SPINE SURGERY GUIDE

Thank you for choosing MU Health Care for your spine surgery. This guide was developed to help you gain an understanding of what to expect during the spine surgery experience, including new technologies and treatment approaches used to improve your surgical recovery.

Our goal is to provide the important information you and your loved ones need to achieve the best outcome for your surgery.

Our staff are here to help answer your questions and prepare you for spine surgery. We look forward to helping you recover and to regain your quality of life.

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Director, Spine Division
Chairman, University Physicians
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This handbook was designed to give you a general idea of what to expect — and what is expected of you — prior to surgery, the day of surgery and after your surgery.

This book should never replace the specific advice given to you by your surgeon and his or her care team.
WHAT IS YOUR ROLE?

The first step on the road to recovery is learning how to play an active role in your care!

☐ **Attend Spine Camp.** This is a class provided to further educate you on what to expect with your surgery, from both nursing and therapy, and allow you to be able to ask questions in person. We highly encourage you to attend with a person that will be assisting you after surgery.

☐ **Get information.** Be proactive! Ask your health care team about your condition and your treatment options. Seek additional information from reliable sources. Take notes during your clinic visits. Ask questions! Request to have information printed out or written down.

☐ **Give information.** Provide your doctor and nursing staff with a list of ALL medications you take, including non-prescription medications, such as herbal supplements and vitamins.

☐ **Stay informed and keep us informed.** If you have any medical tests or procedures performed outside the Missouri Orthopaedic Institute or University Hospital, ask when and how you will receive the results. Do not assume the results are normal if you do not hear from your provider. Call your provider; ask for the results and how the results may affect your health care.

☐ **Prepare for your return home.** Be actively involved in planning your care for the days following your hospital stay. For example, does your home have the changes needed to help you continue to live independently, i.e. handrails, appropriate height place to sit, etc. (see Home Safety Checklist on page 5)

If questions arise or you have concerns regarding your upcoming surgery, please don’t hesitate to call (573) 882-BONE.
Use this sheet to keep track of all the important dates and times related to your upcoming operation. You may want to write in pencil in case dates and times change.

☐ Dr. Choma  ☐ Dr. Moore  ☐ Dr. Mirza  ☐ Dr. Mesfin  ☐ Dr. Norregaard  ☐ Dr. Siddiq

Surgery Date: ___________________________ at _______ am/pm

Surgery Arrival Time: _______ am/pm

Location of Surgery: University of Missouri Hospital
Missouri Orthopaedic Institute

Pre-Anesthesia Appointment Date: ___________________________ at _______ am/pm

Cardiology Clearance (if needed)
Dr. ___________________________ Date: ___________________________ at _______ am/pm

Pulmonary Clearance (if needed)
Dr. ___________________________ Date: ___________________________ at _______ am/pm

Other Specialist Clearance (if needed)
Dr. ___________________________ Date: ___________________________ at _______ am/pm

Post-Op Physical Therapy Appointment (approx. 6 weeks)
Date: ___________________________ Time: _______ am/pm
Location: ___________________________
Spine Camp

You can learn more by attending Spine Camp at the Missouri Orthopedic Institute. This will require registration and attendance prior to surgery. Attendance is highly recommended to better prepare you for your surgery. Spine Camp will cover:

• Anatomy review
• Pain education and management
• Activities you can do prior to surgery to improve recovery
• What to expect while you are at the hospital
• Daily expectations for after surgery
  • Physical therapy
  • Occupational therapy
  • When to resume daily activity
• Discharge planning
• Questions and answers

Pre-Anesthesia (Pre-Op) Visit

Prior to your surgery, you may be scheduled for a pre-op clinic visit. Whenever possible, we will schedule your appointment the same day as Spine Camp. This may also be performed over the phone in some cases.

During your pre-op visit, you will meet with a health care provider who will make sure all of your diagnostic testing has been completed, and that all of your medical history has been obtained and documented. During this visit, you may also meet with an anesthesia provider and have laboratory testing, electrocardiogram (EKG) and a chest X-ray.

