

SPINE SURGERY BOOK



ARIZONA
SPINE & JOINT
HOSPITAL 
Proudly Owned & Operated by Physicians

4620 East Baseline Road, Mesa 85206

Call (480) 824-1229 or (480) 824-1306 to register

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Introduction

The staff of Arizona Spine and Joint Hospital (ASJH) would like to take this opportunity to thank you for selecting us to perform your spine surgery. We realize there are many factors that enter into your decision and appreciate your confidence in our staff.

The dedicated staff of ASJH will insure you are comfortable and knowledgeable about every aspect of your surgery and recovery. Our ultimate goal is to help you learn to care for yourself after discharge so you may regain maximum independence.

The staff of ASJH have found that patients who actively participate in their care and rehabilitation have the best long-term outcomes after surgery. To this end, we believe that teamwork is the key to success with spine surgery. Your team includes the following members:

1. You
2. Your family
3. Your surgeon
4. Your doctor
5. Your nurses
6. Your physical therapist
7. Your case manager

Please take some time to carefully review the contents of this booklet when you arrive home after the spine surgery class. Should you have any further questions or concerns after reviewing the material please don't hesitate to call any of the numbers listed on Appendix I.

Remember – Arizona Spine and Joint Hospital is a non-smoking campus. This includes electronic cigarettes. If you smoke, try to stop. If you can not stop, cut down. This will help with the healing process and speed your recovery. If you would like smoking cessation assistance or information, please ask your nurse or case manager.



Preparing For Your Surgery

The following information is provided to assist you in preparing for surgery. Please review the information very carefully. Address any of the issues or complete any of the tasks that are pertinent to you within the specific time period. Doing so will make you knowledgeable about the many aspects of your surgery and recovery, thus ensuring a very relaxed process.

One Month Prior To Your Surgery

1. Some patients may require a blood transfusion after surgery. If you have any religious or personal issues concerning a transfusion, please speak with your spine surgeon.
2. Your spine surgeon may recommend you see your primary care physician (PCP) or other specialist for medical clearance for surgery. Please discuss this issue with your spine surgeon.

Two Weeks Prior To Your Surgery

1. Visit <https://www.azspineandjoint.com/education/> to register for the joint replacement class from Arizona Spine and Joint Hospital. Or register by calling (480) 824-1306 or (480) 824-1229.
2. Begin eating a well-balanced diet that includes breads, cereals, vegetables, fruits, meat, dairy products, and plenty of fluids. This is not the time to go on a “diet.”
3. Prepare meals for yourself ahead of time and freeze them.
4. Your surgeon will instruct you on which medications to stop taking prior to surgery. Some examples are: aspirin, ibuprofen/Motrin Advil, naproxen/Aleve, any blood thinners, herbal supplements, and Vitamin E. Your surgeon may also prescribe multivitamins, Vitamin C and/or iron pills to start taking prior to surgery.
5. Compile a complete listing of all of the medications that you take. This includes prescription medication, over-the-counter medication, supplements, herbs, vitamins, and home remedies. Be sure to include:
 - Name of medication
 - Amount of the tablet/medication (e.g. 20 mg, etc.)
 - Exactly how you take the medication (e.g. whole tablet or half tablet)
 - How often you take the medication (e.g. daily, twice a day, weekly, etc...)
 - At what time you take the medication (e.g. at 6 a.m., etc.)
6. After surgery you ***may*** need a front-wheeled walker. This item is usually covered by insurance. If you do not have one, the Physical Therapist will obtain one for you.
7. If you already have a walker have it brought to the hospital the day after your surgery by a family member (so it can be checked for proper sizing and safety)
8. After surgery, you may need additional equipment such as a raised toilet seat or a shower chair/bench. These items are not provided by the hospital. See Appendix A for more information.

9. Please make sure that you have someone who will help you for the first several days after discharge. You should not stand for long periods of time after surgery. Therefore, you will need to plan for meal preparation, housework, and personal care after you return home from the hospital. You will want to enlist the help of family, friends, or private pay assistance once you have determined your needs. (For a list of private resources, please see Appendix B).
10. Most patients are discharged directly home after their hospital stay. A small portion of patients are not due to the need for additional rehabilitation before going home. If this is the case, your surgeon will recommend you go to an extended care facility (ECF). You may want to contact your insurance provider to determine if they cover a short-term stay at an ECF and if there is a specific facility you must use in your area. Additionally, you may wish to visit several ECFs within your area in advance (see Appendix C). If you need to be admitted to an ECF, then this will be ordered by your surgeon and your case manager will arrange this for you.
11. You may not be allowed to drive for approximately 6 weeks or longer after your surgery. You should arrange for transportation from the hospital and for your follow up appointment (which is typically 2 weeks after your surgery). If you do not have a family member or friend to assist you, please see Appendix D (Transportation Resources).
12. Safety while using a walker is very important. Ensure all walkways in your home are free of throw rugs or hazards, such as extension cords, to prevent falls. (See Appendix A for suggestions and information). Make sure pathways are wide enough for your walker to maneuver in (width of the walker being the base plus the size of the wheels).
13. If you have pets, you may need to plan for their care during your hospital stay and possibly during your recovery. Please inform your orthopedic surgeon that you have a pet as this may increase your risk of infection after surgery.
14. You may want to install a moveable showerhead and grab bar/rails in your bathroom before surgery. Please ensure that the grab bars/rails are installed into wall studs, and not simply into the drywall.
15. It would be a good idea to make sure you have a chair to sit in at home that has sturdy armrests. This will make it easier for you to get in and out of the chair after your surgery.
16. Where is the bedroom located that you sleep in? If it is located on the second floor, is it possible that you could stay in a bedroom on the first floor for the first couple of days after you return home?

One Week Prior To Your Surgery

1. Complete all the issues or tasks you have been working on up to this point.
2. Your surgeon's office may require you to have an EKG, chest x-ray, and lab tests performed in preparation for surgery. (please contact your surgeon's office with any questions regarding this).
3. Continue eating a well-balanced diet and keeping your bowels regular.
4. Clean your house, do your laundry, and complete any yard work.
5. Put frequently used items in the kitchen and bathroom at waist height.

6. Compile a complete list of all doctors and specialists you have seen in the last five years. Please include their phone numbers and bring this with you on the morning of surgery.
7. Make a copy of your Living Will/Advanced Directives if you have one, bring this with you on the morning of surgery.
8. Gather your insurance cards, prescription cards, and any other medical cards (e.g. pacemaker ID card, COVID vaccination card, etc.) to bring with you.
9. Bring any other forms your physician has given you.
10. Pack a small bag of your personal items and include a set of loose fitted clothing and a good pair of walking shoes for discharge. Do NOT buy new shoes. Make sure the shoe has a rubber sole and there is a back around the shoe (i.e. no flip-flops or open backed sandals).
11. If you use urinary incontinence pads, please bring them with you.
12. If you wear hearing aids, please wear them to the hospital and bring an extra set of batteries. Please wear your glasses and/or dentures as well. Bring the containers for all of these labeled with your name (this is important).
13. If you use a CPAP/BiPAP machine for breathing at home, please bring that with you to the hospital. Please wipe machine down with Clorox wipes before bringing in.
14. DO NOT bring large amounts of cash, credit cards, or jewelry to the hospital. Arizona Spine and Joint Hospital cannot be responsible for valuables brought to the hospital.
15. DO NOT bring in any extension cords or personal fans.

