



SPINE SURGERY GUIDE

*What to Expect, How to Prepare
and Recovery Instructions*



Bozeman Health
Spine + Joint Institute

Improving community health and quality of life.



Thank you for choosing Bozeman Health.

We value your commitment to improving your health. Through high quality compassionate care, research and surgical advances, we can help revitalize your quality of life.

Our local spine surgeons and Bozeman Health medical staff have partnered to create a spine surgery program designed to shorten hospital stays, enhance the quality of care and improve your overall experience. By combining our expertise, we've developed a comprehensive program focused on efficiency, comfort and—most importantly—your satisfaction.

Our goal is to care for every patient as we would a member of our own family. Through personalized care and clear, comprehensive education, we're here to support you at every stage of your surgical journey. This guide explains how to prepare for surgery and what you can do to support a smooth recovery. Use the included checklists as your surgery date approaches to stay on track. Your understanding and active participation play an important role in achieving the best possible outcome, and our care team is always available to answer questions or address concerns.

Your education and participation are essential to ensuring you have an outstanding experience and the best possible outcome, so please read all of the information in this booklet. Our staff is available to help you with questions and concerns.

At Bozeman Health, we are committed to working with you to optimize your health, recovery process and to help put you on the road to success.

Your surgery is scheduled for

IMPORTANT NUMBERS

- Bozeman Health Deaconess Regional Medical Center | 406-414-5000
- Emergency | 911
- Pre-Anesthesia Clinic (PAC) | 406-414-4280
- Spine + Joint Institute | 406-414-5094
- Patient Financial Services | 406-414-1015
- Bozeman Health Neurosurgery and Spine Clinic | 406-414-5930

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Understanding Spine Surgery

An overview of common spine conditions, surgeries and basic spinal anatomy.

COMMON SPINE DISORDERS

- Herniated/Ruptured Disc
- Fractured/Broken Vertebrae
- Spinal Stenosis
- Spondylolisthesis
- Arthritis
- Scoliosis

COMMON TYPES OF SPINE SURGERY

Your surgeon will explain your specific surgery to you. Common spine surgeries include:

- **Discectomy:** Discectomy is a surgery to remove all or damaged portions of the intervertebral disc that may be pressing on the spinal cord or nerve root causing pain, weakness or numbness.
- **Laminectomy:** A laminectomy is a type of surgery that removes part of the vertebral bone called the lamina to create space and relieve pressure on the spinal cord or nerves.
- **Fusion:** Spinal fusion surgery permanently connects (fuses) two or more vertebrae. This procedure is used to correct problems such as painful motion and restores stability to your spine.

ANATOMY OF THE SPINE

Spine surgery is an operation on your back or neck.

The bones of the spine protect the spinal cord. The spinal cord sends and receives messages between the brain and the rest of the body.

THE VERTEBRAE

Your spine is made up of small bones, called vertebrae, which are stacked on top of one another and create the natural curves of your back. These bones connect to create a canal that protects the spinal cord and nerve roots.

- **Cervical | Neck**
The cervical spine consists of 7 vertebrae (C1-C7) and provides support for the weight of the head.
- **Thoracic | Upper and Middle Back**
The thoracic spine consists of 12 vertebrae (T1 - T12) and provides stabilization and support for your rib cage protecting your heart and lungs.
- **Lumbar | Lower Back**
The lumbar spine consists of 5 vertebrae (L1-L5).
- **Sacrum and Coccyx**
The sacrum and coccyx support weight-bearing and stabilization to this region of the spinal column.

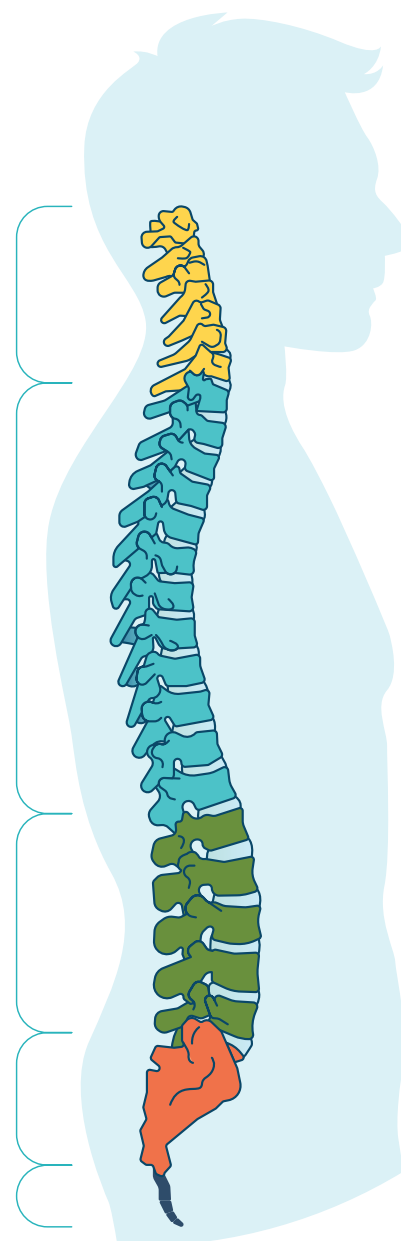
Cervical Vertebrae
(C1-C7)

Thoracic Vertebrae
(C1-C7)

Lumbar Vertebrae
(L1-L5)

Lumbar Vertebrae
(L1-L5)

Coccyx



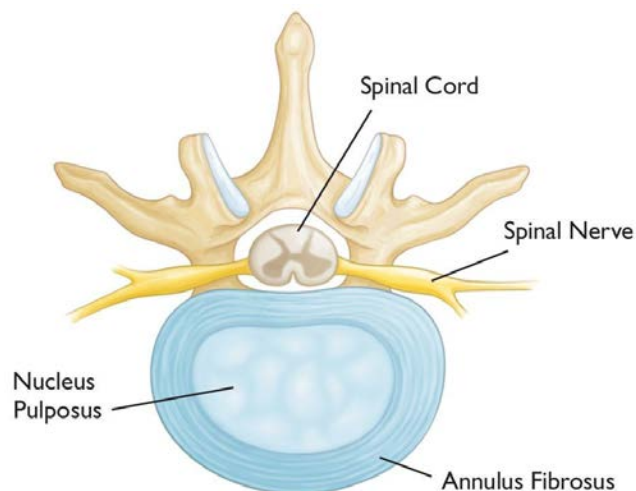
INTERVERTEBRAL DISCS

Intervertebral discs sit in between the vertebrae.

They are flat and round and about a half inch thick.

Intervertebral discs are made up of two components:

- **Nucleus Pulposus:** The nucleus pulposus is jelly-like and makes up the center of the disk. The jelly is partly made of water and gives the disk flexibility and strength.
- **Annulus Fibrosus:** This is the flexible outer ring of the disk. It is made up of several layers, similar to elastic bands.

