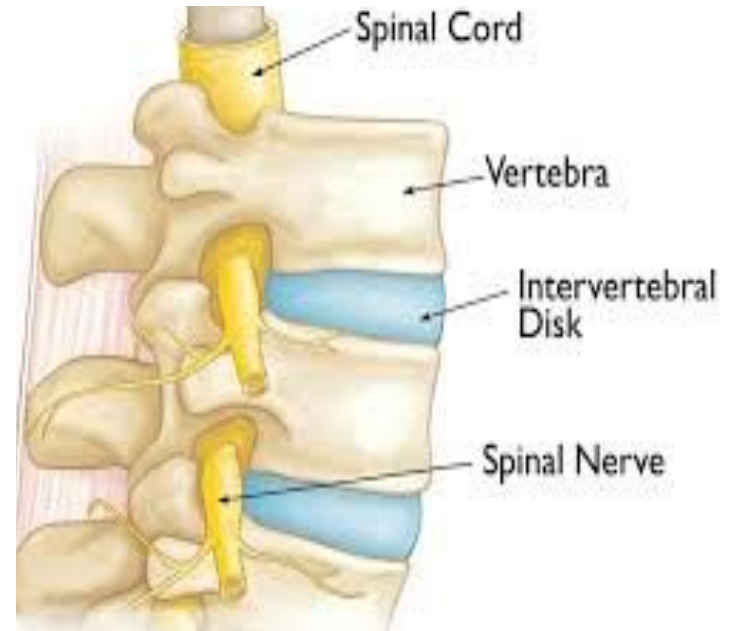


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What does the spine do?

3 Main Parts

- **Vertebrae (the bones)**
 - Give support to the upper body and protect the spinal cord
- **Discs (between the vertebrae)**
 - Act as shock absorbers
- **Spinal cord (in the middle of the vertebrae)**
 - Sends signals from your brain to control all functions and movement of the body



What can happen to the spine?

- Over time, the spine or discs can “wear and tear” due to injury and aging.
- This can lead to pain in the neck, back, arms and legs.
- Also, numbness or weakness may occur.



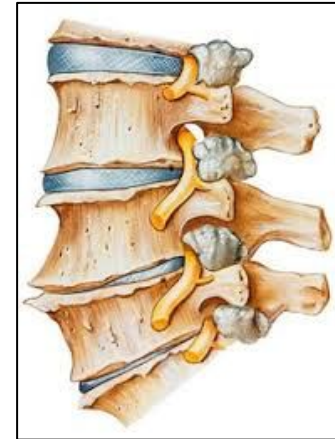
Problems with the spine

- **Spinal Instability**
 - The discs “wear and tear” with time, which can cause vertebrae to slip back and forth
- **Spinal Stenosis**
 - Narrowing of the vertebrae where the spinal cord passes through



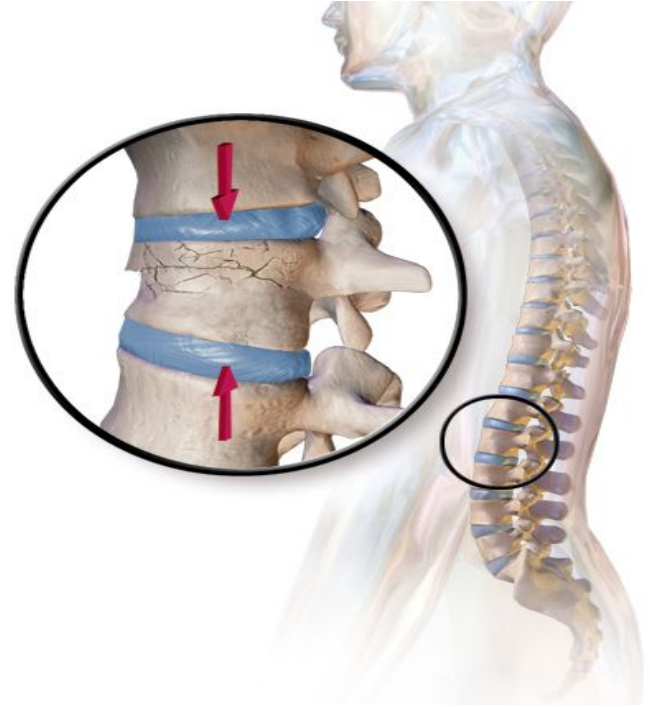
Problems with the spine

- **Spondylolisthesis**
 - Slipping of one of the vertebrae that causes the spine to move out of line
 - Pain caused by pinching of the nerves
- **Arthritis**
 - Bones begin to rub against one another, causing swelling
 - Pain caused by swelling and narrowing of the canal where the spinal nerve passes through