The Morning of Surgery

1. Starting at midnight before surgery **DO NOT** eat or drink anything. This includes food, water, gum, candy, alcohol, and tobacco. Only take approved medications with a small sip of water. If your surgeon has not instructed you on what medications to take the night before and the morning of surgery, please call the office.
2. Take a shower at home, using regular soap. **DO NOT** use any perfume, powder, facial moisturizers or lotions after your shower. **DO NOT** shave. **DO NOT** wear any make-up especially eye makeup.
3. You may brush your teeth, but **DO NOT** drink any water.
4. Limit the jewelry that you wear to only what you cannot take off.
5. Hospital check-in does not begin prior to 5am, as 5am is when the lobby opens.
6. Once you are checked in, the staff will escort you to the pre-surgical area where a nurse will prepare you for surgery and you will speak with the anesthesiologist.
7. Notify the surgeon and/or staff if you have any current cuts, illness, vomiting, fever greater than 100 degrees, insect bites, or dental issues.

8. When all preparations for surgery are completed, you will be taken to the operating room.
9. Please contact the hospital to find out our current visitor policy.

Post-Op (Immediately After Surgery)

1. After surgery you will spend approximately 1 hour in the recovery room. Since everyone is different, this is just a generalization. The surgeon will contact your Person to Notify at this time.
2. Once your vital signs are stable and you're not having any complications you will be transferred by bed, to the inpatient nursing unit where you will spend the next 1 to 2 days.
3. The nursing staff will monitor your vital signs (temperature, pulse, pain, breathing, and blood pressure) and check your dressing frequently for the first 4 hours that you are on the nursing unit.
4. You will have an IV and receive antibiotics for the first 24 hours to prevent any possible infection.
5. If necessary, your surgeon will place a very fine drainage tube in the surgical wound. This drainage tube is connected to a collection device where the fluid it collects is measured then wasted.
6. To reduce swelling, lower your risk for a blood clot (DVT), and improve circulation we may place different devices on your legs/feet. These may be ace wraps, support stockings (TEDs), Sequential Compression Device (SCDs), or Plexi Pulses. Each of these items will be removed and reapplied once or twice a day for skin care unless your surgeon orders otherwise.
7. You may receive oxygen for the first 12 to 24 hours via a nasal cannula or mask to ensure your lungs are properly oxygenated. A small monitor (pulse oximeter) will be clipped to one of your fingers so the nurse will know your pulse and blood oxygen level at any given minute.
8. Fluid can collect in the lungs after surgery. To help clear your lungs, the nursing staff will teach you deep breathing exercises using an incentive spirometer (IS). These exercises must be done 5 times every hour while awake to prevent respiratory problems, such as pneumonia. To complete the exercises correctly follow the steps below:
 - STEP 1. EXHALE
 - Relax and breathe out, completely emptying lungs.
 - STEP 2. PLACE LIPS AROUND MOUTHPIECE
 - Make sure to hold the device upright and not tilted.
 - Tightly seal lips around mouthpiece
 - STEP 3. INHALE
 - Breathe in slowly and deeply through the mouthpiece
 - Inhale as much air as possible while keeping the indicator hovering between the arrows.
 - STEP 4. REPEAT
 - Repeat breathing exercise 5 times every hour, or as instructed by a member of your healthcare team.
9. It is very common for patients to experience nausea after surgery. To help alleviate this problem the nursing staff will first give you ice chips and clear liquids. Once you can tolerate liquids without nausea, you will be advanced to a regular diet once cleared by your nurse

10. If you experience any pain, nausea, itching, or difficulty sleeping be sure to tell your nurse so they may administer the appropriate medication to resolve the problem. Sleeping medications are not usually administered the night of surgery due to the anesthesia and high doses of pain medication administered.
11. Sometimes after surgery patients are not able to urinate as a side effect of anesthesia. Should this occur, the nurse will place a catheter in your bladder to drain it and then remove it once the bladder is drained. This may be repeated in 4 hours. If still unable to void in another 4 hours, a Foley catheter may be placed then removed the next day.
12. Your surgeon will prescribe any medication you routinely take and medication that is specific to your surgical procedure. Please be aware that some of your medication that you regularly take may not be ordered right away. This is all dependent on your condition and other factors. If you have any questions, please ask the nurse.
13. A “Hospitalist” or an “Internal Medicine” doctor may see you while you are here. They are responsible for your medical care outside the surgeon’s scope of care.
14. Hand hygiene is one of the most important ways to prevent the spread of infections (flu, surgical site infections, etc.)

How can hands be cleaned?

Either by washing with soap and water for at least 20 seconds, or using alcohol hand gel. Alcohol hand gel is located in the dispensers on the walls in patient rooms and in the hallways. No water is required when the alcohol hand gel is used. You will be provided with hand sanitizing gel packets to use while you are here.

When should caregivers clean their hands?

Hands should be cleaned before and after any contact with a patient. This means that before and after your caregiver provides care, their hands should be cleaned. A caregiver can be a nurse, doctor, the person drawing your blood, or anyone who helps take care of you. If your caregiver is wearing gloves, their hands should be cleaned before putting the gloves on and after they take them off.

What should you do if you are unsure your caregiver cleaned their hands?

It is your right to ask your caregiver if they have cleaned their hands. At Arizona Spine and Joint Hospital, we want you to take an active role in your care. We want you to ask questions and participate as we care for you. Please notice the handwashing reminder sign that are in your room. They are there to remind you to ask if we have cleaned our hands.

When should you clean your hands?

Everyone should clean his or her hands often. This means after using the restroom, before eating, after sneezing or coughing, or any time they are dirty. You can use soap and water or alcohol hand rubs. Either of these is a good choice to protect your health. Let your visitors, family, friends, and children know when they should wash their hands too. Family and friends who visit should not touch the surgical wound or dressings.

Post-Op Day One (First Day after Surgery)

1. Your first day after surgery is called “Post Op Day 1.” You will often hear the staff referring to your stay as “Post Op Day 1, or 2” while you are here. We number your days in this manner, to track how you are progressing after your surgery.
2. If you experience any of the following symptoms: pain, nausea, itching, difficulty sleeping, constipation, or have any concerns please notify the nursing staff so the appropriate treatment or actions can be initiated.
3. Your pain medication is changed from IV to oral pills. The object is to maintain a comfort level that will allow you to perform in physical therapy and get proper rest. It is essential that you tell your nurse when you are having pain so your pain is well controlled at all times.
4. Your diet will be advanced from clear liquids to a regular diet if you are not experiencing any nausea or vomiting.
5. Your IV fluids may be stopped if you are tolerating food and liquids and if you are producing adequate urine.
6. Physical therapy will assist you in performing your strengthening exercises and walking twice a day. After walking you will be expected to sit in a chair for approximately one (1) hour before you are assisted back to bed. Pain is an unfortunate consequence of increased activity at this stage of your recovery; therefore, we recommend you consider asking for pain medication prior to therapy. Pain medication is normally given every 4-6 hours **upon patient request**.
7. You will be encouraged to tend to your personal hygiene as much as possible. It is considered part of your rehabilitation. You will be given as much assistance as you need with a morning sponge bath. (Some of the surgeons will not allow you to take a shower for 10-14 days after surgery).
8. While you are in bed, the nursing staff will periodically assist you in turning from side to side and repositioning yourself for comfort.
9. Your support stockings (TEDs) will be removed and reapplied once or twice a day.
10. If you have a drain it may be removed by the surgeon or the nursing staff when ordered by the surgeon.
11. If you have a Foley catheter in your bladder, it will be removed by nursing staff on post-op day one or as ordered by your surgeon. If you have a past history of being unable to urinate after surgery, please inform your surgeon of this.
12. If your blood oxygen level remains above 92%, the nasal canula and finger monitor will be discontinued.
13. In the early A.M., the lab tech or nurse will draw blood from you so your surgeon and doctor can follow your blood levels.
14. Preventing falls, you must have a staff member with you every time to get out of bed or out of the chair. This includes walking to or from the bathroom. Family, friends, or guests **CAN NOT replace a staff member during ambulation.** Please **CALL** so you will not **FALL**.

