



Beaufort Memorial
ADVANCED ORTHOPEDICS & SPINE



Getting Ready for
SPINE SURGERY



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WELCOME TO

Beaufort Memorial Hospital

ADVANCED ORTHOPEDICS AND SPINE

Thank you for choosing Beaufort Memorial for your spine surgery!

Our experts have carefully planned every step of your care. We feel that the better informed you are about your surgery, the more likely it is that you will have a positive experience and an excellent outcome.

Spinal surgery requires you to be an ACTIVE team member in your recovery and rehabilitation. We will educate, support, and assist you in returning to your optimal state of health before you are discharged from the hospital. It is important that you COMMUNICATE with all team members. Ask questions and seek clarification if you are not sure or do not understand. Our goal is to help you understand what is involved and encourage you to actively participate in your care.

You have selected a spine surgery program that has several advantages:

- Highly skilled spine surgeons
- Preoperative Assessment Clinic to optimize patients for surgery
- A dedicated Spine Program Coordinator to support you throughout the process
- Preoperative education and support
- Experienced and specially trained staff to maximize your recovery
- In-house physical and occupational therapy
- A team approach to discharge planning to maximize recovery after surgery
- A commitment to safe, high quality, patient-centered care



**At Beaufort Memorial,
we are committed to delivering
excellent orthopedic care and
bringing you the best medical options
to improve your quality of life.**

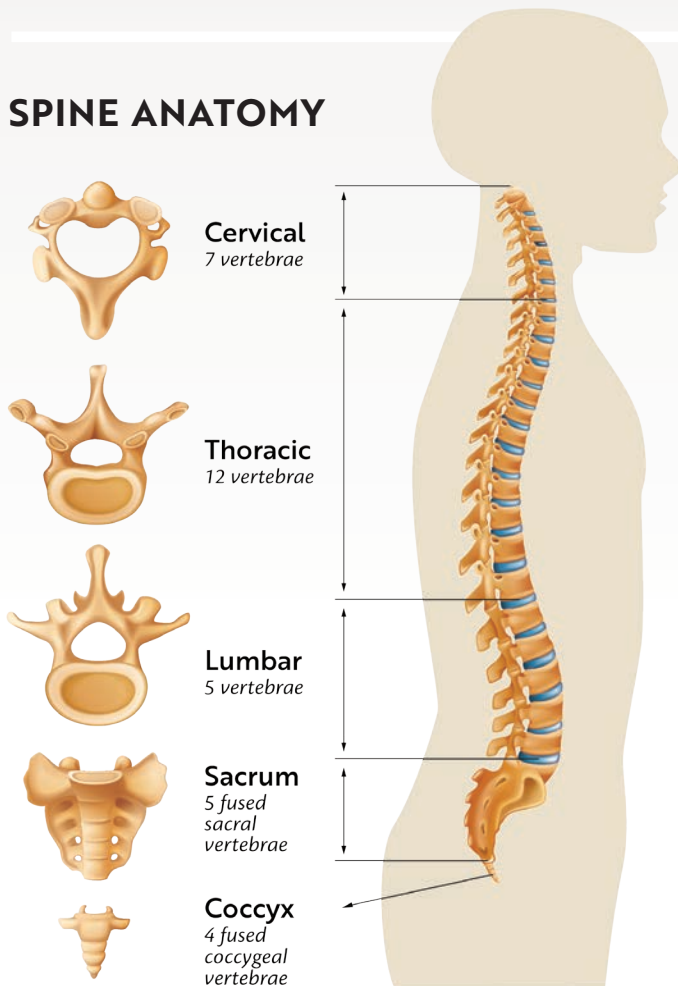
UNDERSTANDING YOUR SPINE SURGERY

ANATOMY OF THE SPINE

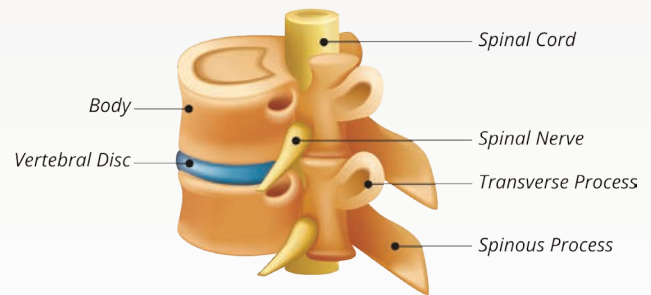
The spine has a column of bones that provides strong, flexible support for the body and protects the spinal cord within.

- The spine has 33 vertebrae stacked on each other.
- The vertebrae are connected by facet joints at the back of the spine. These joints allow movement between the bones and the spine.
- Ligaments support or stabilize the vertebrae.
- An intervertebral disc is in between each vertebra, which acts as a shock absorber.
- The vertebrae can be divided into 5 segments:
 - 7 cervical vertebrae
 - 12 thoracic vertebrae
 - 5 lumbar vertebrae
 - 5 fused sacral vertebrae (sacrum)
 - 4 fused coccygeal vertebrae (coccyx)
- The transverse process is the wing of bone on either side of each vertebra.
- The spinous process is the part of each vertebra you can feel through your skin.
- The spinal cord extends through the canal at the back of the vertebrae from the brain stem to the lumbar vertebrae area. Nerves branch out from the spinal cord and send a message for movement and body functions to the rest of the body.

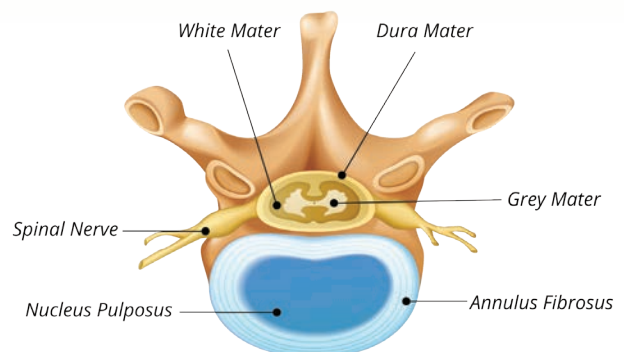
SPINE ANATOMY



SPINAL STRUCTURE



SPINAL CORD



UNDERSTANDING YOUR SPINE SURGERY

SPINAL DISORDERS

Herniated Disc – A disc herniation occurs when the outer wall of the disc (annulus fibrosus) tears or breaks open. Some of the matter inside the disc (nucleus pulposus) leaks out and pushes on nearby spinal nerves and/or the spinal cord. Although a disc herniation can occur at any level of the spine, the lumbar spine (lower back) and cervical spine (neck) are the most commonly involved. The location of the herniated disc determines where the symptoms are experienced in the body. Symptoms such as numbness and tingling, pain and/or muscle weakness may be experienced in the arm(s) or leg(s) as a result of a herniated disc.

Degenerative Disc Disease – This spinal condition comes from the normal wear and tear process of aging. As we age, our discs lose some of their flexibility, elasticity and cushion. Degenerative disc disease may cause problems if the disc height is reduced or if the disc becomes thin and stiff.

Spinal Stenosis – Spinal stenosis is a condition characterized by the progressive narrowing of the spine. Spinal stenosis can result in the compression of the spinal nerves and spinal cord. Although spinal stenosis can occur anywhere in the spine, the cervical and lumbar areas are usually affected. This condition can lead to the development of pain, numbness, weakness in the arms and/or legs and sometimes even balance disturbances.