Stop Smoking

Smoking increases your risk of developing complications with breathing during and after surgery. Smoking also decreases your body’s ability to heal, particularly in the healing of your surgical site. Your physician may perform a nicotine test to confirm you have stopped smoking.

Ellis Fischel Cancer Center, in collaboration with MU Wellness Resource Center, offers free tobacco cessation programs throughout the year. If you are interested, call (573) 882-5755.

Diet and Hydration

Eating healthy food is important to assist with healing. Iron, calcium and plentiful water intake are especially important.

Foods that are rich in iron include:
• red meats
• iron-fortified whole grains including cereal, bread, rice and pasta
• vegetables including broccoli, asparagus and Brussels sprouts
• chicken and turkey
• nuts
• dried fruits such as raisins, prunes, dates and apricots

Foods that are rich in calcium include yogurt, cheese, milk, calcium-fortified orange juice, instant oatmeal, calcium-fortified cereal, spinach and broccoli.

Medications

To decrease the risk of blood loss during surgery, you must avoid the use of certain medications prior to surgery. Generally, these medications include aspirin, anti-inflammatory agents, blood thinners and arthritis medications. It may also be necessary to stop vitamins and herbal supplements.

All of your medications will be reviewed and discussed at your pre-op visit, and your provider will provide you with detailed information on which medications to stop and when. However, if you have any questions regarding which medications to stop, or have questions about your medications, please contact your physician.

Infection Prevention

Infections are passed from one individual to another through a variety of means; many are transmitted through the skin and mouth. In order to reduce the risk of infection, we recommend taking the following precautions:

• Brush and floss your teeth daily.
• Take a shower, followed by skin cleansing kit, the night before surgery, and again the morning of your surgery.
• Wash sheets and pajamas, and do not sleep with pets the night before surgery.
• Avoid environments that can result in skin irritation, such as sunburn, cuts, scratches, poison ivy, and insect bites. If you notice any of these around surgical area, please contact your surgeon.
Transportation
Someone must drive you home after discharge. Instructions for how to get in and out of your car after surgery can be found on page 16.

If you stay overnight, we typically discharge by 11 a.m. once cleared. Please make arrangements and have a driver available to take you home by this time.

Home Safety Checklist
- Remove throw rugs. This will prevent you, or your assistive device, from getting caught on them.
- Install night-lights to light the pathway to your bathroom.
- If your house has stairs, installing secure handrails for your assistance is recommended.
- Remove or tuck away long cords that you, or your assistive device, may get caught on.
- Arrange furniture in a way that will allow you to easily maneuver around the house.
- Make sure your bed is at a comfortable height.
- Select a sturdy chair with a high back, firm seat cushion and arms that you will use after your surgery. Do not use any chairs with wheels on them. Avoid low chairs — it is more difficult to get up from low surfaces.
- Consider having a lumbar support pillow to assist with keeping you in a comfortable sitting position.
- Place frequently used household items and clothing within easy reach (between shoulder and waist level) to avoid repetitive bending.
- Please keep a cordless or mobile phone at your side, if possible.

Support System
- Arrange a driver to take you home; anywhere from day of surgery, up to three days.
- Put together a list of friends or relatives who are willing to run errands for you and take you to appointments until you can drive or otherwise get out by yourself.
- Arrange for someone to assist with household chores, outdoor work and other responsibilities until you are able to resume these activities.
- Arrange for someone to change the dressing on your back at least once a day until the wound is dry, unless the surgeon has placed a long-term dressing at the time of surgery.
- Make arrangements for the care of any small pets that may run underfoot.
ANATOMY OF THE SPINE

Top view and side view of normal lumbar vertebrae.

- Cervical
- Thoracic
- Lumbar
- Sacrum
- Coccyx

- Body
- Spinous process
- Lamina
- Location of spinal cord
- Intervertebral (IV) disc
- Location of spinal cord
- Spinous processes

University of Missouri Health Care
DECOMPRESSION
Laminectomy, Laminoforaminotomy, Discectomy

Viewing the vertebrae from above allows us to see the space where the nerves of the spinal cord pass. In the examples here, the space is restricted by either bone or IV disc (arrows), pinching the nerves. The problematic bone or IV disc is surgically removed, alleviating pressure on the nerves.