15. **Bathroom Safety, You are not allowed to stand up from the toilet or commode without a staff member at your side. This includes wiping yourself and flushing. Patients can become very weak after sitting on the toilet. Even standing on your own can be difficult without assistance.**



Don't Get Up Call Don't Fall

Post-Op Day Two (Second Day after Surgery)

1. With assistance from the nursing staff and physical therapy you will increase your activity level, walking, and sitting each day.
2. You will eat all of your meals sitting up in a chair.
3. Some patients have difficulty sleeping after surgery because of pain or the change in their environment. Whatever the reason, tell the nursing staff and they will place you in a position of comfort and administer pain or sleeping medication if desired.
4. Many patients experience constipation after surgery as a result of the pain medication, decreased activity, alterations in their diet, and use of Iron. To prevent constipation you will be given stool softeners prophylactically starting the night of your surgery. You should drink plenty of fluids and increase your fiber intake. If constipation persists, your nurse will administer laxatives to assist you in having a bowel movement. You need to have a bowel movement before you are discharged from the hospital. You may continue to experience constipation after discharge. You may need to continue taking stool softeners and/or laxatives at home.

5. Continue use of your incentive spirometer (IS) and deep breathing exercises.
6. Continue to wear your support stockings (TED hose).
7. The nurse may change your dressing every day (as ordered by your surgeon) after the original surgical dressing has been removed. Newer forms of dressing may not require changing. Your nurse will teach you and your family how to care for your incision after discharge. It is normal to have some swelling and bruising. Please ask your nurse if you have any questions.
8. If the Foley catheter is in place, it is removed and nursing staff will assist you to the bathroom or bedside commode. Urinals at bedside and/or bedpans will not be permitted at this point in your recovery.
9. You will be encouraged to tend to your personal hygiene as much as possible. It is considered part of your rehabilitation. You will be given as much assistance as you need with a morning sponge bath

Physical Therapy

You will receive physical therapy twice a day while in the hospital, likely beginning the morning of POD #1.

During your hospital stay physical therapy is responsible for teaching you the following:

- How to walk using a front wheeled walker (FWW), if one is needed.
- The proper technique of getting out of bed without using any assistive devices in preparation for discharge home.
- How to get in and out of a chair and on and off a toilet using proper body mechanics.
- You will be educated on the mechanism of disability (protective response) and how to manage this. The “Protective Response” your body initiates following surgery is pain and swelling. This combination is intended to protect your body from further injury if trauma occurs. Your body equates surgery with trauma. Our job is to assist the body in reducing the “protective response” as we introduce activity. As the “protective response” decreases we will have freer movement and increasing strength allowing for better mobility.

The duration of your therapy will increase as you become stronger and more independent each day.

Activity Level

The nursing and physical therapy staff are responsible for teaching and assisting you with the following:

- The proper technique of getting in and out of bed using the Log Roll method.
- How to use a front wheeled walker (FWW) if one is needed.
- Walking 3-5 times per day, with each walk being progressively longer.
- Sitting up in a chair for all meals.

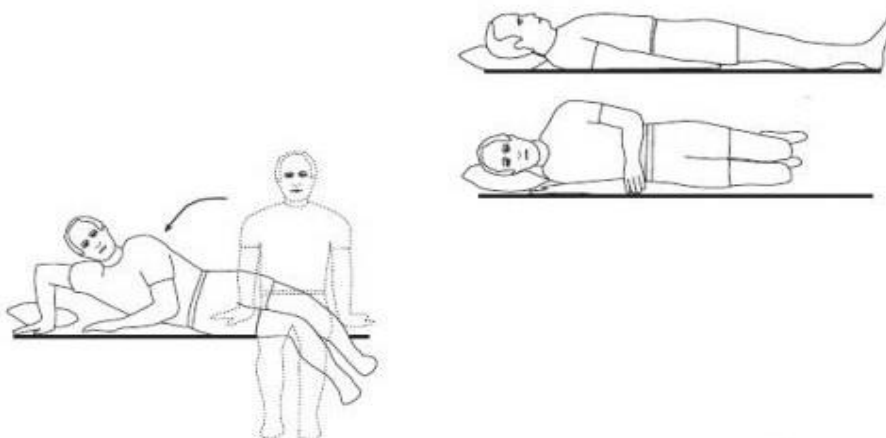
Log Roll

Getting Out of Bed using the “Log Roll”

- Tighten your stomach muscles.
- Roll onto your side.
- Raise your body as one unit, DO NOT twist.
- Scoot to the edge of the bed.
- Use your arms to push up off of the bed. Press down with your arms to raise your body as you gently swing both legs to the floor.
- Place one foot slightly behind the other.
- Keep your stomach muscles tight.
- Then use your thigh muscles to raise your body up.

Getting Into Bed using the “Log Roll”

- Back up until the edge of the bed touches the back of your legs.
- Tighten your stomach muscles.
- Bend forward slightly from the hips
- Use your thigh muscles to lower your body onto the bed.
- Using your arm for support, lower your body onto its side.
- Move your body as a unit, allowing your feet to lift onto the bed.
- Roll onto your back without twisting your waist.



Using Your Walker

The physical therapist or nursing staff will ensure your walker is properly adjusted and explain the safety requirements to you the first time you use your walker. Be sure the walker you plan to use at home has wheels **ONLY** on the front.



Fitting the Walker

1. Safety – Walkers are designed to fold flat so they are transportable. You will hear a click when you open each side of the walker. This click indicates the locking mechanism is in proper position and the walker is safe to use.
2. Proper Fit – To ensure the walker is the proper height for you, stand in the walker with the cross bar in front of you. When your arms are relaxed at your sides the handgrips of the walker should be approximately level with your wrists. When grasping the handgrips, your shoulders should be level and relaxed and both arms should be just slightly bent at the elbows. All four legs of the walker are adjustable and the fitting process takes only a few minutes.
3. Your own Walker – If you have your own walker that you would like to use at home, please have someone bring the walker to the hospital the day of surgery. Leave it in the car and have someone bring it in once you are to the inpatient room. This will ensure the physical therapists have the time needed to evaluate the walker for proper fit and condition. Don't forget to wipe your walker down with Clorox wipes!

To Stand Using A Walker

1. To stand, use one hand to push up from the bed or chair, your other hand to push down on the walker while at the same time pushing up with your non-surgical leg.
2. Once you are standing, place both hands on the walker handgrips and try to stand straight for a few moments to gain your balance.

Walker Safety

- Before you take each step you must ensure that all four (4) legs of the walker are on the floor.
- Your body must be inside the walker before you move to take each step.
- Your toes should never pass the front crossbar of the walker to prevent losing your balance.
- Move the walker a comfortable arms length in front of you. If you feel like you are reaching or bending forward to take a step, the walker is too far forward.
- Wear well fitting shoes.
 - Never wear sandals, thongs, flip-flops, or high heels. Your footwear should have a back or strap that goes around the back of your foot/heel.
 - Make sure your footwear has a rubberized sole (something to create resistance between your feet and the floor).
 - Wear shoes that you have worn before, do not wear new shoes. You do not want to learn how to walk with a new joint while breaking in a new pair of shoes.
 - If you wear athletic shoes, you can use elastic shoe laces or use ¼ inch sewing elastic in place of your regular shoe laces. It will eliminate the hassle of tying your shoes.
- Clear all walkways in your home of throw rugs, phone cords, and extension cords to prevent falls.
- If you have transition areas in your house where the floor surfaces change (i.e. carpet to tile or linoleum), ensure the surfaces are secured to the floor. Be careful not to trip or fall over these transitions.
- If you must climb stairs in your home, tell the physical therapist so you can practice before you are discharged home. When you are climbing up you must lead with your non-surgical leg and step down using your surgical leg. You will be taught how to use the stairs while you are here.