Spondylosis – Spondylosis is arthritis of the spine, and is often called spinal osteoarthritis. Spondylosis can occur in the cervical, thoracic or lumbar spine. As with other joints in the body, osteoarthritis causes progressive degeneration of cartilage. Some patients have no symptoms at all. Your degree of symptoms can vary.

Spondylolisthesis – Spondylolisthesis comes from the Greek words spondylo, meaning vertebrae, and listhesis, meaning slipping or sliding. Spondylolisthesis is a spinal condition in which one vertebra slips forward over the vertebra below. This

disorder most commonly occurs in the lumbar spine. Although spondylolisthesis can cause spinal instability, not all patients experience pain.

Radiculopathy – Radiculopathy is not a disease itself, but the result of direct pressure on a nerve root due to a herniated disc or degenerative changes. The nerve roots are branches of the spinal cord that carry signals to the rest of the body at each level along the spine. The location of the radicular symptoms depends on the area supplied by the specific nerve root that is compressed.

Myelopathy – Myelopathy is an injury to the spinal cord caused by severe compression that may be a result of spinal stenosis, disc degeneration, disc herniation, autoimmune disorders or other trauma. Symptoms may include numbness, weakness, or decreased coordination.

TYPES OF SPINE SURGERY

Below are common spine surgeries. Talk to your surgeon if you have specific questions.

Spinal Fusion

- When 1 or more of the vertebrae of the spine are united or fused together so no motion happens between them.
- Fusing the vertebrae may be done for several reasons such as treatment of a broken vertebra, correction of a deformity like spinal curves or slipping, resolving pain caused by motion, or treatment of instability or disc herniations.

Cervical Fusion

- Fusion of vertebrae in your neck.
- An incision is made through the front (anterior cervical fusion) or back (posterior cervical fusion) of the neck.
- The surgeon will remove the problem disc. After the disc is removed, bone from either the bone bank, your pelvis or another substance is placed in the disc space. This is called a graft.
- In time, the graft and the bone around it will grow into a solid unit.

UNDERSTANDING YOUR SPINE SURGERY

Continued

- A metal plate and screws, rods, or wires may be put over the bone graft for extra support.

Lumbar Fusion

- Fusion of vertebrae in your lower back.
- An incision is made through the front (anterior lumbar fusion) or back (posterior lumbar fusion) to expose the spine.
- The surgeon may remove disc material and place cages or a bone graft in the disc space. If they do not remove the disc, they will place bone along the side of your spine to stimulate the bones to fuse.
- You may or may not have extra hardware such as plates, screws, and cages. This is sometimes used to correct a deformity or hold the vertebra together as the bone graft heals and bones fuse together.

Microdiscectomy

- A small incision is made in the midline of the low back.
- The surgeon will remove the portion of the herniated disc causing pressure on and irritating the nerve.

Cervical or Lumbar Decompression

- This could be a laminectomy, laminotomy, corpectomy, foraminotomy, or other procedure.
- Consists of removing bone, arthritic build up, thickened soft tissue, and possibly disc material to “decompress” or free up the nerves.
- You may have a decompression along with a fusion if your surgeon feels it is needed.

Cervical Disc Replacement (Arthroplasty)

- Replaces a damaged disc in the cervical spine with an artificial disc implant to relieve pressure on the nerve roots and spinal cord.

THE RISKS OF SPINE SURGERY

Spine surgery is major surgery and although advances in technology and medical care have made the procedure very safe and effective, there are risks. These risks should be considered carefully before you decide to have surgery. We encourage you to

discuss the potential risks with your orthopedic surgeon, primary care provider and your family. Every measure will be taken by our team of experts to minimize the risks and avoid complications. Although complications are rare, they do sometimes occur. We will do our very best to avoid the most common risks, which include:

Blood clots: Blood clots can form in a vein and in your lungs after spine surgery and can be dangerous. Blood clots are more common in older patients, patients who are obese, have a history of blood clots, smoke, or have cancer.

Infection: Infection is very rare in healthy patients having spine surgery. Patients with chronic health conditions (like diabetes), patients who take some forms of corticosteroids, and those who use tobacco/nicotine are at higher risk of infection after any surgery. Superficial wound infections are usually treated with antibiotics. Deeper infections may require additional surgery.

Nerve or blood vessel injuries: Damage to the surrounding structures, including nerves and blood vessels are possible but extremely rare. If you have changes in strength, sensation, or bowel or bladder control, call your surgeon right away.

Wound healing: Sometimes the surgical incision heals slowly, particularly if you take corticosteroids or have a disease that affects the immune system, such as rheumatoid arthritis or diabetes, or if you are a smoker. Follow the incision care direction from your surgeon and wash your hands frequently.

Hematoma: Bleeding can occur either immediately after surgery or at a later time. This is accompanied by acute pain and swelling. **Dural Tear:** A tear in the membrane surrounding the spinal cord, or dura, can cause cerebrospinal fluid to leak. This may require further treatment or bedrest for a period of time.

Nonunion/Nonhealing fusion: This may require further surgery or bone stimulator use. Smoking or tobacco use may increase incidence of nonunion.

UNDERSTANDING YOUR SPINE SURGERY

WHAT RESULTS ARE TYPICAL? – You can expect a successful outcome from your spine surgery. Generally, patients experience less pain and more mobility, and can resume many of the activities they enjoyed before the onset of symptoms.

YOU CAN HELP REDUCE YOUR RISKS OF COMPLICATIONS BY:

- Reducing or eliminating the use of tobacco and alcohol
- Being compliant with managing your diabetes, if applicable
- Maintaining a healthy diet
- Using good hand washing techniques
- Performing your exercises as directed by therapy-WALK!
- Limiting activities as directed by your surgeon
- Limiting high-impact activities as directed by your surgeon

PREPARING FOR YOUR SPINE SURGERY

Your spine procedure journey begins long before your actual surgery. These guidelines will prepare you for a safe recovery in your quest for improved mobility and health.

To make sure you and your coach are prepared for your surgery, it is important that you carefully and thoroughly review this booklet and participate in the Spine Surgery education class (either in person or online) before surgery. The information will help you better understand the process and what to expect every step of the way. Please call us at 843-522-7435 if you have any questions or concerns regarding this information.

ITEMS TO DISCUSS WITH YOUR SURGEON

Ask your surgeon what to expect after surgery, such as:

- How many nights, if any, can I expect to stay in the hospital?
- When can I expect to return to work/hobbies?
- When will I be able to resume driving?
- Will I need rehabilitation after surgery?

HELP FROM YOUR COACH – Recovering from spine surgery is a team effort. Support, encouragement and companionship from your coach (a family member or friend) can make all the difference, not just in the hospital, but also throughout the weeks before and after your surgery. We strongly recommend that your coach is present during the therapy sessions in the hospital. This person should be someone who is willing to support you every step of the way and who can participate fully in activities before surgery and during your recovery.



PREPARING FOR YOUR SPINE SURGERY

Continued

Prior to surgery, a nurse will review your medications, including any over-the-counter medicines or supplements, and let you know which are safe to take prior to surgery and which should be stopped.