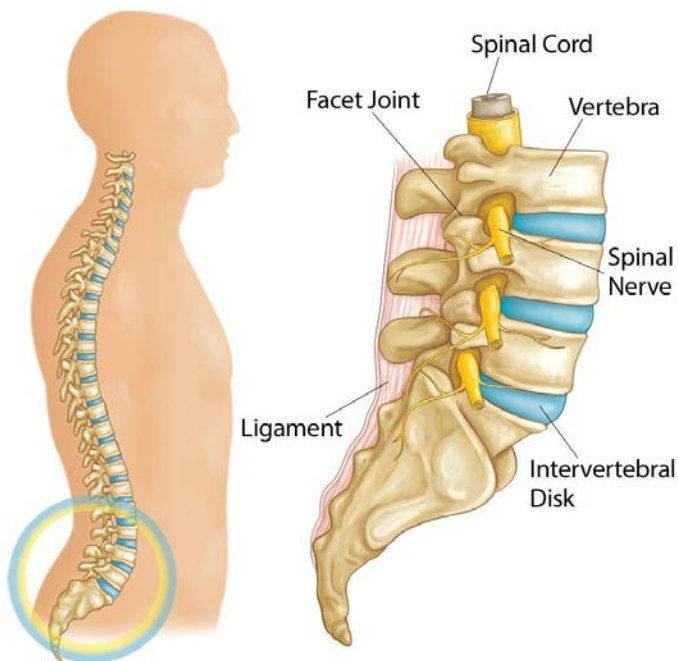


SPINAL CORD AND NERVES

The spinal cord extends from the skull to your lower back and travels through the middle part of each stacked vertebra, called the central canal. Nerves branch out from the spinal cord through openings in the vertebrae and carry messages between the brain and muscles.

MUSCLES AND LIGAMENTS

These provide support and stability for your spine and upper body. Strong ligaments connect your vertebrae and help keep the spinal column in position.



FACET JOINTS

Between the back of the vertebrae are small joints that also help your spine move. These facet joints have a cartilage surface, very much like a hip or a knee joint does. The facet joints are important for allowing rotation of the spine but may develop arthritis and become a source for low back or neck pain.

SACROILIAC JOINTS

The sacroiliac joints connect the hip bones to the sacrum. They function to support the weight of the upper body and absorb shock between the upper body, pelvis and legs.

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Your Spine Surgery Journey



Surgeon's Name _____

Date _____

My Nurse Navigator _____ Phone _____

Date _____ Time _____

Bozeman Health Deaconess Regional Medical Center

Pre-Anesthesia Clinic (see map on back page)

Entrance 8 | Copper Zone | Floor 2



- Call 406-414-5094 to schedule your live class.
OR
- Scan the code to watch a pre-recorded class.
Click on Quick Links > Resources > Pre-Surgery Class.
<https://bozemanhealth.org/services/orthopedics/#videoclass>

My nurse navigator will call me with check-in time and instructions for eating and drinking.

Check-in Time _____

Perioperative Services (see map on back page)

Entrance 8 | Copper Zone | Floor 2

Check-in at Perioperative Services

Surgery → Recovery Room → Patient Care Unit

- ☐ Home with outpatient services.
- ☐ Home with home-health services.
- ☐ Rehabilitation unit / skilled nursing.

Follow-up with my surgeon: Date _____ Time _____

Post-Op Physical Therapy: Date _____ Time _____

Pre-Surgery Checklist

Bring this guide with you to all appointments including the day of surgery.

- ☐ **Read this entire booklet** and bring to all appointments including the day of surgery.
- ☐ **Contact your insurance company** about surgery and rehabilitation coverage.
- ☐ **Designate a coach.** Your “coach” can be a family member, friend or other individual who will help and support you through your surgery. Ideally, they should:
 - Attend your Pre-Anesthesia Clinic appointment and Spine Surgery class.
 - Be available during your hospital stay.
 - Assist you after discharge.
- ☐ **Create a list of your current medications.** Include all prescriptions, over-the-counter medicines, dosages and times taken. Note any allergies (see page 10).
- ☐ **Fill out Advance Directive and/or POLST forms.** Talk to your primary care provider if you haven’t started. Bring completed forms to the Pre-Anesthesia Clinic for them to scan.
- ☐ **Attend your Pre-Anesthesia appointment.**
 - Complete a pre-operative medical optimization with the Pre-Anesthesia Clinic (PAC).
 - This helps provide important health information to your surgeon, anesthesiologist and nursing team.
 - This information also helps to support safe and effective management of your care before, during and after surgery.
- ☐ **Attend the spine surgery class two to four weeks prior to surgery.**
 - Required one-hour class led by a nurse navigator.
 - Covers surgery preparation, hospital stay and recovery expectations.
 - Offered twice monthly.
 - **Call 406-414-5094 to register or scan the QR code on page 6 to watch a pre-recorded class.**
- ☐ **Prepare your home** (see page 8).
- ☐ **Obtain necessary recovery equipment** (see pages 28-30).
- ☐ **Quit smoking.** If you smoke or chew tobacco, please quit as soon as you know you may need to have surgery (see page 10).
- ☐ **Pack your hospital bag.** If applicable be sure to include glasses, dentures, hearing aids and CPAP machine.
- ☐ **Arrange transportation.** Coordinate with your coach, plan your ride to/from the hospital and review the help you’ll need at home post-surgery.
- ☐ **Pre-surgery bathing.** Bathe the two nights before and the morning of surgery, unless instructed otherwise (see page 9).

Prepare Your Home

Here are ideas that will assist in making your home safe.

- ☐ Purchase a non-slip bathmat for your tub/shower.
- ☐ Check every room for tripping hazards; remove throw rugs and secure electrical cords.
- ☐ Identify items from dressers, cabinets and shelves you'll need immediately after returning home.
- ☐ Move frequently used items to counter height to avoid bending or reaching.
- ☐ Plan to use a cordless or cell phone for easy access and mobility.
- ☐ Ensure stairs have securely fastened handrails.
- ☐ Consider boarding pets for a few days after returning home.
- ☐ Use a chair with a firm back, armrests and a higher seat to aid standing; avoid chairs with wheels.
- ☐ Prepare and freeze meals in advance or purchase prepared meals to minimize cooking.
- ☐ Install night lights in bathrooms, bedrooms and hallways.
- ☐ Do laundry ahead of time and put clean linens on your bed.
- ☐ Arrange for someone to collect your newspaper and mail.

YOUR SAFETY IS OUR PRIMARY CONCERN

We recommend that a family member or friend stay with you after your surgery until you can perform activities of daily living independently and safely. Typically, this occurs within 72 hours after you return home.