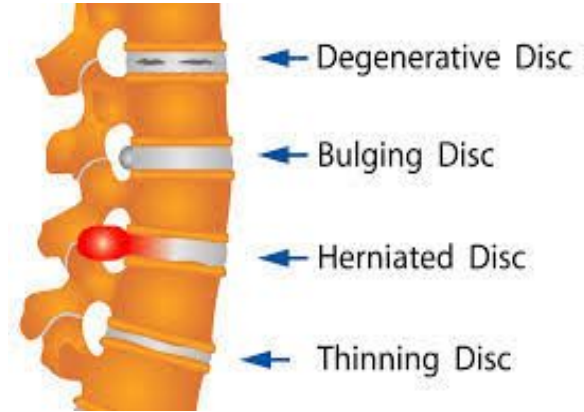
Problems with the spine

- **Vertebral Compression Fracture**
 - One or more of the vertebrae break due to trauma or weakness of the bone



Problems with the discs

- **Degenerative Disc Disease**
 - Discs are worn down due to wear and tear associated with aging and injury
 - Creates pressure on the nerves
 - Causes pain in the back and legs



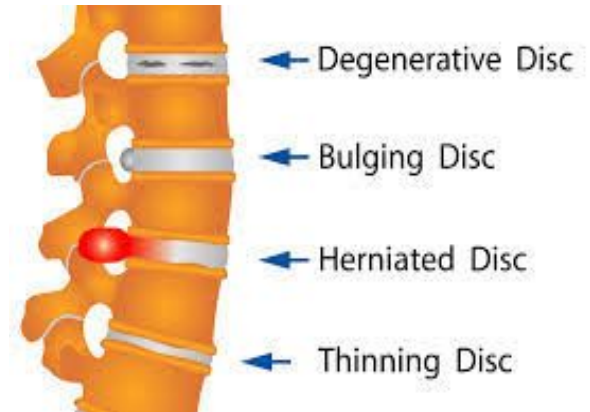
Problems with the discs

- **Bulging Disc**

- Bone surfaces begin to rub against each other
- Bone spurs can also occur, which are bony points around bone edges
- Bone spurs can cause pain and swelling

- **Herniated Disc**

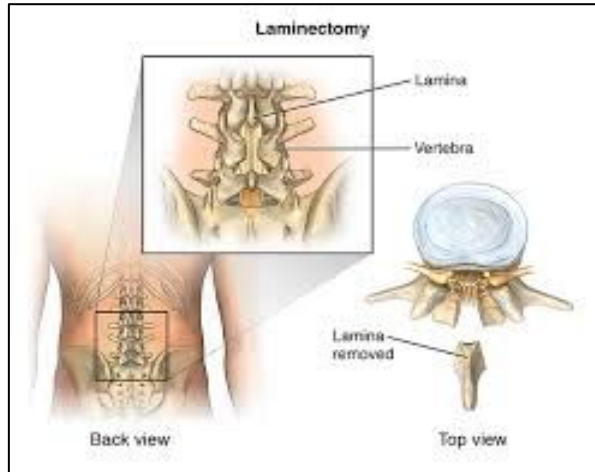
- Disc is being squeezed by the vertebrae
- Puts pressure on the nerves



Types of surgery to reduce pressure (decompression)