MEDICATIONS YOU MAY NEED TO STOP TAKING PRIOR TO SURGERY

Some medications that you currently take may prove harmful during surgery because they thin your blood and increase the risk of bleeding after surgery. If you take the following medications, you must stop taking them prior to your surgery:

Stop two weeks prior

- Prescription diet medications, Methotrexate™ and other rheumatoid arthritis medications.
- If you are having fusion surgery, your surgeon may ask you to stop steroids, NSAIDs, rheumatoid arthritis medicines, and gout medicines for a certain period of time before surgery and to continue to avoid these for up to 3 months after surgery. These may keep your bones from fusing.
- The American Society of Anesthesiology has recommended you stop the following supplements Ginkgo Biloba, Garlic or

Garlique, Ginseng, Glucosamine, Green Tea (capsule form), Kava, Echinacea, St John's Wort, Valerian, Vitamins A and E, and Fish Oil.

Stop seven days prior

- Compounds containing aspirin, hormone replacement therapy, anti-inflammatory medications (such as Ibuprofen®, Motrin®, Advil®, Aleve®, Naproxyn®, Relafin® or Diclofenac®) may need to be stopped prior to surgery. Your surgeon will advise you which medications to stop and offer exact time frames.
- Aspirin should be stopped 1 week before surgery, or as you are told by your surgeon.
- Blood thinners or antiplatelet medicine should be stopped as you are told by your surgeon and the doctor who prescribes it. These medicines may include, but are not limited to:
 - Apixaban (Eliquis®)
 - Clopidogrel (Plavix®)
 - Enoxaparin (Lovenox®)
 - Rivaroxaban (Xarelto®)
 - Dabigatran (Pradaxa®)
 - Warfarin



ENSURING THE BEST OUTCOMES

Preop Testing – You will have several routine tests before surgery. Some of the most common tests done include laboratory tests, a chest x-ray and electrocardiogram (ECG).

Blood Conservation Program – While the need for a blood transfusion following spine surgery is low, your lab work may indicate that you could benefit from iron or other supplements to help the body increase hemoglobin levels. Hemoglobin is what gives cells oxygen, which aides in healing and recovery. If your blood work indicates you could benefit from treatment before surgery, the Blood

Conversation Coordinator will contact you to discuss your options. You may contact the coordinator directly at 843-522-5293.

Preoperative Assessment Clinic – Your surgeon may refer you to the Preoperative Assessment Clinic for evaluation, preparation and education before surgery. During a PAC visit, you will undergo a thorough evaluation by a medical provider to ensure readiness for surgery. At this time, you will receive a history and physical examination to determine if additional tests or medical therapy is necessary prior to your anticipated surgical date.

REDUCING THE RISK OF INFECTION

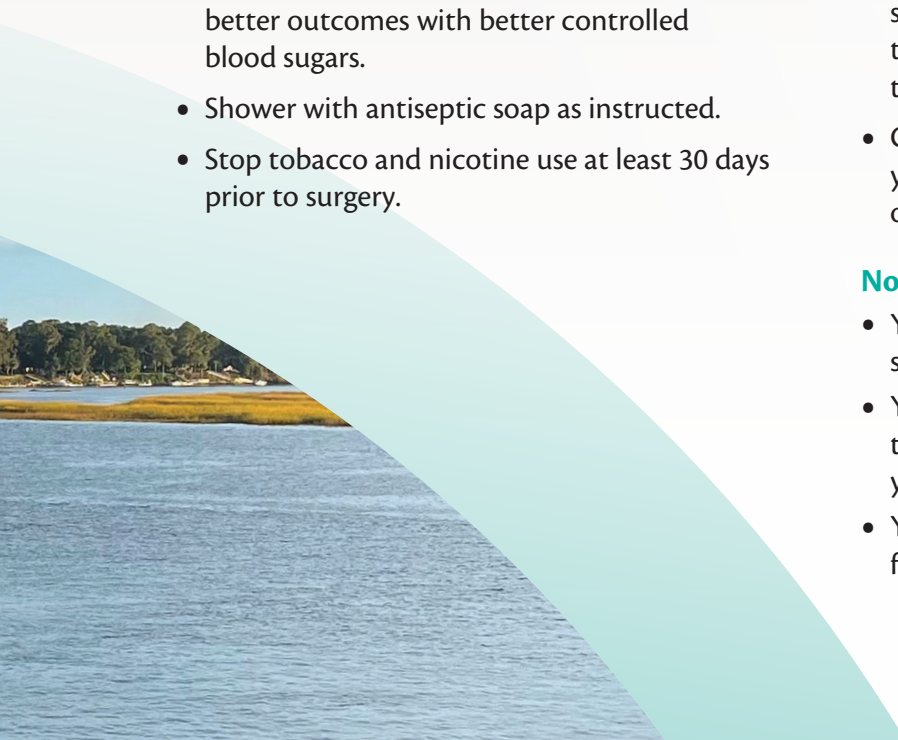
Your overall health is important when you are having a planned surgery. Here are some things you can do to help decrease your risk of developing a surgical site infection.

- Make sure you eat nutritiously.
- Control your blood sugar. Research has shown better outcomes with better controlled blood sugars.
- Shower with antiseptic soap as instructed.
- Stop tobacco and nicotine use at least 30 days prior to surgery.

- Trim nails, and remove polish and fake nails.
- Tell your surgeon if you have any other infections. This may include an ingrown toenail, bladder infection, skin sores, a tooth abscess, colds etc.
- Dental care: Please call your surgeon's office if any dental problems arise prior to your scheduled surgery. Dental work should be completed at least three weeks prior to your surgery and avoided three months after surgery, if possible.
- Clean hands: Hand hygiene is very important for you and your caregivers. Please wash frequently or use an alcohol-based hand sanitizer.

Notify your orthopedic surgeon if:

- You have a skin condition or opening in the surgical area.
- You undergo a procedure or have a condition through which bacteria might spread into your bloodstream.
- You have a persistent fever above 101 degrees for two days.



SHOWER PREP INSTRUCTIONS

Your surgeon recommends chlorhexidine gluconate (Hibiclens) soap to reduce the amount of germs on your skin prior to surgery to decrease your chances of infection. It will be given to you at your pre-op appointment. You may also purchase it at local drug stores.

Take a shower using chlorhexidine gluconate (Hibiclens) each day for five days, including the morning of surgery. On the day you start your Hibiclens shower, make your bed with clean sheets. Do not sleep with pets during this time or after your surgery until your incision has healed.

Directions:

1. Wash all areas as normal, using your regular soap – then rinse.
2. Use the chlorhexidine gluconate (Hibiclens) on a clean, wet washcloth.
3. Wash the area where you are going to have surgery thoroughly.
4. Also wash entire body from neck down (omitting the genitals) thoroughly.
5. After 3-5 minutes of washing, rinse as usual and dry off with a clean towel.
6. Do not apply lotions or powder after shower on the day of surgery.
7. Dress in clean clothes or pajamas.
8. Do not sleep with pets.



NUTRITION BEFORE SURGERY

To help your body prepare for and recover from surgery, we recommend drinking Ensure Pre-Surgery Clear Carbohydrate Drink prior to surgery. Make sure it is the clear formula! Alternative Drink: Gatorade or Powerade (NO RED).

Directions:

On the night before surgery at bedtime (before midnight):

- Drink one 10 oz. bottle of Ensure Pre-Surgery Clear Carbohydrate Drink.