FUSION
Removal of bone or disc is often accompanied by spinal fusion, in which a combination of plates, rods and screws are used to fuse one vertebrae to another, giving it support. A “cage” may also be inserted between two vertebrae to fill the space of a damaged IV disc.

Cervical: Anterior (front)

Cervical: Posterior (back)

Lumbar
**PRE-OPERATIVE EXERCISES**

**Rolling the Low Back & Glutes**
Lean against a lacrosse ball on the wall, applying as much pressure as feels comfortable. Roll the ball along the lines as shown for 60 seconds each.

Four areas:
- Along the side of the spine
- Across the top of the hip
- Along the side of your tailbone
- Across the top of your glute

*Can be performed multiple times throughout the day.*

**Rolling the Upper Spine and Shoulder**
Lean against a lacrosse ball on the wall, applying as much pressure as feels comfortable. Roll the ball along each line for 60 seconds a piece.

Four areas:
- Top of shoulder
- Back of the shoulder blade
- Along the side of the spine
- Under the collar bone

*Can be performed multiple times throughout the day.*

**Seated Hamstring Stretch**
While seated, rest your heel on the floor with your knee straight and gently lean forward until a stretch is felt behind your knee/thigh.

*Hold for 30 seconds. Perform 3 sets, 2-3 times a day.*

**Seated Piriformis Stretch**
While seated, cross your affected leg over the other as shown. Gently lean forward until a stretch is felt along the crossed leg.

*Hold for 30 seconds. Perform 3 sets, 2-3 times a day.*
Hip Hinge
Goal: use hip muscles to bend forward rather than putting stress on the spine
Stand with your back toward a wall. Keeping your back straight (in a neutral spine posture), reach back and touch the wall with your buttocks. Return to standing. To make it harder, stand farther from the wall.
Perform 10-15 reps, 2 times a day

Abdominal Bracing
This can be performed standing or lying down. Press your finger tips into your relaxed abdomen along the sides of your belly button. Tighten and brace your abdomen so that the muscles push your finger tips away from the center of your body. Hold 3-5 seconds and repeat 10-15 times. Hold a chair with armrests for support as necessary.
Perform daily

Sit to Stand
Goal: improved functional strength in legs
Begin seated. Keeping your weight balanced on both feet, come to a full standing position, immediately sit back down and repeat. The goal of this exercise is to use your legs as much as possible, but use a chair with armrests for support as necessary.
Perform daily
PACKING FOR YOUR STAY

If you did not receive your arrival time at your pre-op appointment, you will receive a phone call the business day/evening before your surgery to confirm the time you must arrive. This is typically two or three hours before your surgery. Please be packed and prepared.

What to Pack

☐ This handbook
☐ A copy of your advanced directive, if you have one
☐ A list of all your medications and dosages, including herbal supplements and over-the-counter medications — please bring date and time of last dose taken
☐ A list of all your allergies to foods and medications
☐ Personal hygiene products (toothbrush, toothpaste, deodorant, hairbrush, etc.)
☐ Loose, comfortable clothes to wear (T-shirts, shorts or pants, pajamas, underwear)
☐ Supportive, slip-resistant shoes that are comfortable and easy to put on
☐ Glasses, hearing aids, dentures, contact lenses, CPAP, etc, and cases for each
☐ Chargers for your devices
☐ Your assistive device if you currently use one
☐ Insurance cards and ID for medication pick-up at the pharmacy

What NOT to Pack

• Jewelry
• Valuables
• Large amounts of money and credit cards
• Footwear such as slippers, high-heels, boots, etc.

If you develop a cold, fever, skin sores/rash, nausea, vomiting, diarrhea, tooth infection, gum sores, or other symptoms within 24 hours before surgery, contact your care team.