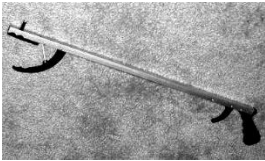
Assistive Devices

After surgery bathing, dressing, and toileting may appear to be a major undertaking but with the right equipment and skills you will be able to adapt very easily. There are a great many assistive devices on the market today. The nursing staff and the physical therapist will demonstrate how to use certain assistive devices that can increase your independence following discharge from the hospital.

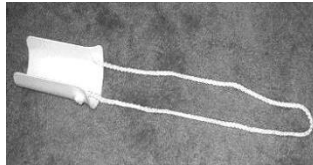
Dressing Devices

Dressing should be done in a seated position with the surgical leg dressed first. When undressing, the surgical leg should be undressed last).

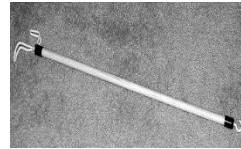
***Long-Handled Reacher**



***Sock Aid**



***Dressing Stick**



Bathing Devices

***Long Handled Sponge**



***Hand Held Shower Head**



***Shower Chair or Bench**



Toileting Devices

***Commode**



***Elevated Toilet Seat**



Activities after Spine Surgery

**** Your surgeon has the final say on any and all activities. ****

Activities you can EXPECT to perform after spine surgery once cleared by surgeon:

- Stationary bicycling
- Nordic Track (stationary skiing)
- Ballroom dancing
- Square dancing
- Golf
- Swimming
- Walking

Most of the activities listed above are aerobic in nature, therefore, good for the heart.

Recommended activities after spine surgery once cleared by surgeon:

- Gardening/Yard work
- Table Tennis (Ping Pong)
- Cross-country skiing
- Bicycling (street)
- Bowling
- Fencing
- Hiking
- Speed Walking

Although prior experience and skill is required for most of these activities, they are quite safe. If you would like to try any of the above activities and have no experience, it is recommended that you speak with your surgeon first. Also, it is recommended that you receive lessons from a qualified instructor.

Activities Requiring Surgeon Approval:

- Aerobic exercise
- Calisthenics
- Canoeing
- Downhill skiing
- Horseback riding
- Ice-skating
- In-line skating
- Jazz dancing
- Tennis–doubles

While safe in most cases, your surgeon should approve your participation in any of the above activities. Recovery from spine surgery is unique for each person. There may be precautions for you to know about before you participate in these activities.

Activities after Spine Surgery (con't)

Activities to be avoided:

- Baseball
- Basketball
- Football
- Handball
- Jogging
- Racquetball/squash
- Soccer
- Softball
- Step machines
- Tennis-singles
- Volleyball

The activities listed above should be avoided because of the undue stress and twisting motions that occur. Some of these activities have potential for sudden, high impact movement, which can interfere with your recovery.

Anatomy

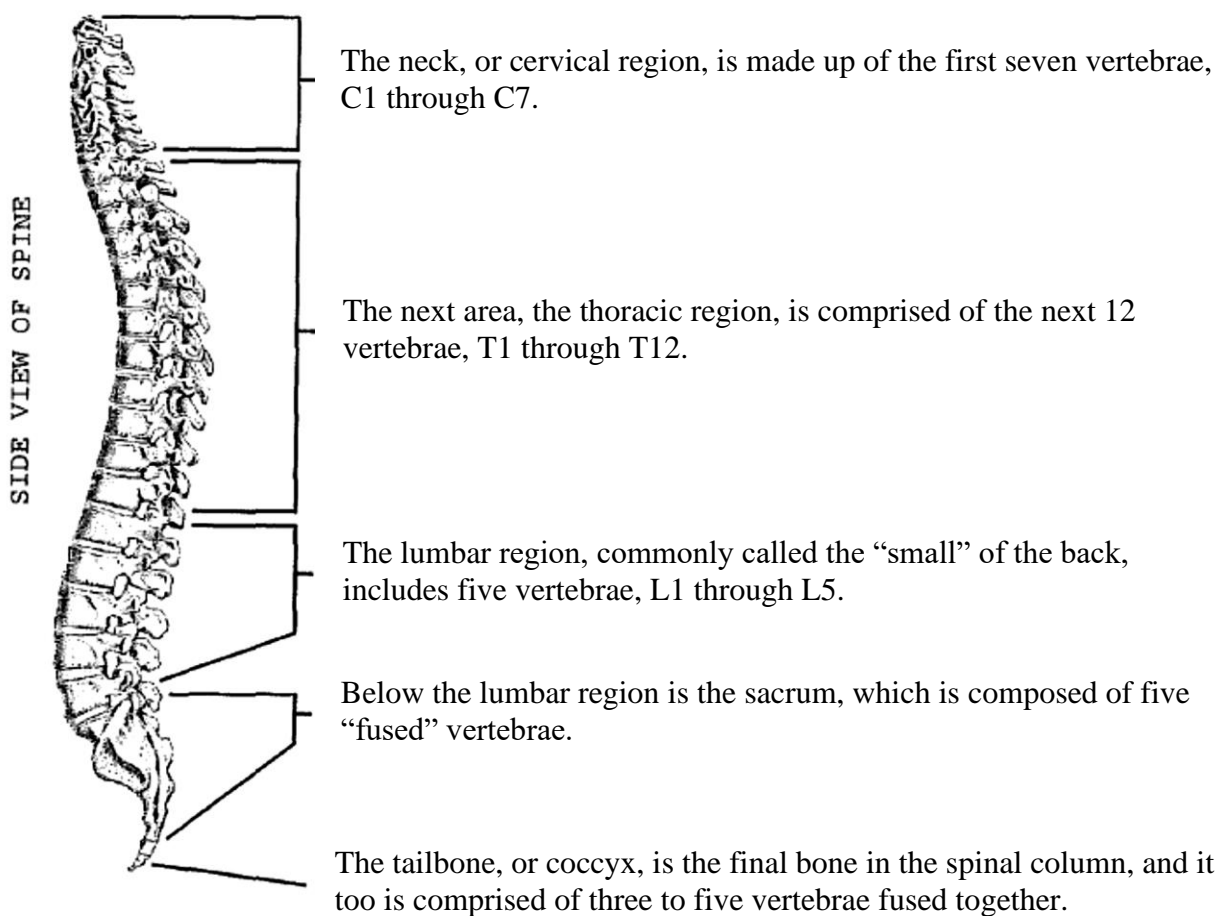
In order to better understand the most common injuries and diseases of the spine, it is essential to have a fundamental understanding of spine anatomy and its role in the body. The human spine is a remarkable structure and it performs a number of important functions:

- It provides protection for the spinal cord
- It provides the support needed to walk upright
- It allows the torso to bend and twist
- It supports the head and allows movement from side-to-side and up and down

The spine is made up of a column of 26 bones that extend in a line from the base of the skull to the pelvis. Twenty-four of these bones are called vertebra (plural – vertebrae). When viewed from the side, the spine has a natural “S” curve.

REGIONS OF THE SPINE

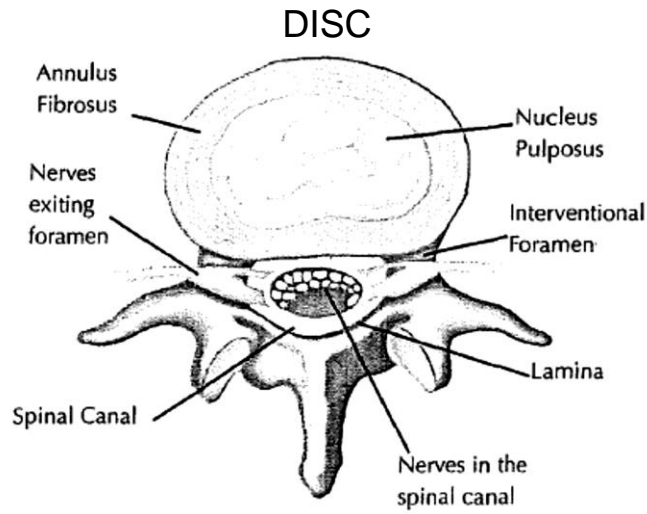
The spine can be divided up into three areas or regions.