On the day of surgery:

- **If not diabetic, 2 hours before arrival at the hospital,** drink one 10 oz. bottle of Ensure Pre-Surgery Clear Carbohydrate drink. Drink it quickly, within 5 minutes.
- **Special Instructions For Diabetics:** 4 hours before arrival at the hospital, drink one 10 oz. bottle of Ensure Pre-Surgery Clear Carbohydrate drink. Drink it quickly, within 5 minutes. If sleeping does not permit the 4 hours, drink 12 oz. of water 2 hours before arrival instead.



▲ A clear, complex carbohydrate beverage, Ensure Pre-Surgery is specially designed to help improve recovery.

HOME SAFETY PREPARATIONS

Follow these tips to help make your home safe and comfortable for your return:

- Check your home for tripping hazards like throw rugs and cords. Area rugs should be picked up, removed, tacked down or secured with a non-skid pad. All electrical cords should be tucked out of the way.
- Have nightlights installed in the bathrooms, bedrooms and hallways.
- Arrange furniture so that it doesn't block walking areas.
- Check the bed and chairs that you will spend most of your time in when you return home. They should be of moderate height and firm. Furniture that is too high or low, or very soft, may present challenges.
- Chairs with wheels should not be used under any circumstance.
- Arrange your "nest," or where you will spend most of your time, with conveniences (i.e., music, TV, lap desk, water pitcher, pillows, etc.).
- Determine what items from dressers, cabinets and shelves you will need immediately after returning home. Any items that are currently stored either high or low and require excessive bending or reaching should be moved to counter height. This includes items in bathrooms and kitchens.
- Have non-slip bath strips or rubber mats in the tub or shower. Replace bar soap with easier to hold liquid soap or soap on a rope.
- If you have pets of any kind, you may want to consider boarding or finding a caretaker for them for a few days after your return. Pets should not sleep in your bed until the incision is healed.
- A cordless phone or cell phone should be available. It should be tucked in a pocket and carried with you for easy use. Emergency numbers need to be close to the phone and easy to access.
- In order to minimize cooking, prepare meals in advance and freeze them. Alternatively, you can also purchase individual serving-size meals for times when you are alone. The goal is to plan ahead.
- Attend to any outdoor work, like gardening or cutting the grass, prior to your surgery.
- Wash any laundry that you may have. Have loose fitting/oversized, comfortable clothing for your first days at home.
- Clean your home prior to surgery. Put clean linens on your bed.
- Plan to have a support person stay with you at home until you are able to perform activities of daily living independently and safely. Typically, this occurs in the first few days after you return home.

REMEMBER

DO NOT shave the surgical area prior to surgery. Women, please do not shave your underarm for 48 hours prior to surgery day. **DO SHOWER.** You will be given an antibacterial soap and specific showering instructions prior to surgery.

WHAT TO BRING TO THE HOSPITAL

- Bring this book to the hospital for reference.
- Comfortable Clothing: Pants or shorts with an elastic waistband, loose fitting tops, and footwear that is easy to slip on and have a back on them (no flip flops or sandals/slippers that have an open heel).
- Eye glasses, contact lenses, and dentures in their cases, marked with your name.
- If you have bladder issues, you may want to bring Depends® or pads.
- If you would like, you may bring your cell phone and/or tablet (and charging cables). However, make sure it is secure while you are here. WiFi is available throughout the hospital.
- BiPAP or CPAP machine and mask if you sleep with one at home.
- ID and insurance cards. If you plan to utilize Publix bedside delivery service for new prescriptions, please bring a method of payment.

DO NOT BRING

Please leave your valuables at home or give them to a friend for safe keeping. The hospital is not responsible for lost or damaged items.



YOUR ITINERARY COUNTDOWN TO SURGERY

4 WEEKS BEFORE SURGERY

- View pre-operative education class and attend pre-op appointment.
- Stop smoking or tobacco/nicotine products.

2 WEEKS BEFORE SURGERY

- Start making home preparations.
- Stop taking prescription diet medications, herbal supplements as stated previously, and medications like Methotrexate and other rheumatoid arthritis medications. THESE ARE EXAMPLES ONLY. Please discuss all your current medications and supplements with your surgeon and/or nurse liaison and follow their directions.

7-10 DAYS BEFORE SURGERY

- Stop taking NSAIDS such as ibuprofen and naproxen, aspirin, and blood thinners as directed by your surgeon.
- Reduce alcohol consumption.

4 DAYS BEFORE SURGERY

- Change bed linens.
- Stop sleeping with pets.
- Start the Hibiclens shower process (your fifth day of use will be the day of surgery.)

DAY BEFORE SURGERY

- Make sure you stay well hydrated throughout the day.
- Pack your bag for your hospital stay.
- Drink one 10 oz. bottle of Ensure Pre-Surgery clear carbohydrate drink at bedtime (before midnight).
- Do not eat or drink after midnight or as instructed.

DAY OF SURGERY

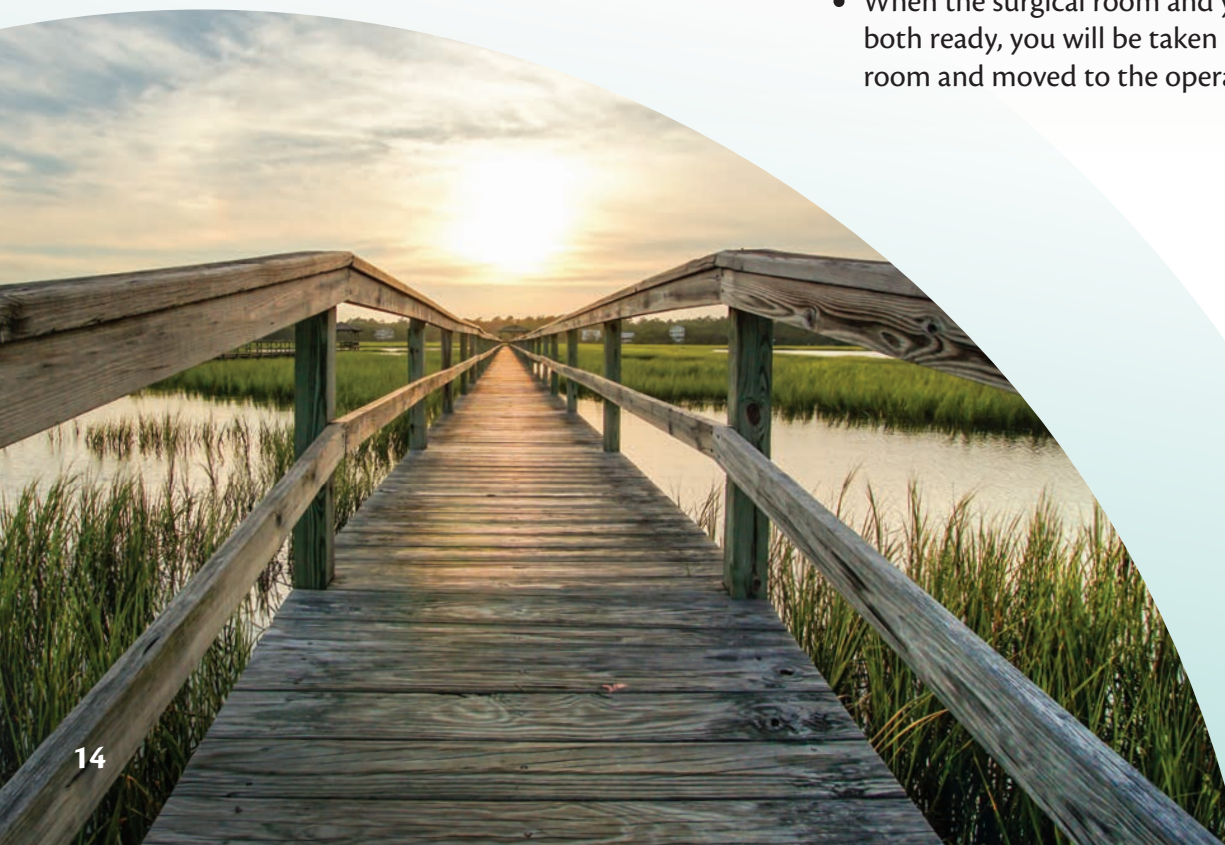
- Take a shower and clean your body with the special cleanser as you were instructed.
- It's ok to brush your teeth, but do not swallow any water.
- Drink one 10 oz. bottle of Ensure Pre-Surgery clear carbohydrate drink two (2) hours before arrival at the hospital. Consume it quickly (in less than five minutes). If you are diabetic, follow instructions on page 10.
- Wear clean, comfortable clothes. Avoid wearing any fragrance, deodorant, cream, lotion or nail polish.
- Take any medications with a small sip of water as instructed during your pre-operative testing. Report to the check-in area on time.