SURGERY DAY

Before Leaving Your Home

☐ Use your cleansing kit as directed (don’t shave the surgical area)
☐ Don’t eat anything after 11 p.m.
☐ Brush your teeth and rinse with water, but do NOT swallow any of the water.
☐ Take only the medications that you were instructed to take during your pre-op visit — leave all your medications at home unless otherwise instructed
☐ No chewing gum, hard candies, mints, etc. day of surgery
☐ Dress in clothes that are loose fitting and easily removed
☐ Remove all jewelry and leave at home (including rings)
☐ Remove all fingernail polish and toenail polish
☐ Do not apply any makeup, deodorant, perfumes or scented lotions
SURGERY DAY
Pre-Operative Procedures

If your surgery is at the Missouri Orthopaedic Institute, you will check in at the registration desk on the first floor, where your registration information will be verified. Your driver should accompany you.

If your surgery is at the University Hospital, check-in will be at the main entrance at centralized scheduling and you will be directed to designated surgery waiting room.

Pre-Operative Room
1. After checking in, you will be taken to a pre-operative patient room. Here, you will be asked to change into a gown and your personal items will be placed in a bag. If you wear contact lenses, eye glasses, or dentures, you will need to remove them at this time.
2. Your pre-operative nurse will confirm your medical records and conduct a brief physical exam, including vital signs. You will be asked to go to the bathroom to empty your bladder.
3. An intravenous (IV) line will be started; you may have additional lab work drawn at this time, if needed.
4. A member of the surgical team will verify your procedure.
5. Any hair around the surgical site will be clipped, if needed.
6. Your nurse will finalize your paperwork and finish any orders the physician has written.
7. Your anesthesiologist will visit with you and discuss what type of anesthesia you will use.
8. If you are planning to go home the day of surgery, a physical therapist may meet with you before or after surgery to review activity expectations and to assist you with initial movements after surgery.

Operating Room
1. Just before your surgery, you will be given a cap to cover your hair.
2. You will be given warm blankets in the operating room to keep you comfortable.
3. Once you are in the operating room, your operative nurse will introduce you to the members of your health care team.
4. Your surgery team will reconfirm your procedure in the operating room before beginning your surgery.

Friends and family can stay with you in the pre-operative room until you are taken into the operating room. Once you go to surgery, your family/friends will wait in the surgery waiting room, just outside the pre-operative area. In the waiting room is a case-tracking board where they may follow your surgery’s progress.
SURGERY DAY
Post-Operative Procedures

Recovery Room
Once your surgery is complete, you will be taken to the recovery room. During this time, a registered nurse and anesthesiologist will closely monitor your condition and level of pain. You will be encouraged to take deep breaths.

Private Inpatient Room
After approximately an hour you will be taken to your room on the inpatient nursing floor, and meet your nursing team. It is at this point that you begin your post-operative recovery. You may wake up feeling groggy and will see several types of equipment and drains. Rest assured, these are all a normal part of the recovery process.

Once you are settled in your private inpatient room, you will meet your care team. Your care team will consist of a physician, residents, physician assistants, registered nurse, nursing assistants, physical therapist, occupational therapist, therapy aides and social workers.

Intravenous (IV) Fluids and Antibiotics
You may have IV fluids after surgery to ensure you are staying hydrated. You may also receive antibiotics through your IV. These are started prior to your surgery, and will continue after surgery to help prevent infection.

Diet and Nausea
You will be introduced to food and drink slowly during your immediate recovery phase, starting with ice chips and small sips of liquid. You may receive clear liquids (gelatin, sodas and broth) a few hours after you are in your room. Your nursing care team will advance your diet to regular foods as you are able to tolerate more food without any problems of nausea. If you had surgery on your neck, it may be helpful to eat soft, easy-to-swallow foods for a few days until you can tolerate more solid foods.

Some patients experience nausea and vomiting after surgery, generally the result of anesthesia and other medications. Although these symptoms usually go away after the first day, be sure to let your nursing staff know if they continue. Your physician can order medication to help reduce and eliminate the symptoms.

It is normal to experience a loss of appetite in the first several days after surgery. It is important that you do your best to eat a well-balanced diet during this time to maintain your strength and improve your healing process. Eating something, along with taking your pain medications, can also help decrease nausea.