Laminectomy

- Removal of the lamina



Discectomy

- Removal of the disc



Types of surgery to reduce pressure

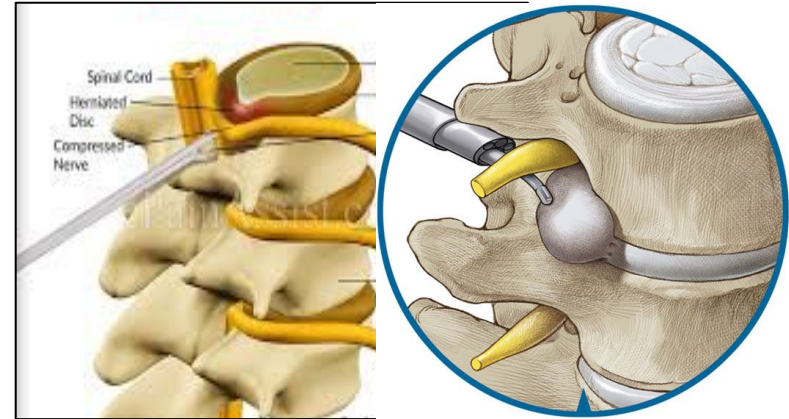
Cervical Corpectomy

- Removal of bone and disc material to take pressure off the spinal cord and nerve



Foraminotomy

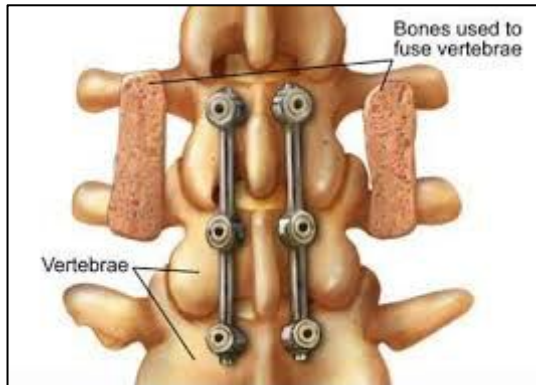
- Removes some bone to enlarge the area where the nerve root is



Other types of back surgery

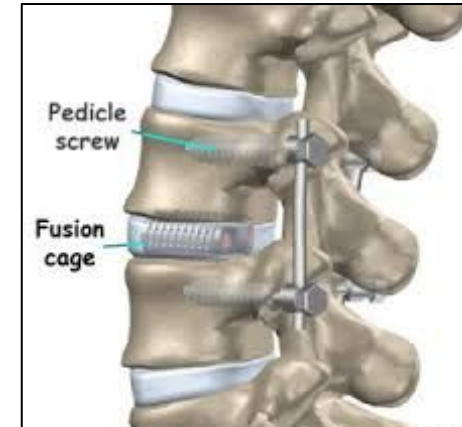
Fusion

- Stabilization of two or more of the vertebrae by joining them with a bone graft



Fixation

- Using metal plates, rods or screws to improve the bone fusion



Other types of back surgery

Disc Replacement

- Replacing a worn or degenerated disc with an artificial disc made of metal



Preparing for Surgery

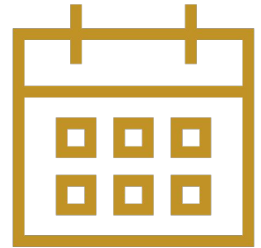


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Appointments

Several appointments are needed to prepare you and the hospital.

- Labwork/other clinical tests
 - Needed to ensure you are in good health prior to surgery
- Physical exam
 - Completed at your surgeon's office a few days before surgery
- Informational phone call with hospital nurse
 - Review medications, prior medical history and pre-surgery instructions



Important information to share

There are several medical conditions that can impact spine surgery and recovery.

- Notify your surgeon if you have or have had:
 - Diabetes
 - Heart disease – heart stent in the past year
 - Sleep apnea – use a CPAP machine at night
 - Blood clots (DVT or PE)
 - Smoking history



Home medications

You may be asked to stop blood thinning medicine before surgery to prevent extra bleeding:

- INCLUDED: glucosamine, anti-inflammatories, Vitamin E
- MAYBE: prescribed blood thinners (examples: Plavix, aspirin, Warfarin)



Stop smoking

Your surgery may be canceled if you are a current smoker.

Smoking....