ARRIVING AT THE HOSPITAL

The day of your surgery will be a busy one. Several hours will pass between the time you check in at the hospital and the time that your surgery is completed. Your coach is welcome to stay with you at all times except while you are in the surgery area.

- It is important that you arrive at the hospital at the designated time. This will give you plenty of time to check in at the desk in the surgical lobby, entrance four (see campus map in the back of this book). The nurse will help you prepare for surgery.
- Once you are taken to the operating room, your family member can wait for updates in the surgical lobby or leave a phone number so we can contact them.
- A nurse will review your planned procedure and allergies with you, along with additional information. She/he will review your past medical history and medication list. This is done to ensure any changes in your medical history or medications are not overlooked.

- You will be placed on several monitors – a blood pressure cuff on your arm, oxygen-sensing device on your finger (similar to a clothespin), as well as three sticky circles on your chest for the heart monitor. Your temperature and breathing rate will be monitored. These are known as your vital signs. Your vital signs will be monitored continuously until you are discharged to your hospital room post-operatively. All pre-operative orders given by your surgeon will be completed. These may include:
 - An intravenous line (IV) started for administration of fluids and medications during and after your surgery.
 - Hair removal by appropriate means, as needed.
 - Application of special compression booties called Sequential Compression Devices (SCDs) to aid the circulation in your legs and feet, which helps reduce the risk of blood clots.
- Additional procedures and/or treatments will be completed based on your individual needs. Your surgeon will mark and verify the operative site in the peri-operative area.
- When the surgical room and your surgeon are both ready, you will be taken to the operating room and moved to the operating table.





ANESTHESIA SERVICES

General Information

- Before surgery, the anesthesia provider will meet with you, discuss your medical history and determine the best plan for your anesthesia care.
- It is important that you tell your anesthesia provider of any prior problems or difficulties you have had with anesthesia.
- Your anesthesia provider will discuss the risks and benefits associated with the various anesthesia options, as well as the potential side effects that can occur with each.
- While you are in surgery, family/friends may wait in the Surgery Center lobby. The O.R. nurses will update your family/friends of your progress periodically.
- When surgery is complete, you will be transported to the Post-Anesthesia Care Unit (PACU) by your surgical nurse and a member of the anesthesia team. Your surgeon will contact your family to discuss your procedure.

In PACU you will receive constant care from a specially trained registered nurse, who is knowledgeable in post-anesthesia care. The PACU may seem bright and busy. You will hear monitors beeping and may see other patients. Your nurse will be close by your bedside and will ask you frequently to move your legs and feet, cough and take deep breaths. He or she will perform frequent checks of your surgical site and pain management.

WHAT TO EXPECT AFTER SURGERY

AFTER YOUR SURGERY – After your stay in the PACU, you will be transported to your room in the hospital's dedicated orthopedics and spine unit. If appropriate, you may go home from the recovery area. Your nurse and his/her team will provide your care.

Communication with your health care team will provide the best outcome possible. Do not be afraid to ask them for assistance.

The nursing team will monitor and observe the following:

- Vital signs hourly at first, then as needed.
- Your bandage will be checked frequently for excessive bleeding. Some bleeding is expected and normal. You may have a drain in place to assist in decreasing fluid accumulation at your surgical site that could lead to hematoma or wound healing complications.

- You will be encouraged to cough and breathe deeply every hour while you are awake. This helps prevent fluid from accumulating in your lungs and reduces the risk of pneumonia.
- **Incentive Spirometer** instruction, a breathing exercise tool, will be given. You will be asked to do this frequently throughout your hospital stay and at home. Please take this device with you upon discharge.



Pain management – Your surgeon and spine care team will work with you to make sure you are as comfortable as possible, keeping your pain under control.

Diet – You will start with ice chips and liquids, then eat lightly a few hours after your surgery. Your diet will be progressed as you can tolerate. If you experience nausea, ask your nurse for medication that can help.

Medications – You will have new medications to help manage the discomfort after surgery and will also resume home medications when your surgeon feels appropriate.

Activity – Therapy or your nursing staff will be assisting you with mobility. Doing your exercises including ankle pumps, and using your incentive spirometer are all important to your recovery.

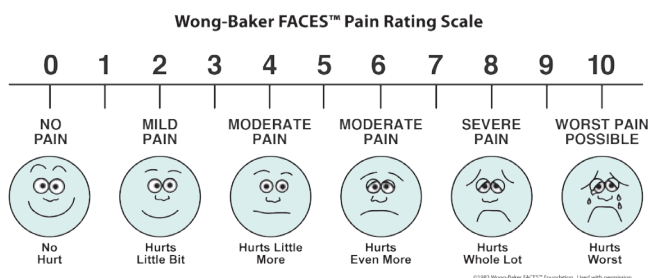


WHAT TO EXPECT AFTER SURGERY

MANAGING YOUR PAIN

- Each of us feels and reacts to pain in different ways. How you feel can depend on experiences you have had in the past, anxiety, stress and other factors.
- Make sure to tell your healthcare team if you are allergic to any pain medicine, if you have had pain medicine that did not work well in the past, or if you have had side-effects to pain medicine such as itching, vomiting, blurred vision or confusion.
- It is our goal to minimize and control your pain as much as possible. We may not be able to make you pain-free immediately after surgery, but we will make the pain as tolerable as possible.
- Staff will often ask about your pain, where it hurts and what type of pain you are having. The following pain scale will help your caregivers understand how you are feeling.

PAIN RATING SCALE – You are the only one who knows how much pain you feel. Be honest with your caregivers. Always let them know if your pain suddenly changes. Medication is our primary defense against pain, but there are additional methods to relieve pain including repositioning, cold therapy and relaxation techniques. Using these techniques alone or with medication will improve the effects of the medication. When you leave the hospital, your surgeon may provide a prescription for pain medicine. Do not be afraid to take pain medicine when you need it, following the directions provided.



BLEEDING AND DRAINAGE – A small amount of bleeding and drainage at the incision site is normal. Call your surgeon's office if you notice increased bleeding from your incision or your surgical dressing becomes saturated.

SIGNS OF INFECTION – Possible signs of infection include fever, redness and warmth at and around the incision site, and increased or foul-smelling drainage. Call your surgeon's office right away if you experience any of these symptoms.