Surgical Dressing
The surgical area is covered with a bandage after surgery. Specific dressing changes and care of incision will be reviewed with you upon discharge.

Drainage Tubes
You may wake up from surgery and have drainage tubes around incision area. This is completely normal and should be removed by care team prior to you going home.

Braces
It may be possible to have a brace when you wake up from surgery. This depends on the surgery and the physician. If a brace is needed, the instructions and use will be discussed individually with you.

SCDs
Sequential Compression Devices
Special calf wraps attach to an air pump that inflates and deflates to encourage circulation in your legs, which helps to prevent blood clots.

You may have SCDs that you wear only while in bed or sitting, or you may have “mobile” compression devices that you are able to use while you are up and moving about. Your doctor will determine which SCDs should be ordered for you to wear.

Oxygen
Oxygen may be used after surgery to help you breathe easier. The oxygen is given through a nasal cannula on your nose. Your nursing staff will monitor your oxygen levels.
Blood Thinners
Blood thinners may be administered to you either orally or by injection. Your physician will determine the method best for you, and monitor you appropriately.

Incentive Spirometer
You will be given an incentive spirometer on the day of surgery. It is a small, hand-held device that helps you breathe deeply, allowing your lungs to expand more fully and to prevent respiratory/breathing complications after surgery. You will be taught how to use your incentive spirometer during Spine Camp, and again by your nurse when you arrive in your inpatient room. It is very important to use your incentive spirometer at least 10 times every hour while you are awake.

Constipation
After surgery, it is very common to experience constipation. Pain medications, decreased activity and changes in diet are all factors that contribute to constipation or changes in your normal bowel pattern. Stool softeners are usually given to you daily. Laxatives, if needed, may also be given. Please do not be embarrassed to discuss this issue with your nurse.

Increasing water intake and being physically active can also help reduce post-op constipation.

Urinary Catheter
If you have a catheter placed, it is typically removed at midnight the night of your surgery.

SURGERY DAY
Returning to Daily Activities
When performing activities, let pain be your guide. If you have questions, reach out to your physician or therapist.

Regaining Strength and Mobility
Your physical therapist, occupational therapist, and/or nursing care team will assist you with regaining strength and mobility after surgery. They will also alert you of any precautions that you must take to protect your spine after surgery. This may begin as early as the day of surgery, depending on what your physician feels is appropriate.

Some pain should be expected when you begin moving, but it’s important you begin moving as soon as possible. Your physician will provide pain medications to help decrease pain that you may experience. Your therapist will assist you and teach you how to:
- Get in and out of bed
- Review supportive devices to use when sitting
- Return to walking correctly
- Getting in and out of a vehicle
- Performing daily activities at home safely

Bending, Twisting, Pushing, and Pulling
Avoid repetitive bending and twisting, as well as pushing and pulling more than 10 pounds for three months, until you have been cleared by your physician.

You may use your arms to help you get out of bed or a chair.

Walking
You will be allowed to increase walking when the nursing team feels you are safe to do so. Each day, the distance you walk should increase. Increase walking tolerance up to 30 minutes a day. Don’t be surprised if you are more active one day and then tired or sore the next; this is normal and should improve with time. Be cautious when walking in areas that have a steep incline or decline. This can be a little more challenging at first but can be progressed into as tolerated.
**Stairs**

If you have stairs at home, make sure there is a handrail you can use for assistance.

**Sitting**

Once it is safe for you to get out of bed, the therapy and nursing staff will assist you to the recliner. We encourage you to get out of bed as much as possible. We recommend not sitting for more than 30-60 minutes at a time to decrease stiffness and pain, and promote mobility. Using a lumbar support while sitting can also assist with posture and decreasing stress or pain on the spine. Be careful reading a book or using your phone/electronic device which requires looking down for prolonged periods of time.

**Sexual Activity**

You can resume sexual activity when you feel up to it. Some positions may be more comfortable than others. Caution and common sense are recommended and, if the position hurts, avoid it.