CROSS SECTION OF A VERTEBRA

The spinal cord travels from the brain through the entire length of the spine. Nerves branch out from the spinal cord all along its course. The nerves that exit C1 through C7 take care of everything that is going on in the face, eyes, ears, shoulders, hands and fingers. The nerves exiting the thoracic vertebrae (T1 to T12) look after the GI

tract, the liver, ureters, some of the colon and the blood vessels in the abdomen. Those nerves leaving the spinal cord at L 1 through LS take care of the colon, the rectum, as well as the blood vessels in the legs, feet and toes.

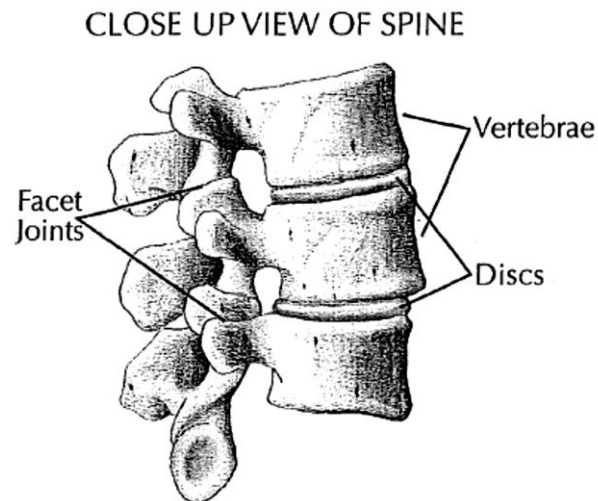


STRUCTURES OF THE SPINE

In addition to the vertebrae, there are a number of structures and features of the spine that are important to understand:

INTERVERTEBRAL DISCS (DISCS)- pads of cartilage between vertebrae that act as shock absorbers.

FACET JOINTS- joints located on both sides and the top and bottom of each vertebra. They connect the vertebrae through which the nerves leave the spine and extend to other parts of the body.

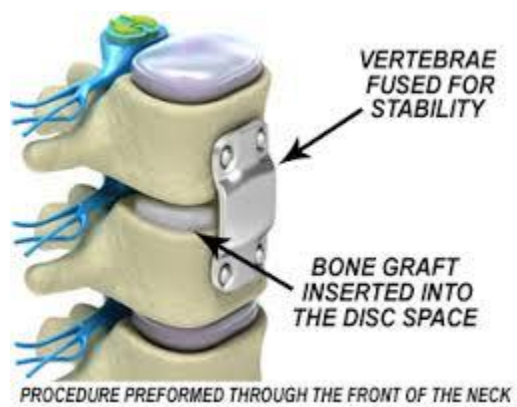


INTERVENTIONAL FORAMEN -an opening between vertebrae through which the nerves leave the spine and extend to other parts of the body.

LIGAMENTS- elastic bands of tissue that support the spine by preventing the vertebrae from slipping out of line as the spine moves. A large ligament often involved in spinal stenosis is the ligamentum flavum, which runs as a continuous band from lamina to lamina in the spine.

LAMINA- part of the vertebra at the upper portion of the vertebral arch that forms the roof of the canal through which the spinal cord and nerve roots pass.

Anterior Cervical Decompression and Fusion

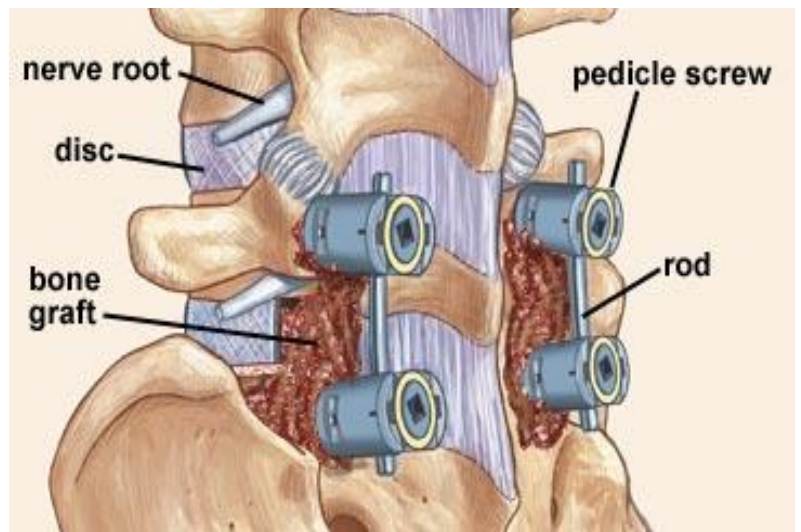


Hard Collar



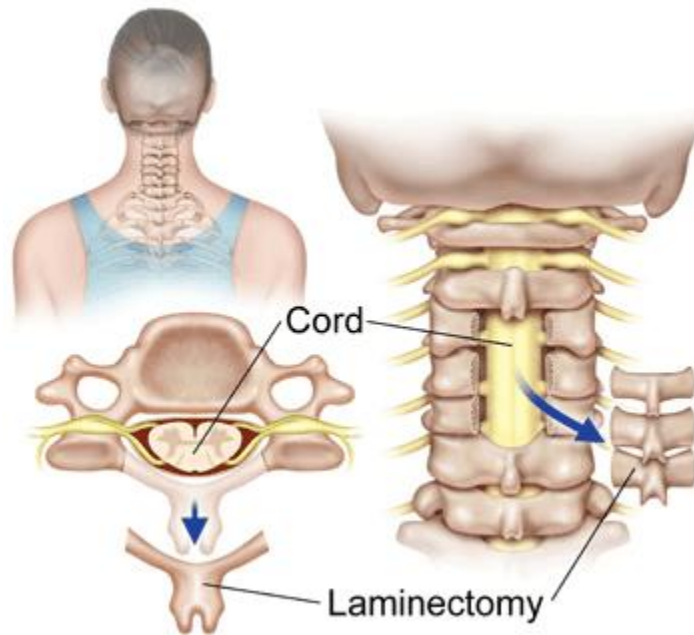
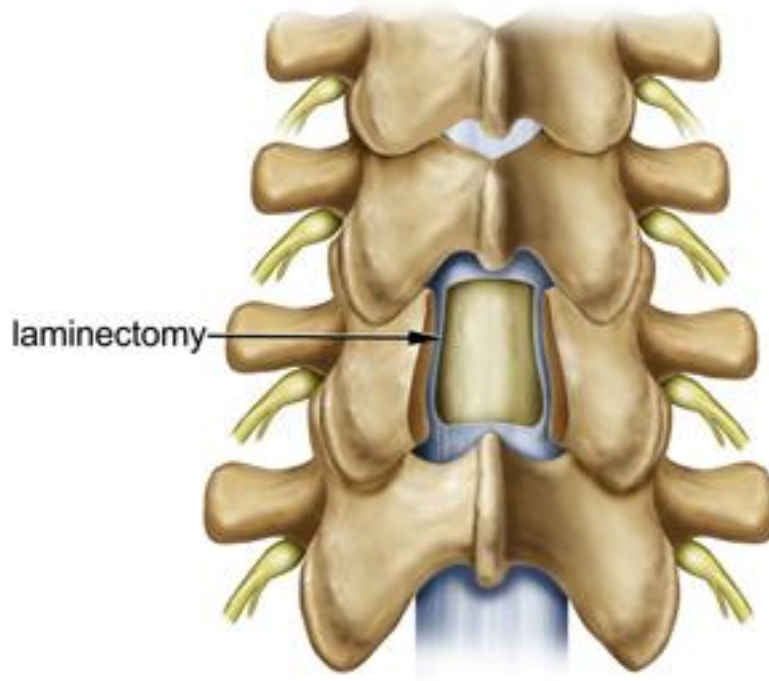
Soft Collar

Anterior and/or Posterior Spinal Fusion



Abdominal Binder

Laminectomy



Prevention of a Blood Clot

Everyone has a risk of developing a blood clot (a.k.a. DVT---Deep Vein Thrombosis). To reduce the risk of developing a DVT after surgery, several methods are used.