- Makes your heart beat faster
- Raises your blood pressure
- Makes your blood clot easier
- Makes your blood vessels smaller
- **Interferes with bone healing/fusion**



All of these things increase your risk for blood clots, slower healing and infection

Planning to stop smoking

Resources for quitting

- Michigan Tobacco Quitline
 - 800-QUIT-NOW (800-784-8669)
- National Cancer Institute Smoking Quitline
 - 877-44U-QUIT (877-448-7848) / www.smokefree.gov
- American Lung Association
 - 800-LUNGUSA (800-586-4872) / www.lung.org/stop-smoking



Personal and home hygiene

- **Oral hygiene**

- A dental exam is a good idea prior to surgery
- No dental work should be done 30 days prior to surgery
- Brush your teeth at least twice a day



- **Body/Nail hygiene**

- Bathe daily with a liquid antibacterial soap beginning 3 days prior to surgery
- Fingernails should be kept short; longer nails harbor more dirt and bacteria
- Use a nail brush to clean your nails
- Wash your hands frequently with soap and water

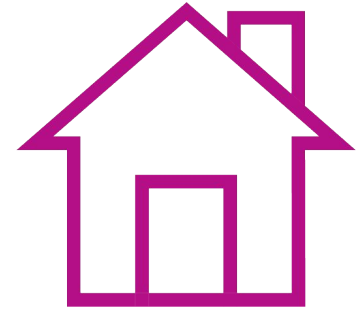


- **Linens**

- Be sure to have clean laundered sheets on your bed at home

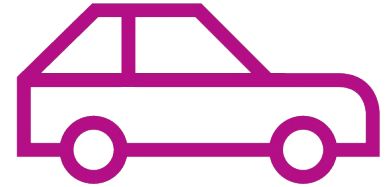
Preparing your home

- Arrange help at home until you feel safe doing daily activities
- Remove all clutter and tripping hazards from the floor
 - Runners and rugs
 - Loose electrical and extension cords
 - Low-rise tables and foot stools
- Stairs to climb? Any way to keep activities on one level?
- Prepare quick-cook meals ahead
- Install handrails by stairs/in bathroom
- Arrange short term pet care



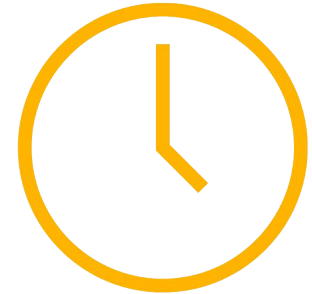
What to bring to the hospital

- Loose fitting clothes (T-shirt, sweatpants/shorts)
- Walker or cane (if you are using one)
 - If you need one after surgery and do not already have it, we will order one before your discharge from the hospital
 - Leave in car – have family or friend bring it in later or the next day
- CPAP – breathing machine for sleep apnea (if you have one)
- Please leave valuables at home or with family or a friend



Night before surgery

- Shower with special soap provided at lab or surgeon's office (Chlorhexidine or Hibiclens)
 - Follow the directions provided
- Nothing to eat after midnight
- May have clear liquids until 2 hours before hospital arrival, which may include a high carbohydrate drink



Preparing for Surgery

Day of surgery

- Park in the parking ramp on the west side of the hospital
- Report to the main entrance area on the ground level
- Begin check in at the electronic kiosk



After Surgery



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Activity

- **Activity starts immediately**
 - Physical therapy – help with walking and muscle strengthening
 - Occupational therapy – help with daily activities such as dressing and bathing
- **Go to the bathroom, sit in a chair, and walk down the hallway WITH HELP**
 - You will get up the day of surgery unless your doctor orders bed rest only
 - Early moving helps to prevent problems
- You are considered **HIGH RISK** for falls after spine surgery. **Ask for help.**

After Surgery

Braces

- You may be required to wear a brace after surgery
- You will get instructions on how to apply it and any specific directions on wearing it

Brace:	When to Wear:	Picture:
Cervical Collar	<ul style="list-style-type: none">• If you have neck surgery, you are required to wear the collar AT ALL TIMES	
BOA Brace	Wear when standing, moving around, sitting in a chair or sitting at an angle greater than 30 degrees	
TLSO Brace	<ul style="list-style-type: none">• Wear when standing, moving around, sitting in a chair or sitting at an angle greater than 30 degrees	

Infection prevention

- **Monitor for signs of wound infection**
 - Increased pain
 - Fever 100.5 or more and lasting more than 24 hours
 - Smelly drainage
 - Increased swelling and redness at surgery area