**Using the Restroom**

When getting on or off the toilet and while completing toilet hygiene, maintain a straight posture without excessive twisting or bending. Having a tall toilet, using a toilet seat riser or using a commode over your toilet can assist with getting up and down from the toilet.

**Showering and Grooming**

When instructed by your physician, you may resume showering. To decrease any chance of infection, do not bathe or soak your incision in water until cleared by your physician. Equipment like a shower chair hand held shower, or long handled sponge may make showering easier and less painful.

**Getting Dressed**

Bending forward at the hips, with a neutral spine, and no rounding of the back, is recommended. Sitting down while getting dressed is generally the safest. It can be helpful to wear loose fitting clothing or button up shirts. If you have trouble putting on your pants, or putting socks/shoes on, you can bring your ankle up to your knee (see figure). Devices such as sock aides and long handled shoe horns may also help to assist if needed.

**Sleeping**

Use pain as your guide to determine the best sleeping position for you. Using a large pillow under your head when lying on your back may cause increased pain and stress your neck. If you use a pillow, pull it down under your shoulders to prevent it from pushing your head forward. A folded towel or small blanket may also be used as needed for comfort. If you are a side sleeper, it’s best to use a pillow to keep your neck in a straight or neutral position. A pillow between the knees can also be helpful to decrease stress on your spine.

**Home Activities**

Rearranging commonly used items in your home to waist level can be helpful to avoid repetitive bending, especially items in the kitchen. You may need to avoid heavy housecleaning such as vacuuming and mopping until cleared by your physician. Your occupational therapist can help teach you ways to perform these tasks safely.

**Rehabilitation**

Your physician may recommend physical therapy after your surgery to help increase strength and function. This typically begins around six weeks after surgery, but is determined by your needs and if your physician feels is appropriate.
Pain Control Tips
• Know that you just had surgery and pain is expected
• Stay ahead of pain by taking medication when needed, but try to wean off when appropriate
• Change positions frequently to help reduce pain and stiffness
• Ice if needed to decrease inflammation
• Perform any activities instructed by your therapist

Oral Medications (Pills)
We have learned that pills are generally more effective than shots of medication for managing pain after surgery. While they make take longer to start working, they last longer. It is important that you start taking pills to help control pain soon after your surgery. There are two types of pain medications that we provide after surgery: anti-inflammatory medications and narcotic pain medication. We will work to find the right balance between medication strength for pain control and clear thinking, so you can resume your daily activities when you feel up to it.

Pain Scale
Spine surgery can be painful, but learning about pain and how to manage it is an important part of your recovery. While you are in the hospital, you will be asked to rate your pain on a scale from 0-10 in order to help us adjust your medications if needed. A sample of the pain scale is shown here with a score of 10 for the worst pain you can imagine and a score of 0 for no pain at all.

LOG ROLLING
Use the following method when getting out of bed:
• While lying flat, bend one knee placing foot on the bed.
• Log roll over keeping shoulders in line with your hips and knees
• Once you are completely on your side, bring your lower legs forward off the edge of the bed. At the same time, use your arms to push yourself to a sitting position without twisting.
Reverse process to get into bed.
HOW TO GET IN AND OUT OF A CAR AFTER SPINE SURGERY

1. During your rehabilitation period, we recommend you ride in a standard-size vehicle, especially on your way home. Vehicles that are too high or low off the ground can be difficult to enter and exit.

2. When close to the car, turn and begin backing up to the front passenger seat. The goal is to lower yourself into the seat rather than stepping in first.

3. Placing a plastic bag on a fabric seat may make moving easier.

4. Reach with your right hand and hold the door frame or headrest. Place your left hand on the car seat or dashboard.

5. Slowly lower yourself to the car seat.

6. Slide yourself back onto the car seat.

7. Swing your legs into the car. Try to move one leg at a time. Keep your toes pointed upward.

8. Adjust the seat for comfort once both legs are in the car.

9. Reverse these steps to get out of a car.

Helpful hint: When taking extended car rides, make sure to take breaks every 30 to 45 minutes. Get out of the car and walk/stand for a few minutes so you don't become too stiff. Please contact your doctor to find out when it is safe to resume driving.
DISCHARGE

You will receive specific discharge instructions after surgery based on your procedure and what your physician feels is best. If you have questions please don’t hesitate to call!