Skin and Infection Prevention

Steps to keep your skin and surgical site clean and safe.

SKIN

Our skin is the largest organ of our body. One of its many functions is to prevent dirt, bacteria and viruses from getting inside our body. All of us have millions of microorganisms on our skin. If our skin is cut, microorganisms are able to get in and cause an infection. Because incisions will be made through your skin for surgery, you are at a higher risk for infection.

Here are a few steps regarding your skin:

- Wash your hands or use hand sanitizer often, especially after using the bathroom, after coughing, sneezing or blowing your nose. Wash your hands before preparing food.
- Do not touch your incisions after surgery.
- Use chlorhexidine gluconate (CHG) soap prior to your surgery; please read the information below.

ILLNESS

If you become ill with a fever, cough, sore throat, flu or any other illness, contact your surgeon's office.

MOUTH CARE

Routine brushing prevents harmful bacteria from rapidly multiplying in your mouth. These bacteria may travel into your lungs and cause pneumonia — a serious and potentially life-threatening infection. The American Dental Association suggests brushing your teeth twice a day with a soft-bristled brush and rinsing with mouthwash. Flossing daily can help reduce the bacteria between teeth where your brush can't reach. Be sure to brush your teeth, floss and rinse with mouthwash everyday, even the morning of surgery.

SHAVING

It is very important that you do not shave or use any hair removal products anywhere near the surgical area for **three days prior to surgery**. Studies show an increased risk of surgical site infection associated with shaving. This is attributed to the microscopic cuts in the skin that allow bacteria to enter.

FINGERNAIL POLISH

Remove all fingernail polish as it can harbor bacteria.

CHLORHEXIDINE GLUCONATE (CHG) SOAP

You will be instructed to use this soap prior to your procedure to help prepare your skin. CHG is a special soap to help reduce the risk of surgical site infections by removing bacteria normally found on the skin. This protection lasts 24 hours. Hibiclens and DYNA-HEX are both CHG soaps. Plan to shower with CHG three times before surgery: two nights before surgery, on the night before and once the morning of surgery (unless instructed otherwise). **If you have any open areas on your skin when it is time to use CHG, consult your surgeon before using it.**

STEPS FOR WASHING WITH CHG SOAP

1. Take a shower as normal using your regular shampoo and soaps.
2. Rinse hair, face and body thoroughly to remove any shampoo or soap residue.
3. Turn off water off before applying CHG to your body.
4. Using a clean washcloth, rub a generous amount of CHG on your skin. Apply to body top down, head to toe. Avoid eyes and ear canals. Apply to your groin and buttocks last. For best results, leave CHG on skin for 2 minutes before rinsing. Your skin might feel sticky, this is normal.
5. Turn the water back on and rinse yourself off thoroughly.
6. DO NOT apply any lotions, creams, perfumes, makeup or other products to your skin.
7. Put on clean pajamas or clothes after bathing. If you have pets, do not allow them to sleep in bed with you the night before your surgery.



Quit Smoking

Smoking can increase your risk of surgical complications.

If you smoke or chew tobacco, plan to quit as soon as you know you may need to have surgery. The sooner you quit smoking, the more benefits there are.

SURGICAL COMPLICATIONS INCLUDE

- Increased risk of lung problems such as pneumonia.
- Increase risk of heart problems such as high blood pressure, heart rate and risk of irregular heartbeat (arrhythmias).
- Decreased oxygen in your blood.
- Increased risk of blood clots.
- Increased risk of wound complications such as slow healing, infections, cell and tissue death and hernias at the wound site.

WHEN SHOULD I QUIT?

The best time to quit is **before** surgery. People who stop smoking ahead of time have much higher success rates.

- **8 weeks before surgery:** improves airway function.
- **4 weeks before surgery:** reduces surgical complications by 20–30%.
- **Even quitting 1 day before surgery:** may improve your blood pressure and heart function.



Resources to Help Quit Smoking

AMERICAN LUNG ASSOCIATION
action.lung.org

CENTER OF DISEASE CONTROL
cdc.gov/tobacco

NATIONAL CANCER INSTITUTE TOBACCO LINE
1-877-448-7848 (also in Spanish)

AMERICAN SOCIETY OF ANESTHESIOLOGISTS
Asahq.org/stopsmoking/provider

SMOKEFREE.GOV

- teen.smokefree.gov
- veterans.smokefree.gov

Medications

IMPORTANT: DO NOT bring your medications from home unless you are instructed to do so.

MEDICATIONS PRIOR TO SURGERY

During your Pre-Anesthesia Clinic appointment, a nurse will review which medications to take the morning of surgery.

Bring a complete list of your current medications, including doses and time of day you take each medication, to this appointment. If it's easier, take pictures using your smartphone or ask your pharmacist to print your list of medications for you.

If you have questions about which medications to take before surgery, call the Pre-Anesthesia Clinic at 406-414-4280.

MEDICATIONS WHILE IN THE HOSPITAL

Your physician will prescribe any necessary medication during your hospital stay from our pharmacy. If you do bring your medications to the hospital, they will be sent home or stored in the hospital pharmacy for you until your discharge.

DISCHARGE PRESCRIPTIONS

Our Med-to-Bed program is a free delivery service provided by Bozeman Health Highland Park Pharmacy. It ensures that your medications are delivered to you before you leave the hospital. Highland Park Pharmacy accepts most prescription insurances, so your cost is similar to or the same as other pharmacies.

A pharmacy employee will bring your medication to your nurse for delivery. This allows you to go home with your medications and avoid an additional stop at the pharmacy.

When reviewing your medications on the day of surgery, you will have the opportunity to choose this option if desired.

MEDICATION REFILLS

For pain medication refills, contact your surgeon's office at least **TWO DAYS** in advance (Monday–Friday, 8 a.m. to 5 p.m.). Some prescriptions must be picked up in person. **Plan ahead for weekends and holiday closures.**



Day of Surgery

Important steps to take on the day of your surgery and what to expect.

YOUR CHECK-IN TIME

You will be contacted by Bozeman Health **one business day before surgery** to inform you of your check-in time and eating and drinking instructions. You may continue to drink clear liquids (water, clear sports drink) to stay hydrated even once you have stopped eating solid food. **If you do not follow these instructions, your surgery may be canceled.**

Check-in times are based on patient's specific medical needs, age and type of surgery. If you have any questions or concerns regarding your scheduled time, please call 406-414-1600.