Infection prevention

- **You are at higher risk of infection if:**
 - You smoke
 - You are diabetic
 - You are overweight
 - You are malnourished
 - You have a weak immune system (such as cancer or organ transplant)



Infection prevention

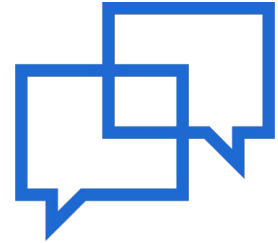
- **Pneumonia**

- Use your breathing exercise machine (incentive spirometer) every hour when awake for 1 week after surgery
 - Exercise machine will be given and explained at the hospital
- Increase activity as ordered
 - You breathe better and deeper when you are up moving around (sitting, standing, moving)



Infection prevention

- **Antibiotics**
 - You will take preventive antibiotics in the hospital
 - You may be asked to take preventive antibiotics before some future invasive procedures
- **Tell your dentist, family doctor and other healthcare providers that you have a new spine surgery hardware**



Blood clot prevention

- You will have compression wraps on your legs
- Do ankle pumps with both feet multiple times each day (during TV commercials, etc.)
- Continue exercises and walking each day (increase as tolerated)
- Above all: walk, walk, walk



Blood clot prevention

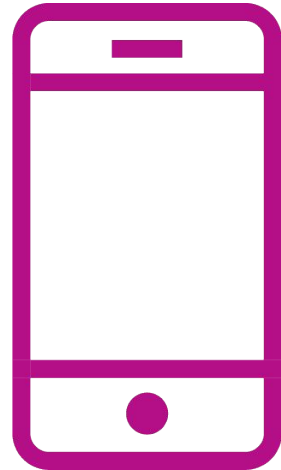
- **Watch for signs of blood clot**
 - Swelling in your leg that continues and makes it difficult to do activities
 - Increased pain, tenderness in your calf
 - Redness
 - Warm to touch
- If you normally have some leg swelling, monitor for **INCREASED SYMPTOMS**



Blood clot prevention

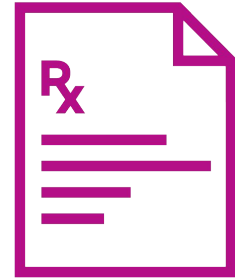
- **Pulmonary Embolism (PE)**
 - Blockage of the pulmonary artery
 - Occurs when a blood clot from a vein travels to the lung
- **Blood clot symptoms may include:**
 - Difficulty breathing
 - Shortness of breath
 - Chest pain
 - Rapid breathing
 - Sweating
 - Confusion
 - Anxiety

CALL 9-1-1



Constipation prevention

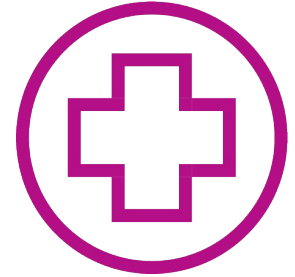
- **Pain medication often causes constipation**
 - Be sure you are drinking enough fluids
 - **Avoid caffeine – it causes dehydration**
 - Stay active – physical activity promotes bowel activity
 - Increase fiber in your diet
 - Consider:
 - Stool softeners daily
 - Laxatives as needed to have regular bowel movements



After Surgery

Wound care

- Keep your incision DRY – DO NOT apply lotions or creams
- You will have a light bandage on your surgery area that stays on until your office visit
- Avoid touching the surgery area
- Keep pets away from the surgery area
- Do not tub bathe or swim until it is OK with your surgeon
- Leave dressing on surgical area unless given instructions to remove it



Pain management

- **Take pain medicine as directed**
 - You may have over-the-counter pain relief medicine and opioid (narcotic) pain medicine prescribed
 - Do not wait for pain to increase
 - Pain pills take about 45-60 minutes to work
 - Take pain medicine before exercise sessions
 - If prescribed pain medicine is not working, call your surgeon's office



Pain management

- **Other things to try for pain relief:**
 - Meditation/Prayer
 - Relaxation – breathing exercise
 - Music
 - Cold packs
 - Aromatherapy
 - Guided imagery
 - Distractions – watching TV or reading
 - Movement and exercise