PREVENTING NAUSEA AND VOMITING – Nausea can be a result of surgery, pain medications or both. Let your nurse know when you feel nauseated so that he/she can administer medication to help, if needed. Tell your nurse if there are other methods that you have used in the past to relieve nausea. Often taking pain medication with a meal or snack may help to decrease nausea.



YOUR RECOVERY SCHEDULE

DAY OF SURGERY – Although each patient is different, here are things you can expect on the day of surgery:

- The nurses will closely monitor you to make sure you can urinate. During this time, you will need to drink plenty of fluids and save all urine so the staff can record the amount. You could also have a catheter that would be removed the day after surgery.
- The IV that was placed pre-operatively will be left in place to provide you with fluids, pain medications, antibiotics and other medications, as necessary. It will be removed when you no longer need it.
- You will wear foot or leg pumps (SCDs) which are used to reduce the risk of blood clots. For the pumps to be most effective, they must be worn while in bed or while resting in your recliner. Ask for assistance before getting out of bed, to remove the devices and prevent tangling and falling.
- Oxygen is sometimes used immediately after surgery, delivered to you through a tube in your nose.

DAY OF SURGERY AND/OR POST-OPERATIVE DAY #1 – Your health care team will continue to observe and monitor you after surgery. They will assist you with activities as needed, including getting up and walking around. Please always ask for assistance, as your safety is our primary concern.

- You may have blood drawn so that the lab results are available for your surgeon to review whenever he/she makes rounds.
- If admitted to the orthopedics and spine unit, Physical Therapy (PT) staff will assist you in learning safe ways to get in and out of bed and the chair. The PT will evaluate your ability to move safely about your home with or without a front wheeled walker or other device. They will educate

you about your spine precautions and any exercises you will need to do at home.

- Occupational Therapy (OT) staff might be ordered to assist you with activities of daily living (ADLS) such as safely bathing, grooming and dressing. The OT will evaluate your ability to perform your ADLS, recommend any special equipment you may need, and begin instruction on using special techniques and equipment for completing self-care, including: bathing, dressing, and toileting without risking damage to your spine. OT will instruct you in post-operative precautions and energy conservation techniques.
- Your care coordinator will visit to discuss discharge planning for any home needs. Please plan to have support at home until you are able to walk about the home and care for yourself. If the surgeon recommends therapy right away, the care coordinator will help set that up. If you are concerned about lack of support at home, please discuss with your surgeon right away and/or call the coordinator.
- Pain and nausea medication are available on an as-needed basis. Please maintain communication with your nurse about your pain and nausea levels so they can assist you in controlling these.

You may go home as soon as you have met your goals.

Your goals for your independent and safe discharge from the Beaufort Memorial spine unit are as follows:

- Understand all precautions and safety concerns.
- Understand how to safely perform self-care tasks such as: bathing, dressing, grooming and hygiene.
- Mobilize safely with or without assistance from a coach.

PREPARING TO RETURN HOME

Care Coordination Services

The care coordinators can help you with any discharge needs you may have, such as setting up therapy or obtaining equipment. They can also give you information about community resources.

Things you can do prior to surgery to assist with your discharge plan:

- Talk to your family and support system about how they are able to help at home upon discharge. We do encourage you to choose a caregiver or coach to support you during your recovery from Spine surgery. Please talk to your care coordinator early in your hospital stay about concerns you have about going home.
- Please confirm your discharge time with your nurse or doctor to assist in arranging your ride home. We will make every effort to have everything ready for your planned discharge.

- Also, make arrangements for a family member or friend to pick you up when you are discharged from the hospital.

Care coordinators will check with you after surgery. If you or your family would like to speak to them sooner, please alert your nurse and he/she will contact them.

Continued physical therapy and/or walking is key to your recovery. When you have met your therapy goals, you will be discharged from the hospital and continue with your recovery plan. If you need daily assistance at home but don't have family or friends to help you, ask your doctor or care coordinator if he/she can recommend a home care agency. This service may not be covered by insurance.



DISCHARGE CHECKLIST

Before leaving the hospital, make sure you and your coach know:

- How to control your pain, including prescription and over-the-counter pain medication, ice packs, positioning, etc.
- How to control swelling
- What to do if you have nausea, vomiting or bleeding
- The signs of infection and blood clots
- When and how to change dressings
- What activities you can and cannot do until cleared by your surgeon (for example, walking, lifting, twisting, showering)
- When/if you will begin outpatient therapy
- Who will be helping you at home as you recover
- When to call your surgeon or 911

YOUR CONTINUED RECOVERY

PREVENTING BLOOD CLOTS/ PULMONARY EMBOLI (VTE/PE)

After spine surgery, you are at increased risk of developing a blood clot. There are many ways to decrease this risk, including: being as mobile as possible, as early as possible; wearing sequential compression devices (SCDs) on your feet while in bed; and, performing exercises as instructed by your therapist, such as ankle pumps.

AT HOME CARE

Incision Care

- Keep incision clean and dry to help prevent infection. You will be given instructions depending on your specific dressing chosen by the surgeon. You may have an Aquacel, Tegaderm, or other gauze over the incision. These may not require changing but will need to be monitored. The nurse will review details with you and your coach.
- Shower per your surgeon's instructions. Some of the dressings used may have special instructions for showering.
- Check the incision for any sign of infection (redness around the incision, foul smelling or pus-like drainage, or if you experience high fever/chills). Call your surgeon right away if you see any signs of infection.
- Change your dressing as instructed by your surgeon. Gauze bandages and tape are available at a drugstore.

Prevention of Blood Clots (DVT/PE)

- Ankle pumps exercises
- Walking

Signs of Blood Clots in Legs

- Increased swelling in the leg(s)
- Unusual pain in the leg(s)
- Pain, redness, or warmth in the leg(s)

NOTE: Blood clots can form in any extremity.

Please call your surgeon if you experience any of these symptoms.

Signs of Pulmonary Embolus

- Sudden chest pain
- Difficult and/or rapid breathing
- Shortness of breath
- Coughing up blood

Dial 911 if you experience any of these symptoms.

Control Discomfort – Take your pain medication as prescribed, and always at least 30 minutes before physical or occupational therapy. Use ice therapy for comfort and to decrease swelling, especially after physical activity.

Appetite Changes – Your appetite may not be normal. Drink plenty of fluids so that you do not become dehydrated. Your appetite will return to normal gradually. Eat plenty of fiber rich foods. To help your body recover, we recommend drinking one protein shake per day for eight days after surgery. Examples include Ensure Plus Nutrition Shake, or Glucerna Protein Smart Shake for diabetics.

Sleep and Rest – You may have trouble sleeping at first. Try not to sleep or nap too much during the day. You will return to your usual sleep pattern.

Constipation – Pain medicine contains an ingredient that can constipate you. You may use an over-the-counter laxative or stool softener. Drinking lots of fluid and walking will also help to decrease constipation.

Precautions

- No lifting until cleared by your surgeon.
- For lumbar surgery patients, no bending, twisting or rotation until cleared by your surgeon.
- For neck surgery patients, minimize bending, twisting or rotation of your neck until cleared by your surgeon.
- Wear the brace or collar, if ordered, as directed by your surgeon.