MORNING OF SURGERY

- ☐ DO NOT eat food or candy or use cough drops, gum or chewing tobacco.
- ☐ DO NOT smoke or vape.
- ☐ Take medications as instructed. Do not bring any medicines with you unless you have been instructed to do so. If you do not remember which medications to take, please call the Pre-Anesthesia Clinic at 406-414-4280.
- ☐ Bring a complete list of your current medicines, including prescriptions and over-the-counter, dosages and times taken. Be sure to list any medications you are allergic to.
- ☐ DO NOT drink anything other than water or clear sports drink.
- ☐ Shower with the CHG soap (see page 9).
- ☐ DO NOT remove any hair by shaving or waxing.
- ☐ DO NOT put anything on your skin like lotions, oils, creams, deodorant or makeup.
- ☐ Bring a picture ID and insurance card(s) for registration.
- ☐ Wear loose, comfortable clothes like sweatpants, and shoes that are easy to slip on and off.
- ☐ DO NOT wear any jewelry, including wedding rings, earrings or body piercings.
- ☐ Leave all valuables at home or give them to a friend or family member.
- ☐ Bring your packed bag and this booklet with you.

Your surgery will be at Bozeman Health Deaconess Regional Medical Center.

SEE THE BACK OF THIS GUIDE FOR ADDRESS AND MAP.

UPON ARRIVAL

- ☐ Park in **parking lot F or G.**
- ☐ Enter the building through **entrance 8.**
- ☐ Take the **Copper Zone** elevators to the **second floor.**
- ☐ Check in at the **Perioperative Services** desk.





YOUR PROCEDURE

After you check in at registration, you will be directed to the surgical preparation area. A wristband will be applied at this time. If you have any allergies, an additional wristband will be applied. It is important for you to verify that all information on your identification bracelet is correct.

You will be asked to change into a surgical gown. Your clothes and any items you bring with you will be placed in a locker.

Just before surgery, a nurse will review your medical records, take your vital signs, perform a brief physical exam, clean the surgical site and start an IV. The IV allows medication and fluids to flow directly into your bloodstream. We utilize preoperative antibiotics to reduce the risk of infection.

Your surgeon and the anesthesiologist will visit you in the pre-op area prior to surgery. Among other things, your surgeon will ask you to identify which joint is being operated on and will mark the surgical site with a special marker. Your anesthesiologist will review your chart, discuss your anesthesia and answer any questions.

FAMILY WAITING

Your family member or friend will be able to stay with you until you are ready to be transported to the operating room. At this point, they will be directed to a family waiting area where they will wait while you have your surgery. Once your joint replacement is complete, a member of the surgical team will contact your family member or friend. At this time they will be able to speak with your surgeon to discuss your procedure.

THE OPERATING ROOM

Inside the operating room, you will be cared for by a team of physicians, physician assistants, nurses and skilled technicians. You can expect to have compression sleeves placed on your calves in the operating room. These sleeves will squeeze your legs at regular intervals to circulate blood and to help prevent clotting. The OR is often cold and bright, but you will be provided with a blanket to keep you warm throughout the procedure. When you are settled on the operating bed, the anesthesiologist will make you comfortable for the procedure. The total time required for surgery will be different from patient to patient depending on the complexity of your procedure.

After Your Procedure

What to expect after immediately after your procedure.

After surgery, you will be transported to an area called the Post-Anesthesia Care Unit (PACU) or recovery room. Your stay in the PACU will depend upon the effects of the anesthesia and pain control. Nurses will check your vital signs and monitor your progress. You will then be admitted to a hospital room.

SUPPORT AND COMFORT FROM YOUR NURSES

Your nurses are here to support your comfort, safety and recovery. They will:

- ☐ Help assess your pain level and determine when pain medication is needed.
- ☐ Administer your regular medications, as well as medications to help prevent blood clots.
- ☐ Monitor for medication side effects—please let your nurse know if you experience nausea, itching or anything unusual.
- ☐ Check your bandages and monitor drainage from your surgical site.
- ☐ Remove your incision drain and IV when appropriate.
(The IV port will remain in place until discharge in case it is needed.)
- ☐ Encourage coughing and deep breathing. You will be instructed on using an incentive spirometer and will go home with it to help prevent post-operative pneumonia.
- ☐ Assist you to the bathroom or commode as needed.
- ☐ Help you move safely to a chair or back to bed.

Remember to use the call light to request help from the staff to get back from the bathroom, in or out of bed, and in or out of the chair.



Pain Management

It is important to manage your pain after surgery.

When you are in a lot of pain, you will be less likely to do the things you need for recovery such as eating, drinking, walking and taking deep breaths. The amount of pain and discomfort you experience depends on multiple factors. Your physicians and nurses will do everything possible to relieve your pain and discomfort using medications and other techniques. During the first day, and over the next few days, you will start taking pain medications by mouth. Arrange to take your pain pills approximately **30 minutes prior** to doing your exercises to help control the soreness that often accompanies activity in the first few days after surgery. You can help us by letting your health care team know your pain rating. Controlling pain will help ensure you continue to play an active role in your recovery.

PAIN MEDICATION

Our goal is for patients to be opioid free after two months following surgery. Your surgeon will not refill your opioid medications after six weeks without an in-person visit. Our care team will work to reduce your pain and therefore reduce the need for prolonged postoperative opioid pain medications.

Be sure to take your pain medications by mouth with food. **DO NOT** not drink alcohol or drive while taking prescribed pain medication.

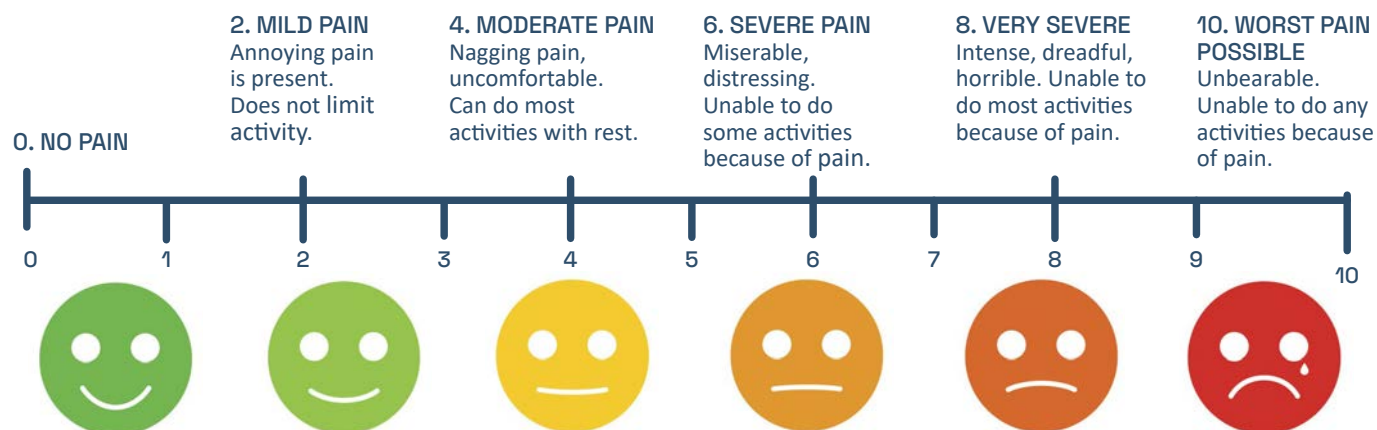
SIDE EFFECTS OF OPIOIDS

Narcotic pain medication and some other possible side effects of narcotic pain medications can include:

- **Addiction:** Patients taking frequent pain medication after three months have a 50% increased chance of addiction at two years following surgery.
- **Constipation:** Drink plenty of water and eat high-fiber foods (fruits and whole grains). If you do not have a bowel movement within two days, let us know as there are other medications that can help. Exercise and walking also help prevent constipation.
- **Drowsiness:** This usually goes away in a few days after you get accustomed to the medication. Report severe drowsiness or confusion.
- **Itching:** May occur with certain medications; notify us if this occurs.
- **Nausea or vomiting:** Let us know, there are medications to help control or prevent this.

PAIN ASSESSMENT SCALE

Use this scale to indicate the level of pain at any given time.



Safe Ways to Move

Moving is an important part of your recovery. Learn the best ways to protect yourself.

BED MOBILITY, LOG ROLLING

The following information defines what is termed a “log roll” to protect your spine while it heals. This is the best way to maintain a neutral spine position while getting in and out of bed.

- **Getting into bed:** from sitting, lower yourself onto your side while raising legs at the same time.
- **Getting out of bed:** from your side, move legs off the bed as you push yourself up into a sitting position.
- **Rolling in bed:** bend your knees and move your shoulders and hips together to avoid twisting.
- **Pillows:** use a pillow between your knees when rolling, sitting up or lying down. This will help maintain the proper alignment of your hips and knees. Use a pillow under your knees when sleeping on your back, or between your knees when sleeping on your side.



EXAMPLE OF LOG ROLLING WITH ASSISTANCE



Scan code to watch a video on the log rolling technique.



<https://youtu.be/P8FrvNoUFpY>

SITTING

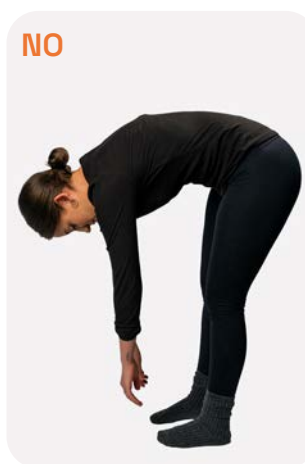
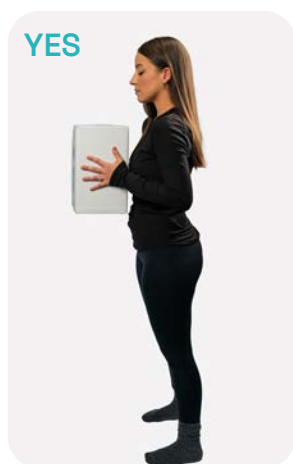
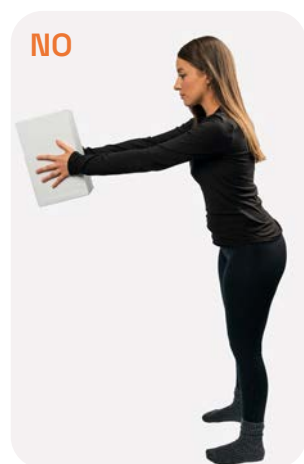
Avoid prolonged sitting (microdiscectomy) and follow these simple recommendations:

- Avoid low seats and chairs that roll or swivel.
- Microdiscectomy: reclined 45 degrees or less x 2 weeks.
- Fusion: sit up straight and avoid slouched, rounded shoulder postures x 2 weeks.

LIFTING

- Avoid heavy lifting.
- With any necessary lifting, keep weight close to the body and lift with your legs.
- Do not lift more than 10 pounds.

LIFTING MECHANICS | GOOD VS BAD



THE DIAGONAL LIFT

Squat, head up, back arched, feet spread one foot ahead as you lift.



Transitioning Home

Goals to reach so you can safely be discharged from the hospital.

There are certain goals you must reach and your medical team will work with you to help you reach these goals and plan for this transition. Please coordinate any private home care, home health care or outpatient services with your provider prior to your scheduled procedure, including obtaining any durable medical equipment.

A Bozeman Health case manager will be available to assist you with any additional discharge needs that may arise during your stay at Bozeman Health.

GENERAL DISCHARGE CRITERIA

- ☐ Tolerate the diet your physician prescribed to you.
- ☐ Drink all of the liquid your body needs without feeling sick.
- ☐ Pass gas.
- ☐ Manage your pain with oral pain medicine only.
- ☐ Get out of bed and walk without help.

Everybody meets discharge criteria at slightly different times. Different surgeries and different surgical approaches may need more or less time in the hospital. Please talk with your surgeon about expectations for your surgery.

You will need to arrange for a responsible adult to drive you home. To make your ride more comfortable, your driver should bring pillows, slide your seat back and recline the seat slightly.

MEDICATIONS YOU MAY GO HOME WITH

- ☐ Opioid medication for pain management.
- ☐ Blood thinning medication to help prevent blood clots.
- ☐ Muscle relaxant for muscle spasms.
- ☐ Stool softener to prevent constipation.

These prescriptions and instructions will be given to you during the discharge process from the hospital.

Resume your home medications as instructed by your physician.

When I Leave the Hospital

OPTION ONE

HOME WITH OUTPATIENT SERVICES

- ☐ Follow-up appointments at surgeon's office.
- ☐ Physical therapy at clinic of your choice.

Best option if you have:

- Good mobility.
- Help with transport.
- Help at home.

OPTION TWO

HOME WITH HOME CARE SERVICES

- ☐ Nurse comes to your home to check incision and assist with medications.
- ☐ Physical therapy at your home to instruct in post-operative exercises.

Best option if you have:

- Help at home, but still have limited mobility.
- Limited help with transportation.

Activity After Surgery: Checklist

Overview of important reminders once you're home.

Let comfort guide you. Moving frequently throughout the day is better than staying in one position. You will find that you are less stiff if you change positions as you feel the need to. Follow all precautions until instructed otherwise by your physician.

☐ **ACTIVITY AND MOVEMENT** are important to:

- Prevent blood clots from forming.
- Assist in the return of normal bowel function after surgery.
- Help you get back to your regular daily activities sooner.
- Prevent lung infections such as pneumonia.

☐ **BRACE WEAR:** Always wear your brace as instructed by your surgeon.

☐ **NO BLT'S** for the first six weeks after your surgery, or until your health care team tells you otherwise.