Pain management

- **Possible side effects of opioid pain medicine:**
 - Constipation
 - Nausea, vomiting and dry mouth
 - Sleepiness, dizziness and lightheaded
 - Confusion
 - Breathing problems
 - Sleep apnea (pauses in breathing while sleeping)
 - Depression
 - Low levels of testosterone that can result in lower sex drive, energy and strength
 - Itching and sweating



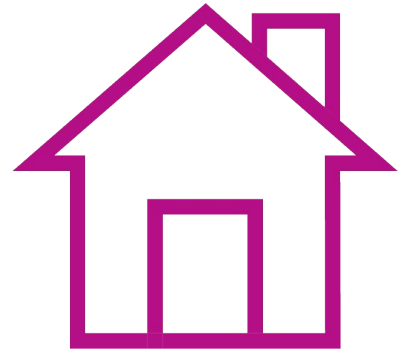
Goals

- **Walk without assistive device**
 - Continue exercises at home or at a therapy center
 - Strengthen your leg and hip muscles to assist with walking and provide support to your back and/or neck
 - Full range of motion for the back and/or neck
- **Decreased pain**
 - Pain will gradually decrease
 - If unable to do exercises and activities, call your surgeon's office for direction



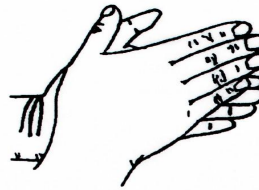
Leaving the hospital

- Many patients go home from the recovery room or the day after surgery
- Plan to have 24-hour help at home for a few days
- Continue exercises/activity as shown in the hospital
 - Your surgeon may also order outpatient therapy
- If additional services are needed, the hospital discharge planning team will help arrange

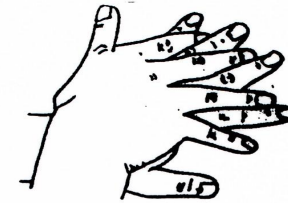


Personal hygiene

- **It's important to wash your hands:**
 - Before and after meals
 - After a sneeze or cough
 - After going to the bathroom
 - Before and after touching the incision
 - After touching pets



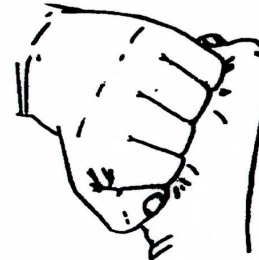
1. Palm to palm



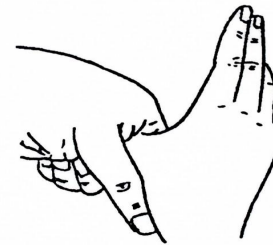
2. Right palm over left dorsum, left palm over right dorsum.



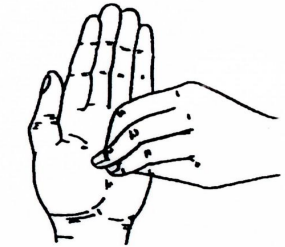
3. Palm to palm, fingers interlaced.



4. Backs of fingers to opposing palms with fingers interlaced.



5. Rotational rubbing of right thumb clasped over left palm & left thumb over right palm.



6. Rotational rubbing backwards and forwards with clasped fingers of right hand in palm of left hand and vice-versa.

Personal hygiene

- **Hand washing instructions**

- Turn on warm water
- Wet hands and wrists
- Use liquid soap
- Scrub your hands thoroughly for at least 30 seconds
- Dry your hands using a clean paper towel
- Remove hand towels and replace with a roll of paper towel
- Use a paper towel to turn off the faucet



Diligent hand washing is the best way to prevent infection

Personal hygiene

- **Bathing**

- No submersion (bathtub, pool, Jacuzzi, etc.) for 6 weeks or as directed by your surgeon
- Do not get your incision wet until 5 days after surgery
- Bathe daily using a mild liquid soap for 45-60 days; DO NOT use bar soap
- Do not share soap or towels with family members
- Use a clean washcloth and clean towel each time you bathe
- After 5 days, gently wash your incision first, then the rest of your body
- When drying, pat your incision dry first, then dry the rest of your body being careful not to retouch your incision