LIFE AFTER YOUR SPINE SURGERY

What can I expect? Surgical time, hospital stay, and recovery for spinal procedures can vary depending on the number of vertebral levels involved and the complexity of the case. Recovering from spine surgery depends on your general health before the procedure and your activity level. The soft tissues at the surgical site will take three to four months to completely heal, but most of the healing happens in the first six weeks. Building muscle strength and reconditioning your body takes time. Bone healing and fusion consolidation generally happens between six and twelve months after surgery. Nerves may continue to heal for one to two years after surgery. Most patients experience spine pain improvement, compared to preoperative pain, three to six months after surgery; however, this depends on your symptoms and diagnosis prior to surgery.

How long will I be in the hospital? Generally, patients who have had spine surgery go home in 0-2 days. Ask your surgeon what is expected.

Will I need more therapy after I leave the hospital? Maybe, but it could be delayed until you heal some more. The care coordinator will assist with setting this up if ordered by your surgeon.

What can I do to prepare my home and my body for surgery? Refer to the home safety checklist in this book. Remain as active as able and eat a healthy, balanced diet.

Are there activities that may damage my spine? No lifting for neck and back surgery patients. Back surgery patients also follow “No BLT”, bending-lifting-twisting until your surgeon instructs otherwise. Good body and spine mechanics are always encouraged!

What about sleep and rest positions? Usually on your back with knees bent/supported by pillows or on the side with a pillow between the knees works best. Just remember, no twisting of the spine.

When can I drive? You should not drive until you are off of pain medications and have the ability to manage the wheel and all necessary auto controls safely. Discuss with your surgeon when this is appropriate.

When can I swim, take a bath or shower? Although you may shower soon after leaving the hospital, your incision needs to remain clean and dry until healed. Your nurse and/or therapist will make recommendations on how to keep your wound dry while showering, based on your dressing and wound closure. To prevent chances of infection, absolutely no soaking in water until your surgeon has said that you may do so. This may be a month or longer.

Can I ever have an MRI after spine surgery? Yes, but always remind the technician and all your doctors of your spine surgery.

Will I set off an airport metal detector? Maybe, and you will then need to be checked with a hand wand. Identity cards are no longer allowed, since they are so easy to reproduce. Allow extra time for this when you travel.

What about precautions when seeing the dentist or having minor surgical procedures?

Your dentist or health care provider may wish to order preventive antibiotics when you have any dental work. Always let health care professionals know that you have had a spine surgery.



HELPFUL PHONE NUMBERS

Beaufort Memorial Hospital

(843) 522-5200 or
TOLL FREE: (877) 532-6472

TO YOUR ROOM:
(843) 522-5xxx – your room number
ADDRESS: 955 Ribaut Road,
Beaufort, SC 29902.

Spine Program Coordinator

Dana Aiken, RN • (843) 522-7435
Dana.Aiken@bmhsc.org

Surgical Liaison

PRE-OPERATIVE QUESTIONS:
(843) 522-5954 or (843) 522-5118
(843) 522-7755

Care Coordination Director

Carrie Confare, LBSW • (843) 522-5052
Carrie.Confare@bmhsc.org

Orthopedic and Spine Unit Nurses Station (24 hours)

(843) 522-5488

BOSS Orthopaedics

BEAUFORT
(843) 525-0045

BLUFFTON
(843) 837-4300

HILTON HEAD
(843) 681-2363

HELP US TRACK YOUR RECOVERY

You will be asked to complete several online assessments at various times before surgery and throughout your recovery. Your feedback is very important and will help us to measure your improvement. Each time you receive a feedback request, please take a few minutes to let us know how you are doing.

NEXT STEPS

Check your email or text messages

A member of our Outcomes Team will contact you by email or text message a few days before your surgery about answering an initial set of questions.

Complete assessment

It is important that you complete each assessment within a few days of being contacted. This allows your care team to have all the information needed to provide you with the best care possible.

Questions?

If you have questions about the assessments, contact a member of our Outcomes Team at bmh-ortho-spine@patientoutcomes.com



SPECIAL REHABILITATION CONSIDERATIONS

After Spine Surgery

- You can expect swelling locally for some time after surgery.
- Put ice packs on operative area if it helps with pain.
- Walking is an excellent exercise to speed your recovery and prevent complications, such as infection, pneumonia, blood clots, and constipation. Benefits of walking are improved blood flow, lung function, pain control, and muscle tone. Take a few short walks each day and increase the distance as you heal. If you feel more pain than usual after you have rested, you may have overdone it. Take it easy for the next few hours.
- Drink plenty of fluids and eat a high fiber diet. Use stool softeners and laxatives as indicated.
- When sitting, avoid low chairs and sofas. Instead sit on a higher chair or a chair with a firm pillow in the seat. This will make it easier to get up and down and reduce strain.
- No BLT which means No Bending, Lifting, or Twisting-keep your spine straight/neutral as much as possible. Bend from your hips if needed, not the spine.

Car Transfers

To get into the front passenger-side seat:

1. Make sure the car seat is all the way back and the backrest is semi-reclined.
2. Lower yourself onto the seat. Allow the seat to support you.
3. Slide back in a semi-reclined position toward the driver's seat.
4. Pivot your body and legs around to face the front. Do not twist your back as you get into the vehicle. Reverse the order to get out.

Bathing:

- Use a long handled sponge to wash your back and feet and avoid bending and twisting in the shower.

Assistance

- Make sure you have someone who will assist you with transportation, meal preparation and household activities as needed.
- If you live alone you will need extra help for the first week.