POST-DISCHARGE GUIDELINES

Lumbar Fusion Patients

Precautions:
• Avoid excessive lifting, twisting, bending of the lumbar spine
• 10 lb. lifting restrictions, increase as physician directs (ex. gallon of milk)

Rehabilitation Goals and Priorities
• Engage early mobility as tolerated after surgery
• Decrease pain and inflammation
• Increase activity tolerance; up to 30 min of walking each day
• Encourage healing and monitor for infection
• Increase aerobic tolerance
• Educate in-bed mobility
• Increase independence with self-care and hygiene as tolerated

Cervical Fusion Patients

Precautions:
• Avoid excessive lifting, twisting, bending of the cervical spine
• 10 lb. lifting restrictions, increase as physician directs (ex. gallon of milk)
• Follow physician recommendations regarding use of collars if applicable

Rehabilitation Goals and Priorities
• Engage in activity after surgery as tolerated.
• Decrease pain and inflammation
• Increase activity tolerance; up to 30 min of walking each day
• Encourage healing and monitor for infection
• Increase aerobic tolerance
• Educate in-bed mobility
• Increase independence with self-care and hygiene as tolerated
UNDERSTANDING THE SIGNS

INFECTION
While uncommon, infections can be a serious complication after spine surgery. You should be aware of signs of infection, listed below, so you can seek early treatment if needed.

**Signs of infection**
- Increased swelling and redness at incision site
- Change in color, amount and/or odor of drainage
- Increased pain in surgical area (that is **not** due to increased activity)
- Fever greater than 100.4° that lasts more than 24 hours

**Preventing infection**
- Wash your hands frequently, especially after you remove any dressing and apply a new dressing
- Take proper care of your incision; do not scratch or pick scabs along the incision

BLOOD CLOTS/DVT
Blood clots or DVT (deep vein thrombosis) can sometimes occur after surgery. You can reduce the risk of blood clots by taking the following steps:
- Take your prescribed blood thinner
- Wear supportive stockings or use SCDs (see pg 12)
- Do not to stay in one position for long periods of time

**It is critical that you can recognize the signs of blood clots:**

**Warning signs of blood clots in the leg:**
- Increased pain in your calf
- Tenderness or redness in your calf
- Increased swelling in the thigh, calf, ankle or foot

**Warning signs of blood clots in the lung:**
- Sudden increased shortness of breath
- Sudden onset of chest pain
- Localized chest pain with coughing or when taking a deep breath

*Call 911 immediately if you are experiencing any of the above signs.*
MEET YOUR TEAM

Attending Physician
A senior member of the medical staff who directs your care, performs your surgery, and is responsible for your overall care throughout your stay. (See next page to learn about our surgeons)

Fellow
A doctor who has finished residency and is specializing in a specific area of medicine.

Resident Physician
A doctor who is in the first one to five years of training after graduating from medical school.

Physician Assistant/Advanced Practice Nurse
A health care professional who collaborates with the physician to provide care.

Anesthesiologist and Certified Registered Nurse Anesthetist
A physician who administers anesthesia to you during your surgery, monitors your vital signs, and may oversee pain control after surgery.

Hospitalist or Consulting Physician
A physician with whom attending physicians may consult on an area outside their specialty.

Nursing Team
Health care professionals with varying degrees of training and education who will provide most of your hands-on care.

Physical Therapist
A health care professional who will assist you in regaining your ability to move and walk after your surgery. The PT will help you regain strength and motion in your new joint during your hospital stay and, in some cases, for the first few weeks after you return home.

Occupational Therapist
Occupational therapists are health care professionals that help people do the things they want and need to do through therapeutic use of daily activities. The OT will have specific knowledge on home safety, activity modification and adaptive equipment recommendations to keep you active and safe, and get you back to your everyday life.