1. Mechanical

- TED Hose/Stocking (Thromboembolytic Device)
 - They help in preventing a DVT by creating pressure on your muscles to assist the blood flow in your legs.
 - These are thick white spandex stockings worn on both of your legs.
 - These are worn during your stay in the hospital and for 2-6 weeks at home after your surgery. Your surgeon will let you know when you can discontinue using these.
 - You should have these off 1time a day for 60 minutes to prevent any skin breakdown. Please ask to have these removed if someone has not offered to do so.
 - To wash these at home, use laundry detergent and rinse well. Let them air dry. Do NOT put these in the dryer, it will ruin the elasticity.

- SCDs/Plexi-Pulses (Sequential Compression Device)
 - They help in preventing a DVT by imitating walking to assist the blood flow in your legs.
 - These wrap around the calves or feet of both of your legs. They are connected to a pneumatic pump, at a standard set pressure.
 - These are worn on both legs during your hospital stay. They are only worn while you are in bed while you are in the hospital.

Medications for Your Stay at the Arizona Spine and Joint Hospital

What medications should I bring with me?

- Bring Your Current Prescription Medications
- Bring all prescription medications in their ORIGINAL CONTAINERS with pharmacy labels attached – No loose pills please.
- Be sure to bring any prescription eye drops, inhalers, creams or ointments, and insulin pumps or pens.
- Bring any prescription patches you will need during your stay, such as hormone patches or patches for pain control.
- Bring narcotic pain medications **only** if they are Extended Release pills and you take them on a scheduled basis.
- If you don't want to bring in all your pills be sure to bring at least a 3-day supply for each medication

What Should I Leave At Home?

- **Do Not Bring Expired Medications** – They will not be used in the hospital
- **Do Not Bring Weekly or Monthly Medications** that are not due during your stay – however, DO let us know you are taking them
- **Do Not Bring Over-The-Counter Medications or Dietary Supplements** unless they are in a brand new sealed bottle, but DO let us know what supplements you are taking
- **Do Not Bring Any Cannabis, marijuana or CBD Products**, but DO let us know you are taking them
- **Do Not Bring These Controlled Substances:**
 - **Narcotics** for pain such as Vicodin/Norco (hydrocodone), Percocet, Lortab, OxyContin, oxycodone, morphine, Dilaudid (hydromorphone), Demerol (meperidine), Ultram (tramadol), or Soma (carisoprodol)
 - **Sleep Aids** such as Ambien (zolpidem), Restoril (temazepam), Klonopin (clonazepam)
 - **Anti-Anxiety Medications** such as Ativan (lorazepam), Xanax (alprazolam), Halcion (triazolam)

What will happen to my medications?

- The nurse that greets you before surgery will collect your home medications and drop them off at the pharmacy
- A pharmacist will review each medication and compare it to what you have reported taking at home
- The pharmacist will notify the hospital doctor about your home medications

Medications During your Stay at Arizona Spine and Joint Hospital (con't)

- The hospital doctor will write an order to continue any home medications that are indicated during your stay
- Your home medications will be sealed by the pharmacist and stored in a locked medication room during your stay. They will be returned to you or an authorized family member at the time of discharge.

Important Notes:

- Sometimes the hospital doctor will not restart your home medications until the day after surgery.
- If you are taking oral medications for diabetes, you may be placed on insulin temporarily until you are able to eat a regular diet.
- NO medications or supplements of any kind may be kept in a patient's room at the bedside without an order from the hospital doctor.

For safety reasons we will usually dispense medications from the hospital pharmacy supply. During your stay, we may change your home medication to an equivalent dose of another drug. We will only use your home supply if we do not have your same drug or a suitable substitute in the pharmacy. If you prefer, we use your med supply, please verbalize this request to the hospitalist.

- Your surgeon or the hospital doctor will order pain medications for you as well as medications for anxiety or sleep if necessary. Our nursing staff will administer the medication from our pharmacy.

What if I am not sure whether or not to bring in a medication?

- Call the pharmacy at 480-824-1260. If there is no answer, leave a message with your name and number and they will call you back.

What if I have medication related questions before my stay?

- Please call the pharmacy at the above number.

What if I have medication related questions during my stay?

- Please ask your nurse to have the pharmacist visit you.

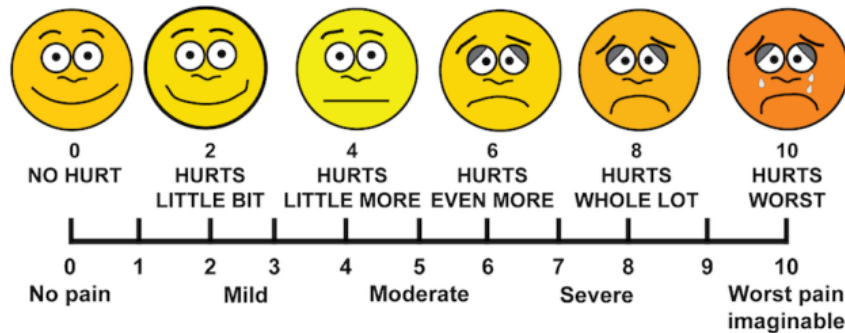
Medication purpose and side effects

- Your nurse will describe the purpose of a medication and the possible effects prior to you taking them.
- If you do not understand the purpose or side effect, please ask for the description to be repeated. The nurse may ask you to repeat back the information to ensure you understand.
- Your nurse will review your medications with you when you are discharged to make sure you know what to take at home. He or she will return your home medications and answer any questions.

PAIN

We use the faces pain scale at the Arizona Spine and Joint Hospital. Everyone's pain is different and by using this scale, we can evaluate how effectively we are managing your pain. We will ask you to rate your pain on a scale of zero (0) to ten (10). Zero (0) is no pain and ten (10) is the worst pain imaginable.

PAIN MEASUREMENT SCALE



Pain is a natural response that your body has to an outside stressor. You will experience pain after your spine surgery. Our goal while you are here is to control your pain, but eliminating your pain is not realistic. We will teach you how to control your pain, keeping it at a tolerable level. There are several methods we use to assist in your control of your pain: medicine, ice/heat, position change, distraction, exercise, etc.

Remember that the pain you experienced before surgery and the pain you experience after surgery are two different types of pain. After surgery, you will experience pain from being operated on. You may also experience pain in different places than you did before.

We do not want to “drug” you while you are in the hospital, but we will encourage you to take something for pain every 4-6 hours around the clock (this is administered by patient request ONLY, so please ask your nurse for pain medicine every 4-6 hours as needed). If you treat and manage your pain like this, you will have better control of it and will be better able to participate in your physical therapy sessions. Physical therapy is the most important part of your recovery from this surgery. We do not want you to miss one of your sessions due to uncontrolled pain.

Non-medicine methods for treating pain:

- Position changes. Sometimes just changing your position will alleviate your pain. Things such as getting back into bed (if you have been in the chair for some time) getting out of bed to sit in the chair, turning onto your side in bed. There are different ways to achieve this. If you are uncomfortable, please ask your nurse and we will find a way to help you.
- Relaxation Techniques: deep breathing, meditation, prayer, listening to music, visualization, watching TV, reading, etc.