Home Safety After Surgery



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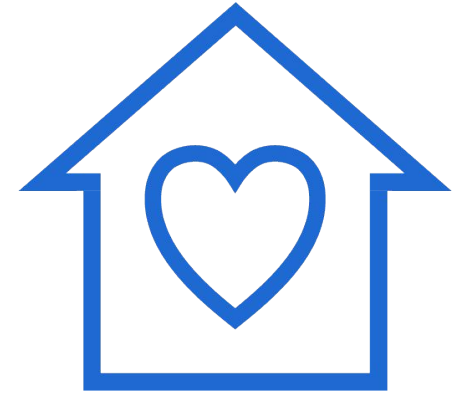
General tips and considerations

- **Footwear**
 - Wear properly-fitted shoes with non-skid soles
 - Use a long-handled shoehorn if you have trouble putting on your shoes
 - Never walk in your stocking feet; you could slip on smooth surfaces
 - Replace slippers that have stretched out of shape and are loose
 - Make sure slippers have non-skid soles



Bedroom safety

- If you get up in the middle of the night, sit at the side of the bed for a few moments to avoid dizziness
- Make sure there is a lamp or flashlight at the bedside as well as a phone
- Set up a small cooler with drinks and snacks next to the bed



Bathroom safety

- Nearly half of all falls recorded after surgery occur in the bathroom.
- Splashed water increases the chances of a fall, so be careful
- Keep a nightlight in the bathroom
- Place a slip-resistant rug adjacent to the bathtub for safe exit and entry
- Add non-skid strips or a rubber bath mat to the floor of the tub
- Install grab bars in the tub or shower if balance is a problem
- Stabilize yourself on the toilet by using either a raised seat or a special toilet seat with armrests



Kitchen safety

- The kitchen is the second most dangerous room in the house because of water spills and splashes
- Wipe up water spills right away
- Immediately clean up any spilled food or grease from the floor
- Do not stand on stools, chairs or boxes to reach upper cabinets
- Slide pots across the countertop instead of carrying them



Medication(s) safety

- Purchase a daily or weekly pill organizer
 - These devices add safety by grouping together medicines needed to be taken each day
- Be aware that some medicines can cause dizziness, which can increase the likelihood of a fall



Pets

- Keep pet toys picked up
 - Tripping over pet toys or food bowls is a common cause of falls
- Clean up spilled water or scattered food as soon as you see it
- Stay alert as you walk
 - Some pets have a habit of crossing in front of their owner's feet
- Train your dog not to jump up on people when it gets excited
- Do not let your pet sleep with you
 - This could cause an infection of your incision

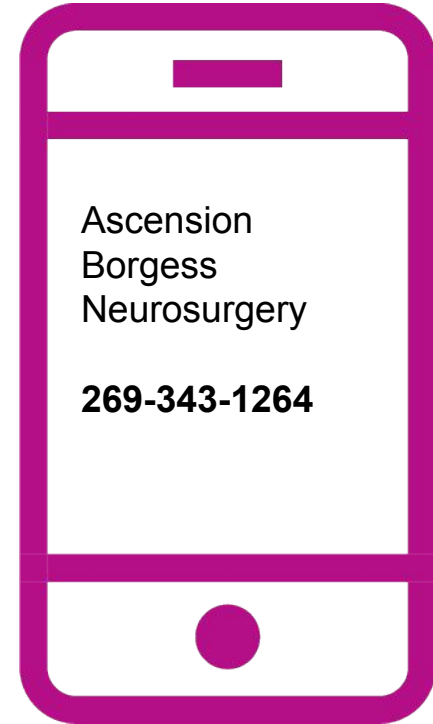
Small children

- Whether you are a parent or grandparent, restrictions such as no bending or lifting can make it difficult to care for small children
- You may want to have some assistance for a short time after surgery and prepare in advance
- Small children may need some education on how to interact with you in a way that ensures both their safety and yours
- Rough play could cause injury

Contact Us

Questions?

- Contact the Ascension Borgess neurosurgery office at **269-343-1264**



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Terie.Caldwell@ascension.org

or

Montserrat.Gower@ascension.org

Please use the subject line “**Spine Surgery Education Attendance**” and use the following text:

(Your name) has attended the presurgical patient education online. My surgery is on (month/date/year) to be performed by Dr. (your surgeon’s name)

**Thank you for choosing
Ascension Borgess Hospital
for your spine surgery!**