- **No Bending!** Do not bend your spine
- **No lifting!** Do not lift more than 10 pounds (a gallon of milk weighs about nine pounds)
- **No twisting!** Do not twist your back or neck.

☐ **PHYSICAL THERAPY**

Once you leave the hospital, outpatient physical therapy will start at six weeks post-operatively or when instructed by your surgeon. Physical therapists are experts in the movement and function of the body. They can help people gain or regain the physical abilities they need for day-to-day functioning, working or participating in sports or other activities. While in the hospital a physical therapist will help you:

- Learn exercises to improve your strength and range of motion.
- Practice using a walker to improve mobility.
- Work on restoring normal walking pattern.
- Ensure you are comfortable using stairs if applicable.

☐ **EXERCISE**

Safe activity and light exercise will help speed your recovery (do not sweat):

- Walking is the best exercise the first few weeks after surgery.
- Take frequent walks each day and advance the distance as tolerated.
- Avoid steep hills and rocky uneven terrain.

During your follow up visit, check with your surgeon about when to return to specific athletic activities.

☐ **IMPORTANT REMINDERS**

- Avoid wet and slippery areas and be very cautious around children and pets as they can be unpredictable.
- Listen to your body and rest when you need to.
- Do not allow yourself to become fatigued.



Recovery at Home

Recover safely by resting, moving carefully and listening to your body.

GENERAL TIPS

- Initially, you may need lots of rest breaks.
- Plan your days to include times to rest.
- Be sure to get dressed every day, this will help you to feel better.
- Resume as much personal care as possible within your recommended precautions. This will help increase your confidence and independence.
- Eat well-balanced, healthy meals.
- Gradually resume the hobbies or social activities you enjoy as long as they are within your recommended movement precautions.

BATHING AND SHOWERING

- Have someone help you the first few times you shower until you feel sure about your safety.
- Use a shower chair or tub transfer bench for in your tub or shower. This will increase your safety and help you save your energy.

- Do not twist while entering or exiting the tub or shower.
- Follow your surgeon's instructions regarding the care of the incision. It is important NOT to soak in water until your surgeon tells you otherwise.

TOILETING

- Use a raised toilet seat or a bedside commode over your toilet or grab bars at home.
- Avoid “plopping down” during transfer.
- Use of a toileting aide for post-toilet cleaning/wiping will allow increased ease and cleanliness whilst preventing twisting or bending during this activity.

DRESSING

- Wear loose-fitting clothes so that you do not twist your upper body when you put them on and take them off as well as to increase ease for dressing.
- If it is hard for you to reach your feet by crossing your feet up to your knee, you can use a sock aid, long-handled reacher, or a long-handled shoehorn for putting on and taking off your pants, socks and shoes.
- Sit down while completing lower body self-care and clothing management.
- If you have one leg that is less mobile, dress that leg FIRST.

DAILY LIVING NEEDS

- Arrange your house so that frequently used items are easily accessible.
- Place items between knee and shoulder level for easier access.
- Keep living areas and walkways free of clutter and well-lit and put away throw rugs for at least four weeks.
- Listen to your body when doing activities, if you start to feel an increase in pain and/or fatigue then take a break



SELF-CARE AND HOME MANAGEMENT

Gradually resume your normal routine while following these precautions:

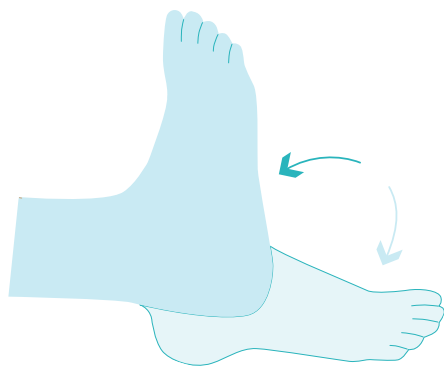
- Avoid highly strenuous household tasks the first week or so and incorporate proper posture and body mechanics into your activities of daily living.
- Do not pull anything tight over your head or collar (ie: turtleneck top).
- Avoid hunched over positions when washing your hands, brushing your teeth, shaving or applying make-up.
- Keep meals simple and arrange your kitchen so that frequently used items are close to countertop level.

MENTAL WELLNESS AFTER SURGERY

- Be patient with yourself!
- It is normal to feel frustrated, stressed, tired or depressed after a major injury or surgery. Some people feel they are not as sharp mentally. Do not make yourself do mentally challenging tasks.
- Talk with your health care provider if you have these feelings and feel overwhelmed.

PHYSICAL ACTIVITY

- Being overly aggressive with your therapy may lead to increased pain and swelling.
- **It is vital that you do ankle pumps and walk for 10 to 15 minutes every few hours.** This will help prevent blood clots.



Ankle Pumps

WOUND CARE INSTRUCTIONS

- Always wash your hands with soap and water or an alcohol-based hand rub before and after caring for your surgical incision(s).
- Do not allow pets too close to your surgical incision(s).
- Do not apply any ointments or lotions unless specifically instructed to do so by a provider.
- No pools, baths or soaking of the surgical incision(s) until instructed to do so by your surgeon.
- Family and friends who are visiting should clean their hands with soap and water or an alcohol-based hand rub before and after visiting.

REDUCE COMPLICATIONS

- Reduce or eliminate the use of tobacco, if applicable.
- Manage your diabetes, if applicable.
- Maintain a healthy weight and diet.
- Using good handwashing techniques.
- Perform your exercises as directed.
- Limit high-impact activities.

Possible Complications

Recover safely by resting, moving carefully and listening to your body.

All surgical procedures have some risks. Although advances in technology and medical care have made the procedure relatively safe, these risks do exist. Risks of complications should be considered carefully before you decide to have surgery. We encourage you to discuss the potential risks with your surgeon, primary care provider and your family. Every measure will be taken by our team of experts to minimize the risks and avoid complications. Although complications are rare, they do sometimes occur. We will do our very best to avoid the most common risks which include:

BLOOD CLOTS

Deep vein thrombosis (DVT), a blood clot in your leg, is a possible complication of spine surgery. A blood clot that travels from your leg to your lungs is called a **pulmonary embolus**. It is important that you follow instructions to prevent blood clots:

- ☐ Take your anticoagulant medication as directed.
- ☐ Wear your TED stockings (compression socks) as directed after your surgery.
- ☐ Minimize time in bed after surgery, take walks several times a day.

Signs of a blood clot in your leg (DVT)

- Swelling of foot, ankle, calf or thigh that does not resolve with elevation.
- Pain, heat and/or tenderness in leg or calf.

If you develop any of the above signs, notify your surgeon's office.

Signs of a pulmonary embolus

- Sudden chest pain.
- Rapid or difficulty breathing.
- Shortness of breath.
- Sweating.
- Feeling lightheaded or passing out.