Increasing your comfort level during your hospital stay:

Our goal is to achieve comfort not complete pain relief. Pain is a healthy human response following surgery. Pain will be elevated in the first week post-surgery. The goal is to *reduce* that pain. Being pain free is not a realistic goal. We will use medication as well as position changes, cold therapies and environmental changes to promote patient comfort. Remember to SPEAK UP and let your nurse know if you feel that we are not managing your pain effectively.

Going Home

Things to remember once you are discharged:

- Drink plenty of fluids, with water being the most desirable.
- Increase your fiber intake.
- Monitor your bowel movements and continue to take stool softeners and/or laxatives to prevent constipation.
- Control your pain. Be sure to monitor your pain level and continue taking your pain medication as instructed by the hospital. You may even want to write down when you took your pain pills and how many. This will help you to keep track of your pain medication usage and avoid any confusion you may have of when you last took a dose.
- Keep using your TED hose as instructed by your surgeon.
- Care for your incision as instructed by the discharge nurse and by your surgeon. Be sure to watch for signs and symptoms of infection (as instructed by your discharge nurse). Keep the wound area clean and dry.
- Be sure to wash your hands thoroughly with soap and water before handling your incision. This will help prevent infection.
- Call your surgeon's office to obtain a follow-up appointment if it is not already scheduled. This visit is usually 10-14 days after your surgery.
- Remember that you will need to inform every doctor and dentist you see, that you've had spine surgery. You will need to be given a prophylactic antibiotic before any invasive procedure (this includes routine dental cleanings).

Appendix A

Preparing Your Home

There are several things you can do to get your home ready for your return from your hospital stay. Things you may want to consider doing are:

- Getting a bag or bicycle basket to attach to your walker. It can hold all of things you may want to have with you (e.g. phone, Kleenex, TV remote, etc.)
- Pick up all throw rugs and cords. Make sure any loose edges between carpet and tile/linoleum are secured to the floor.
- Cover any slippery surfaces with non-skid surfaces.
- Be sure to have good night lighting (for when you have to get up in the middle of the night—so you will not trip with your walker).
- Put all items you will need in the kitchen and bathroom at waist height (to prevent you from reaching too high and stooping too low).
- Stock up on paper products (plates, cups). You should not stand for prolonged periods of time, and doing dishes and/or laundry is not recommended.
- Install a moveable showerhead. It will be dangerous for you to try and turn around in the shower with a leg that has been operated on coupled with the fact that you are wet and soapy. It would be much safer for you to stand in one place and use a moveable showerhead.
- Shower chair/plastic resin chair for your shower. It will be much safer for you sit in the shower for the first couple of times due to the above-mentioned items.
- Complete any yard care that cannot wait 4-6 weeks.
- Complete any house cleaning that cannot wait 4-6 weeks.
- Consider if you need a grab bar installed next to your toilet to help you on and off it (it needs to be drilled/secured into the wall studs, not the drywall). Or do you have a sturdy countertop that you can use to assist you? You may NOT use the toilet paper holder, towel bar, or cabinet to assist you.

Adaptive Equipment

After surgery, you may potentially need additional equipment such as a raised toilet seat or a shower chair/bench. These items are usually not covered by insurance. Check to see if you can borrow these items from friends, loan closets in retirement communities, or loan closets in local organizations. These items may also be purchased at:

- Pharmacy stores (Walgreen's, CVS)
- Lowe's, Home Depot, Thrift Stores, Online ordering (Amazon)
- Home Care Supply Stores:

| | |
|---|---|
| Laguna Medical, Inc. 480-894-0360 325 E Southern Avenue Suite 104 Tempe, AZ 85282 Some items are deliverable | Mediquip 480-800-8712 319 S Power Rd Mesa, AZ 85206 |
| Medical Super Center 480-924-5914 5050 E University Drive Suite 110 Mesa, AZ 85205 | |

Appendix B

Home Assistance

It is very likely that you may need some assistance at home with meal preparation, housekeeping, and errands for the first week you are home. This is especially important if you live alone. We recommend you make arrangements several weeks before your surgery date. Possible resources are:

- Family – If you have family coming in from out of town, they need to have flexible travel arrangements in case your surgeon recommends further therapy at an Extended Care Facility (ECF). An ECF would delay your return home by about one week.
- Friends or Neighbors – If you have several people they can spread out the tasks to keep from overwhelming one person.
- Church – Many churches have groups that are available to provide assistance.
- Non-Medical Home Assistance – People you can hire to assist you for a set period of time (see below).

| | |
|--|--------------|
| Arizona Lullaby Guild | 602-852-0459 |
| Home For Me | 480-599-8529 |
| Care from the Heart | 623-875-4440 |
| Always Caring | 480-491-1140 |
| Foothills Caring Corp | 480-488-1105 |
| Home Instead Senior Care | 480-827-4343 |
| Plus 50-Mesa Senior Center | 480-962-5612 |
| Senior Adult Independent Living (SAIL) | 602-264-4357 |
| Sunland Home Care | 480-447-8893 |

Appendix C

Extended Care Facilities (ECFs)/ Skilled Nursing Facility (SNF)

If an ECF has already been discussed and approved by your surgeon, we suggest you call several of the ECFs close to your home and ask to take a tour of the facility and speak with one of the administrators. While speaking with the administrator you may want to ask the following questions:

A current, comprehensive list of providers for your geographical area is available from the hospital case manager. You may choose any provider you would like.

We suggest you call several of the ECFs close to your home and ask to take a tour of the facility and speak with one of the administrators. While speaking with the administrator you may want to ask the following questions:

- Is your organizations Medicare-certified, state licensed, and/or JCAHO (Joint Commission for the Accreditation of Healthcare Organizations) accredited?
- What services does your organization offer?
- Are your caregivers carefully selected? If so, how?
- Do you obtain a criminal background check of your caregivers?
- Are your caregivers bonded and insured?
- Can you provide references?
- Do you provide Physical Therapy twice a day? On Saturday and Sunday?

Advanced Health Care of Scottsdale
9846 North 95th Street
Scottsdale, AZ 85258
480-214-4200

Advanced Health Care of Mesa
5755 East Main Street
Mesa, AZ 85205
480-214-2400

Desert Cove Nursing Center
1750 West Frye Road
Chandler, AZ 85224
480-899-0641

East Mesa Health Care Center
51 South 48th Street
Mesa, AZ 85206
480-832-8333

Sante of Chandler
825 S. 94th Street
Chandler, AZ 85224
480-361-6636

Sante of Mesa
5358 E. Baseline Rd
Mesa, AZ 85206
480-699-9624

The Center at Val Vista
3744 South Rome Street
Gilbert, AZ 85297
480-224-9500

Appendix D

Transportation Options**WHEELCHAIR/STRETCHER VANS**

Quality 602-371-1000

AMBULANCE

AMR 844-300-3606

TAXI CABS

Quality 602-371-1000

AIRPORT

Super Shuttle (*to and from the airport*) 602-244-9000

VALLEY METRO

602-253-5000

PHONE APPLICATIONS

Lyft

Uber

Super Shuttle (Airport Transportation)

Appendix E

Meal Preparation Options

- Prior to your surgery, prepare and freeze approximately 1-2 weeks of meals that can be reheated or microwaved.
- You should plan to eat your meals at home for the first two weeks. You might want to stock up on your favorite foods before surgery.
- Rearrange your refrigerator and pantry by placing the most frequently used items waist high. This will prevent you from bending or stooping over.
- Try to arrange delivery of your groceries from the local supermarket. Contact “Meals-on-Wheels” or “Meals While You Heal” to deliver meals to your home while you are recovering.