KNOW WHEN AND WHO TO CALL

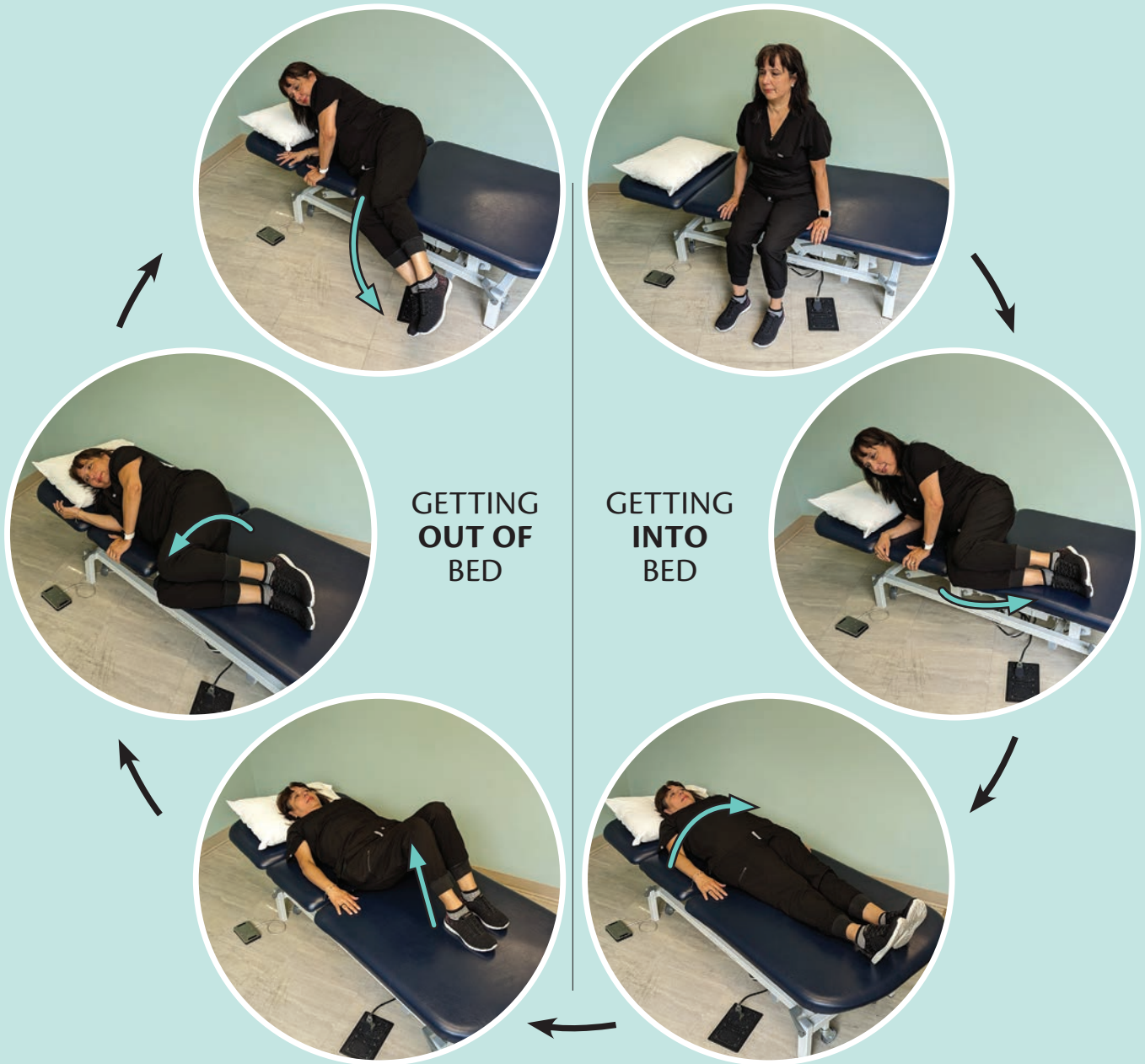
Signs and Symptoms to Watch For



- ➔ **Call 911 and go to ER**
 - Chest pain • Change in mental status or alertness • Difficulty breathing
 - Fall with inability to walk • Loss of bowel or bladder control • Incision open
- ➔ **Call Surgeon's office**
 - Sudden increase in pain, drainage, or redness around the incision
 - Change in color or any odor of drainage
 - Pain not relieved with pain medication • Fever of over 101 degrees F.
 - Fall with increased pain or decreased mobility
 - New weakness in arms, legs, difficulty walking
 - Difficulty swallowing (cervical patients) • No bowel movement in 4-5 days
- ➔ **Normal findings**
 - Warmth around the surgical area with a clean/dry incision
 - Mild bruising or swelling is expected.
 - Feeling tired but can take short walks frequently
 - Pain that can be controlled with medication, ice, and/or position changes
 - Bowel movements every 1-3 days

GETTING IN AND OUT OF BED

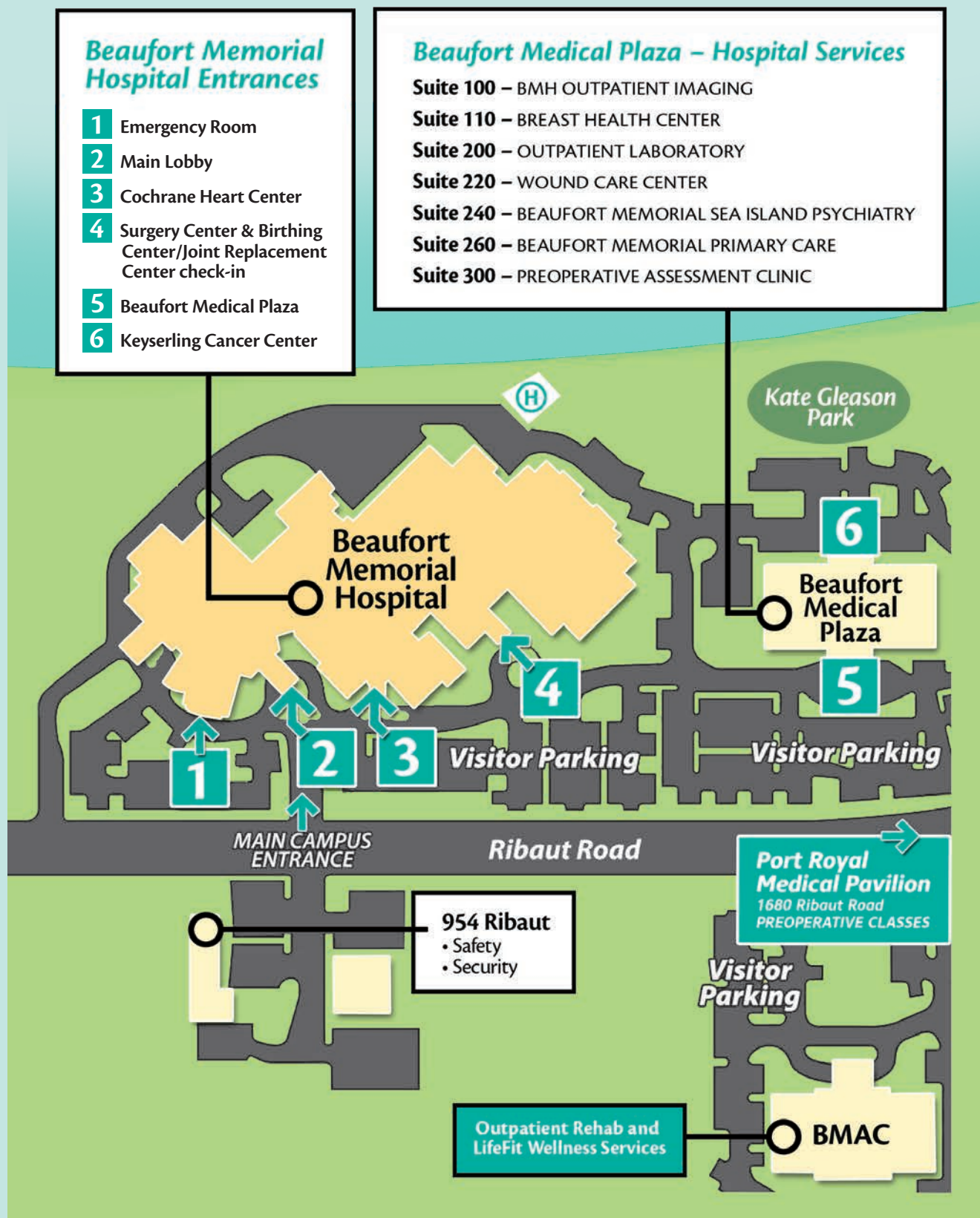
After Spine Surgery



Spine Tips

- The spine isn't straight. The four different curves allow for flexibility and shock absorption.
- Your stomach, back, buttock, and thigh muscles make a natural back brace for your spine. Keeping your CORE strong and flexible gives your spine support and proper mobility.
- Posture is key! Your spine is strongest in the upright position.

BEAUFORT MEMORIAL CAMPUS MAP



PREOPERATIVE EDUCATION

Prior to surgery, we ask that you and your coach watch an educational video to help prepare you for surgery and recovery. You may access the video by scanning the QR code from your smartphone or typing the following into your web browser:

BeaufortMemorial.org/OrthoEducation



BeaufortMemorial.org • Phone: (843) 522-7435