If you develop any of the above signs, this is an emergency and you must call 911 right away.

HEMATOMA

Bleeding into the surgery site can occur either immediately after surgery or at a later time. This is accompanied by acute pain and swelling and is sometimes confused with infection.

SURGICAL SITE INFECTION (SSI)

After surgery, an infection can develop in the part of the body where surgery took place—this is called a surgical site infection (SSI). Most patients who have surgery do not develop an infection. Although rare, SSIs can be serious. We want all patients to be aware of the possibility of a SSI and help to prevent them. Some common **SSI symptoms include:**

- Cloudy fluid draining from your surgical wound.
- Fever
- Pain, redness and warmth around the surgical area.

As your body heals, it is usual to see some redness and swelling at your incision. Do not be alarmed. If you are concerned about redness and swelling associated with pain, fever, or cloudy fluid draining from your incision, call your provider for further instructions.

NERVE AND BLOOD VESSEL INJURIES

Damage to the surrounding structures including nerves and blood vessels is possible, but extremely rare. More commonly there is numbness in the area of the incision which usually, but not always, resolves in 6-12 months. Do not be surprised if you have some small residual numbness in one or more areas around your incision.

WOUND HEALING

Sometimes the surgical incision heals slowly, particularly if you take corticosteroids, smoke or have a disease that affects the immune system, such as diabetes.

Smoking can cause serious complications, and quitting before undergoing spine surgery is strongly encouraged. Talk with your orthopedic team or your family physician if you need help with smoking cessation (see page 10).

MECHANICAL WEAR

Your spine surgery may contain a mechanical device that will wear over time. The rate of wear may depend on your age, weight and activity level.

When to Call

Call anytime you are worried or have questions.

A moderate amount of bruising, swelling and redness can be expected after spine surgery. If you experience any of the following, you should call your doctor immediately:

- You fall.
- Find that your prescribed pain medication does not control your pain.
- Feel worse instead of better at any point.
- Have a fever of 101°F (38.3°C) or higher.
- Have thick yellow drainage or bleeding from the incision site.
- Have excessive swelling that persists.
- Have increased redness around your incision.
- Have any unexpected problems, concerns or questions.



911

CALL 911 OR GO TO THE EMERGENCY DEPARTMENT IF YOU:

- Have sudden, severe chest pain.
- Feel lightheaded or pass out.
- Are short of breath or have trouble breathing.
- Have any other severe problems.

Common Questions

WHAT TIME IS MY SURGERY?

Bozeman Health will call you one business day before surgery to review instructions and verify your check-in time. If you do not have a surgery time by 3 p.m., one business day before your surgery, call 406-414-1600.

WHAT ARE MY EATING INSTRUCTIONS BEFORE SURGERY?

Bozeman Health will call you one business day before surgery to review eating and drinking instructions. If you do not follow the instructions, your surgery may be cancelled.

WHAT MEDICATIONS CAN I TAKE THE DAY OF SURGERY?

During your Pre-Anesthesia Clinic appointment, you will be instructed on which medication to take the morning of surgery. If you do not remember which medications to take, call the Pre-Anesthesia Clinic at 406-414-4280.

WHEN CAN I SHOWER AFTER SURGERY?

Your surgeon will give you specific showering instructions based on your type of surgery.

HOW LONG DO I HAVE TO WEAR COMPRESSION STOCKINGS?

Wear compression stockings on both legs for two to three weeks.

WHEN DO MY STITCHES OR STAPLES COME OUT?

If absorbable sutures are not used, staples or sutures will be removed in two to three weeks at your surgeon's office.

HOW SOON CAN I TRAVEL OR FLY?

DO NOT make any travel plans for at least **SIX weeks after your surgery** unless you have been cleared by your doctor.

WHAT DO I DO IF I NEED MY MEDICATION REFILLED?

For pain medication refills, contact your surgeon's office at least TWO DAYS in advance (Monday–Friday, 8 a.m. to 5 p.m.). If you get voicemail, please let us know your name, date of birth, doctor, pharmacy, name of medication and strength. Some prescriptions must be picked up in person, so plan ahead for weekends and holidays.

WHEN CAN I DRIVE?

There are several factors to be taken into account when resuming driving. Your surgeon will determine when you are cleared to drive.

- Your return to driving will be dependent on how often you take which medications.
- DO NOT drive while taking any narcotic pain medication.
- Plan to rely on other means of transportation until you have been cleared to drive.
- Limit driving following surgery, even as a passenger (due to sitting, twisting for seatbelt, etc.).

WHEN CAN I RESUME MY NORMAL ACTIVITIES?

Participating in as much of your personal care as possible will increase your confidence and independence as well as supplement your exercise program.

Life After Spine Surgery

Life after spine surgery requires safe, mindful daily habits.

Life after spine surgery involves making thoughtful adjustments to daily activities to protect your healing spine and support long-term recovery. The following guidelines provide important information on travel, physical activity and preventive care to help you stay safe and active as you return to everyday life.

TRAVELING

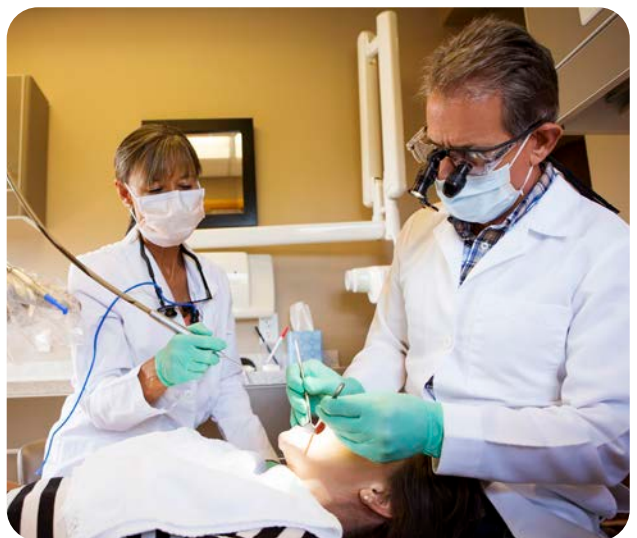
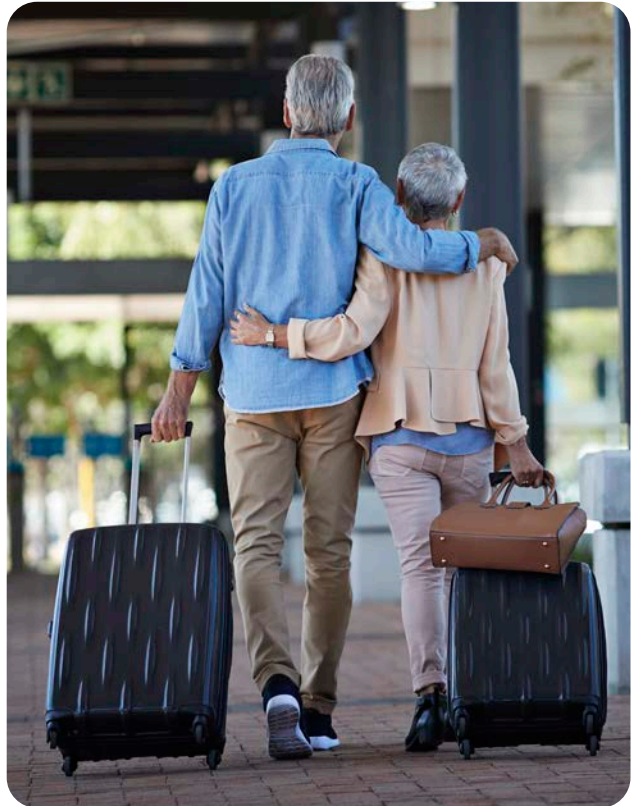
When traveling long distances, you should attempt to change position or try to stand every hour. Some of the exercises, like ankle pumps, can also be performed should you need to sit for long periods of time. **Traveling is not recommended prior to six weeks after surgery**, check with your surgeon to establish a safe timeline.