Mesa Meals on Wheels

- 480-962-5612
- Boundaries: East to West: Val Vista to Dobson
North to South: McKellips to Baseline
- Eligibility: None
- No Special Diets

Mesa Senior Center-Meals While You Heal Program

- 480-962-5612
- Frozen Meals
- No weekend delivery
- You can be in the program for one month
- Boundaries: All of Mesa, West of Meridian
- Suggested donation: \$1.50 (subsidized)
- Eligibility: Apply through Maricopa County Area Agency on Aging (SAIL) Central Intake (602-681-8733) or the Mesa Senior Center. Must be homebound, includes physically disabled persons less than 60 years.
- Special Diets: Yes - diabetic and low sodium with doctor’s order

Mesa Senior Center

- 480-962-5612
- Private Pay
- Cost: \$4.00 a meal
- 2-3 week wait
- Special Diet: Yes - diabetic and low sodium with doctor’s order
- Frozen Meals
- No Weekend Deliveries

Appendix F

Home Health (Medical) Providers

A current, comprehensive list of providers for your geographical area is available from the hospital case manager. You may choose any provider you would like to use.

Appendix G

Frequently Asked Questions

- Can I sleep on my side?
Yes you may. The staff will assist you in doing this. Please do not do this on your own.
- Can I move my legs?
Yes, although pain will be a limiting factor.
- Where will I go after I am discharged from the hospital?
You will be discharged directly to your home if you are stable and can:
 - Sit to Stand by yourself
 - Get in and out of bed by yourself
 - Ambulate a safe and comfortable distance (usually 100 feet).
 You will be offered the option of being transferred to an Extended Care Facility if you are unable to meet the above requirements, and your surgeon orders it.
- It may require two (2) physician signatures to discharge you home. One from your surgeon and one from the hospitalist who attends to you during your stay. Please be patient with us during this process. It may take up to 4 hours to complete the discharge process.
- Will I need help at home?
You will need help with meal preparation, laundry, house cleaning, and bathing. When you are discharged you will be able to get yourself in and out of bed as well as the chair or couch. We do not expect or want anyone to help you to do these things once you are home.
- Will I be hospitalized?
Yes. The usual stay is one to two days. Several factors can affect the length of time you are hospitalized, such as the type of surgery performed, your health and your age. If there are complications, you may be in the hospital longer.
 - Some spine surgeries like a cervical or lumbar laminectomy/microdiscectomy are considered outpatient surgeries and you may be discharged from the outpatient area with no hospital stay.
- Could complications arise because of the surgery?
With any surgical procedure, there is a potential for complications. Such complications could include uncontrollable bleeding, wound infection, blood clots, pulmonary embolism, abdominal problems, loss of bowel or bladder control, impotence, ejaculation problems, heart attack, paralysis or even death. Nerve root damage can also occur, resulting in numbness and/or weakness in the leg. The possibility for any of these complications is very low.

- How long is the surgery?
It may be two to eight hours depending on the type of back surgery being done.
- How do I care for my incision?
Your nurse will show you. You will also be given written instructions to take home. It is very important to keep the wound clean and inspect the incision daily. You need to contact your surgeon for the following:
 - Any drainage from the wound
 - Fever if it exceeds 101°
 - Increased pain, swelling, heat or redness
- How long will my sutures/staples stay in place?
Most sutures are underneath the skin and will dissolve on their own. If your sutures or staples are visible, they are usually removed in 10-14 days. If steri-strips are used, they usually fall off in about 5-7 days. If Dermabond (a topical skin adhesive that holds the incision together) is used, the film will usually remain in place for 6-10 days, and then will naturally fall off.
- Will my pain improve?
Most patients get marked relief of the pain early postoperatively. Sometimes, during the first two months, you may have episodes of pain similar to what you experienced prior to surgery due to inflammation around the nerve. This will pass in time as the tissues heal.
- When can I walk?
We will have you up and walking two to three hours after the surgery.
- Will I be able to walk up stairs?
Yes
- Will I require the use of a walking aid?
This will depend on you and how well your strength and balance are prior to being discharged from the hospital.
- What is the approximate time it will take for me to recuperate?
Approximately two months. Two to four weeks at home and six weeks without any strenuous activity. For fusion patients this may be longer.
- How long before I can return to work?
This varies from person to person and of course will depend on the type of surgery and type of work you were doing prior to surgery. Your surgeon will discuss with you a plan to safely return to work.
- How long before I can drive?
Usually in two to four weeks or when released by the surgeon. It will also depend on your pain medication use. For patients having cervical fusion it may be six weeks before driving is permitted
- What will my limitations be after my surgery?
Limitations will vary. You will be given written instructions to take home with you. Generally, you should avoid lifting more than 8 to 10 pounds (approximately a gallon of milk). Avoid twisting and repetitive bending. You should not be sitting more than 30 minutes to an hour if you have low back surgery

unless your surgeon indicates otherwise. During the first several weeks you should avoid travel that takes longer than one hour.

- Will I be able to have sex after surgery?
Yes, however we request you wait until approximately two to four weeks after surgery and use a dependent position.
- How long before I can fly in a plane?
You will not be able to fly for at least two weeks after surgery. Your surgeon will give you more specific information for your particular situation.
- Can I eat right after surgery?
Depending on the type of surgery, particularly posterior and anterior fusion, you will probably get ice chips and sips of water until your bowel sounds return and you are passing gas. Once this happens then your diet will be slowly advanced. Walking will help stimulate the bowels.
- Do I need to be on a stool softener?
It may be a good idea as sometimes constipation can develop while in the hospital, or if you have problems with constipation prior to surgery. Another factor to consider is narcotic pain medications can promote constipation.
- Will I be wearing a brace?
It depends on the extent of the surgery. You may be wearing a brace whenever you are out of bed. For patients having cervical fusion, you may need to wear your brace at all times.

Appendix H

Hotels/Motels

Super 8 Motel
1550 S. Gilbert Rd.
Mesa, AZ 85204
480-545-0888

Best Western Superstition Springs Inn
1342 S. Power Rd.
Mesa, AZ 85206
480-641-1164
Country Inn & Suites by Carlson Mesa
6650 E. Superstition Springs Blvd.
Mesa, AZ 85206
480-641-8000

Hampton Inn
1563 S. Gilbert Rd.
Mesa, AZ 85204
480-926-3600

La Quinta
6530 E. Superstition Springs Blvd.
Mesa, AZ 85206
480-654-1970 Sleep Inn
6347 E. Southern Ave.
Mesa, AZ 85206
480-807-7760

Residence Inn – Gilbert
3021 E. Banner Gateway Dr.
Gilbert, AZ 85234
480-699-4450

Appendix I

Important Telephone Numbers

| | |
|-----------------------------------|----------------------|
| Admitting Office/Information Desk | 480-824-1221 |
| Case manager | 480-824-1306 |
| Inpatient Nurses' Station | 480-824-1233 |
| Joint Replacement Class | 480-824-1306 or 1229 |
| Medical Records | 480-824-1284 |
| Patient Billing | 480-824-1232 |

Glossary of Terms

Case Managers: case managers will assist you and your family with discharge planning, such as arranging for home care and necessary equipment

Compression Device: this plastic inflatable sleeve wraps around your feet and may be used to improve blood flow in your legs

Continual Passive Motion (CPM) Machine: this machine will be used to exercise your knee while increasing blood circulation, decreasing swelling and increasing your range of motion

Foley Catheter: this tube is used to eliminate urine from the bladder before and shortly after surgery. This remains in place with an inflated balloon.

Hemovac Drain: a drain that is placed near the surgical site and used to collect blood

Incentive Spirometer (IS): this breathing exercise device is designed to improve your ability to expand your lungs after surgery

Intravenous (IV) Catheter: the IV allows fluids and medications to be delivered through your blood stream

Physical Therapist (PT): your physical therapist will assist you in regaining mobility and function following your surgery

Pulse Oximeter: this clip is attached to one of your fingers to monitor the oxygen content in your blood