Dietitian
An expert who will assist you in learning about the diet your doctor has ordered for you.

Case Manager or Social Worker
A specialist who helps you and your family to manage the logistics of your care, answers your questions and ensures that quality care is being delivered. A social worker also finds resources and helps plan your home care.
ATTENDING PHYSICIANS

All of our surgeons are fellowship-trained. Learn more about them at http://www.muhealth.org.

Theodore Choma, MD

Dr. Choma joined the faculty at the University of Missouri-Columbia in 2006 as associate professor of Orthopaedic Surgery and the director of the Missouri Spine Center. He was inducted into the prestigious American Orthopaedic Association in 2008 and became the vice chairman of the Orthopaedic Surgery Department at MU. He has directed the Spine Fellowship at the University of Missouri since 2012, and serves as the J. Vernon Luck, Sr. Distinguished Professor of Orthopaedic Surgery. He has published articles on the biomechanics of spinal implants, challenges in treating the aging spine and the basic physiology of the intervertebral disc. He has served on many committees for national societies and is past chair of the Fellowship Committee for AOSpine North America and the Education Committee of the Scoliosis Research Society. He also serves as the chairman of the 700-physician University Physicians practice group at MU health Care.

Fassil Mesfin, MD, PhD

Dr. Mesfin serves as the assistant professor of Neurological Surgery, director of Complex Spine and Spine Oncology, and is the assistant director for Neurological Surgery Residency Program. His interests include back pain, brain cancer (neuro-oncology), brain damage/injury, brain tumors, cancer, carpal tunnel syndrome, cerebral palsy, cerebrovascular disease, cerebrovascular surgery, chronic pain, spine and spine oncology.

Don Moore, MD

Dr. Moore specializes in orthopaedic spine surgery at MU Health Care. He is certified by the American Board of Orthopaedic Surgery. A graduate of the University of Michigan Medical School, Dr. Moore completed his residency at the University of Michigan Medical Center, St. John Hospital and Medical Center, and the University of South Florida. He also completed an AO Trauma fellowship at Kantonsspital Surgical Clinic in Chur, Switzerland, and an Orthopaedic Spine Surgery Fellowship at the University of Wisconsin.

Thorkild Norregaard, MD

Dr. Norregaard is an assistant clinical professor of Neurological Surgery at MU Health Care. His areas of expertise include cerebrovascular surgery, chronic pain, movement disorders, Parkinson’s disease, spine surgery, and stereostatic neurosurgery.

Farhan Siddiq, MD

Dr. Siddiq is an assistant professor of Neurological Surgery at MU Health Care. He has a special interest and active involvement in research related to cerebrovascular disease, carotid disease, acute stroke treatments, intracerebral hemorrhage and neuro-trauma.

Zain Mirza, MD

Dr. Mirza has a special interest in minimally invasive spine surgery and trauma. He attended medical school at the University of Missouri-Kansas City and graduated in 2013. He completed his residency at Penn State in 2018, and completed a fellowship at the University of Wisconsin-Madison in 2019. His research interest is in post-operative pain control and expectation management.
**IMPORTANT PHONE NUMBERS**

Orthopaedic Physician: ____________________________
Primary Care Physician: ____________________________
Other Physicians: ________________________________
Friend, Family and Other Advocate: ______________________

Missouri Orthopaedic Institute.................................................................(573) 882-2663 (BONE)
  Check-In (2nd floor)...........................................................................(573) 884-2703
  Pharmacy.........................................................................................(573) 884-3069
  Inpatient Rehabilitation Services.......................................................(573) 884-9477
  Inpatient Nursing Unit......................................................................(573) 884-9884
  Social Worker................................................................................(573) 884-4818
  Pre-Op (for questions regarding surgery time)..............................(573) 884-9860

University Hospital
  Inpatient Nursing Unit......................................................................(573) 884-9626
  Pre-Op (for questions regarding surgery time)..............................(573) 882-8757

Mizzou Therapy Services......................................................................(573) 884-0655

*If after hours, call Inpatient Nursing Unit for questions and concerns.*