EXERCISES AND ACTIVITY

Exercise and maintaining an active lifestyle are important parts of overall good health. Most patients after surgery are able to enjoy many activities, though some should be avoided. In general, high-impact exercises, heavy weightlifting or contact sports, are not recommended. Participating in these activities, or activities like them, may damage your surgery area or cause it to wear down much more quickly. Low-impact activities like swimming, walking and gardening are encouraged.

DENTAL CARE/ANTIBIOTICS

You must take care to prevent an infection of your surgery area. Depending on your risk factors, antibiotics may need to be taken before any dental procedure, including routine cleanings. Check with your surgeon to determine if you will need a prophylactic antibiotic prior to any dental cleaning or procedure.





Take a breath, we're here for you.



Durable Medical Equipment: **Vendors**

BOZEMAN	HOURS	BUY	RENT	LOAN	NOTES
Bozeman Senior Center 406-586-2421	Monday - Friday 8:30 a.m. to 4 p.m.			X	Must be at least 50 years old. You do not have to live in Bozeman for loan equipment. \$10 rental fee for non-members.
Bridger Orthopedic 406-556-9115 406-556-9105	Monday - Friday 8 a.m. to 5 p.m.	X	X		Delivery available to hospital.
Price Rite Pharmacy and Medical Equipment 406-587-0608	Monday - Friday 9 a.m. to 6 p.m. Saturday 9 a.m. to 5 p.m.	X			Delivery available. Call for details.
Blue Bird Medical Supply 406-585-2860	Monday - Friday 9 a.m. to 5 p.m.	X	X		Delivery available. Call for details.
Pacific Medical, Inc. 406-698-2296	Monday - Friday 9 a.m. to 5 p.m.	X			Delivery available to Bozeman, Belgrade and Livingston.
Community Home Oxygen RoTech Healthcare, Inc. 406-586-1262	Monday - Friday 9 a.m. - noon 1 to 4 p.m.	X	X		Delivery available. Call for details.

SURROUNDING AREAS	BUY	RENT	LOAN	NOTES
Belgrade Senior Center 406-388-4711			X	Limited items.
Big Timber Pioneer Medical Center 406-932-4603			X	Ask for hospice.
Butte - Harrington Surgical Supply 800-345-9517	X	X		Delivery available. Call for details.
Harlowton Senior Center 406-632-4360			X	Limited items.
Livingston Senior Center 406-333-2276			X	Limited items.
Livingston Western Drug 406-222-7332	X	X		\$1 delivery in Livingston.
Madison Valley Medical Center 406-682-6605			X	Limited items.
Red Lodge Senior Center 406-446-1826			X	Limited items.
Three Forks Senior Center 406-285-3235			X	Limited items.
White Sulphur Springs Senior Center 406-547-3651			X	Limited items.

Durable Medical Equipment: Considerations

These photos are for representation purposes only and may be subject to stock on hand.



FRONT WHEELED WALKER AND TREKKING POLES

Standard walker with two front wheels and two back slider legs.



STANDARD RAISED TOILET SEAT

Raised seat makes it easier to sit and rise from toilet. Installs easily onto round toilet bowls.



SAFETY FRAME

Heavy-duty frame provides extra support for those whose knees, hip or back make it hard to sit or rise.



BEDSIDE COMMODE

This can be used as a standard bedside toilet, an elevated toilet seat, or safety rails over the toilet.



LOCKING RAISED TOILET SEAT WITH ARMRESTS

Comfort and stability with armrests for safety and support.



HEAVY-DUTY BATH AND SHOWER SEAT

Adjustable, durable seat with drainage holes.



BATHTUB TRANSFER BENCH

The bathtub transfer bench makes it safer to step in and out of the bathtub and lets you bathe with confidence.



GRAB BARS

Prevent falls in the bathroom and around the home. Sizes vary. Recommend installation by a qualified professional.



COMFORT WIPE AIDE STICK

Self-assist toilet aid.



SOCK AID

Slip on socks without completely bending over. Continuous loop is great for one-handed users.



ELASTIC SHOELACES

Heavy-duty elastic shoelaces don't need special lacing or tying.



COMPRESSION STOCKING DONNING AID

Used for putting on tight compression stockings if needed.



REACHER

This lightweight aluminum reacher lets you easily grasp items beyond arm's length. Its trigger-action jaws hold objects securely, and a built-in pulling lug and magnet help retrieve small items.



SHOE HORN

16.5 or 18 inches with curved handle to provide secure grip.

- American Dental Association (2016). Mouth healthy: Brushing your teeth. <http://www.mouthhealthy.org/en/az-topics/b/brushing-your-teeth>
- Molnlycke Health Care (2016). CHG How To. <http://www.molnlycke.us/antiseptics/general-skin-cleansing/CHG/>
- CDC (n.d.) Frequently asked questions: Surgical Site Infections. http://www.cdc.gov/HAI/pdfs/ssi/SSI_tagged.pdf
- American College of Surgeons (2015). Quit smoking before your operation. <https://www.facs.org/~media/files/education/patient%20ed/quitsmoking.ashx>

Driving and Parking Instructions

BOZEMAN HEALTH DEACONESS REGIONAL MEDICAL CENTER
915 Highland Blvd, Bozeman, MT 59715

ON SURGERY DAY

Park in lot F or G and come in Entrance 8. Then proceed to the Copper Zone elevators and go to Perioperative Services on the second floor to check in.

Lot F | Entrance 8 | Copper Zone



Bozeman Health
Spine + Joint Institute

406-414-5094