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One Mercado Street, Suite 200  
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# Minimally Invasive Surgery (MIS) Guide

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## Dear Patient,

We are honored that you've entrusted us with your care, and we are here to guide you through the journey ahead. This surgical guide has been created with you in mind and is designed to provide clear, helpful information about your upcoming procedure.

As you prepare for surgery, we understand you may have many questions. Please know that we are committed to ensuring you feel informed, confident, and supported every step of the way. From the moment you arrive, our dedicated team will be with you to offer expert care and compassionate support.

In this guide, you will find important information on what to expect before, during, and after your surgery. We've included tips to help you prepare, instructions to ensure a smooth recovery, and answers to frequently asked questions. Whether this is your first surgery or you're a seasoned patient, we want to make this experience as comfortable as possible for you.

Your active participation in your healthcare journey is essential. Should you have any concerns or need further clarification, don't hesitate to reach out to us. Our team is always here to help, and we encourage you to ask questions and voice any worries you may have.

Thank you for choosing us for your care. We look forward to partnering with you for a successful procedure and speedy recovery.

Warm regards,  
**Spine Colorado**



**Amber Price, MD**



**Ryan Martyn, MD**



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## Care Team Contact List

Please call with any questions or concerns you might have. We are here to help and look forward to assisting you in your surgical experience.

**Spine Colorado, Main Office**  
970-385-9500

**Spine Colorado, Surgery Scheduler**  
970-375-3606

**Spine Colorado performs surgeries at 2 locations in Durango:**

**Mercy Hospital**  
1010 Three Springs Blvd.  
Durango, CO 81301  
970-247-4311

**Durango Surgery Center**  
1738 Nighthorse Circle  
Durango, CO 81301  
970-331-0777





# What to Expect Before Your Surgery

Our surgery scheduler will contact you to help you choose a surgery date. After your surgery is scheduled, you'll have pre-operative (pre-op) appointments at Spine Colorado and at the hospital where your surgery will happen.

**These visits are very important to:**

- Check your current health and medications.
- Make sure you are medically ready for surgery.

Our Surgery Scheduler will send you a letter with all the appointments you'll need to attend.

**The hospital will decide the exact time of your surgery. They will call you the business day before your surgery to confirm what time you should arrive.**

## Questions for Your Preoperative Appointments

We understand that as you read through this guide to surgery, you may have some unanswered questions. To help ensure that you feel fully prepared and informed, please use the space below to jot down any questions you would like to ask during your preoperative appointments.

Having a list of questions will allow you to discuss any concerns or clarify details about your surgery, recovery, and aftercare. Our goal is to make sure you feel confident and well-prepared for your procedure.

**Your Questions:**

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_
7. \_\_\_\_\_
8. \_\_\_\_\_
9. \_\_\_\_\_
10. \_\_\_\_\_

**Please bring this list with you to your preoperative appointment so we can make sure all your questions are answered.**

# Preparing Your Home for Surgery

Recovering after a Minimally Invasive Surgery (MIS) is often quicker and less painful than traditional open spine surgery, but you should still prepare your home for a smooth recovery.

Keep in mind that your recovery will vary depending on the type of procedure, your overall health, and the severity of the spinal condition treated. This guideline help explain how you can start preparing now:

## Support Person and Driver

- You will need someone to drive you home from the hospital.
- Have someone cook for you, or plan and freeze meals for the first week.
- If you think you'll need extra help at home, let the nurse know during your pre-surgery appointments.

## Fall Prevention

The risk of falling after MIS Decompression is typically low. However, it's important to take precautions to prevent falls, especially during the initial recovery period when your body is healing.

- If you have concerns about weakness and instability, walking sticks can provide support and stabilization until you are walking confidently again.
- Have shoes that are flat, slip resistant, and easy to put on and take off.
- Remove rugs, cords, loose carpets, and anything that could make you trip.
- Move things you use a lot to waist level, so you don't have to reach or bend down.





# Steps to Take Before Surgery

Following your pre-surgery instructions is very important—your surgery could be canceled if you don't. Below is a general guide, but if you are given specific instructions, be sure to follow those.

## Things To Do Now

- Stop using nicotine.
- Stop or reduce your use of narcotics.
- Eat a well-balanced diet (see page 13)
- Stay as active as you can.

## 7 Days Before Surgery

- Follow the pre-op team's instructions about stopping medications.
- Stop taking NSAIDs (Ibuprofen, Aleve, Celebrex, Diclofenac, etc.) unless directed otherwise.
- Stop taking supplements, herbs, and vitamins unless instructed otherwise.
- Let Spine Colorado know if your health changes (fever, cough, cold, infection, etc.).

## 3 Days Before Surgery

- Begin using Chlorhexidine 4% (CGH) soap for daily showers, including the morning of surgery. This soap helps prevent infections. You will take four showers in total. Specific instructions will be provided at your pre-op appointments.

## 2 Days Before Surgery

- Stop drinking alcohol.
- Continue using Chlorhexidine soap for your daily shower.

## 1 Day Before Surgery

- Take a Chlorhexidine 4% (CGH) soap shower.
- **Do not eat or drink after midnight the night before your surgery (no food, drinks, gum, or candy, and only sip water to take needed medications).**



# What to Expect the Day of Surgery

## Morning Preparation

- Take your fourth and final Chlorhexidine 4% soap shower.
- Take your morning medications as directed during your pre-op appointment.
- Do not eat, drink, chew gum, or suck on candy. Only take a small sip of water if needed for medication.

## Where to Go

- When you get to the hospital, check in at the front desk.

## What to Bring

- Photo ID, insurance card, and a method of payment (if needed).
- Medical documents, like a Medical Power of Attorney, Living Will, or CPR Directive, if you have them.
- Comfortable, non-skid shoes with a closed heel or strap behind the heel. Wear loose-fitting clothes for when you leave the hospital.
- Remove all jewelry including rings.
- Dentures, eyeglasses, hearing aids, and other assistive devices (in their cases to keep them safe).
- Portable oxygen concentrator or tank (if you use supplemental oxygen).
- Toiletries and entertainment, if staying overnight.







# What to Expect After Surgery

## Phase 1 – Post Anesthesia Care Unit (PACU)

Once your surgery is finished, you'll be taken to the PACU, where nurses will monitor your vital signs as you wake up from anesthesia.

## Phase 2 – Hospital Recovery

After you're awake and stable, you'll be moved to your hospital room. At this stage:

- Your care team will notify your support person, and visitors will be allowed.
- Your recovery journey officially begins, and you'll stay here until you are discharged, which is usually the same day.
- **IV Fluids and Supplemental Oxygen:**
  - You may wake up with an IV for fluids and supplemental oxygen. These will be removed once your vital signs are stable.
- **TED Hose (Compression Stockings):**
  - You'll wear compression stockings to improve blood flow and reduce the risk of blood clots. Keep them on for 7 days after surgery or until you can walk one mile daily.
- **Incentive Spirometer:**
  - Use your spirometer 10 times per hour while awake. This helps expand your lungs, increases oxygen intake, and prevents pneumonia.
- **Walking:**
  - Walking is the best exercise for recovery, and you'll likely start soon after moving to Phase 2.
  - Focus on walking frequently, at least every 2-3 hours, with the goal of walking a total of 1 mile each day.
- **Log Rolling:**
  - Your care team will teach you how to safely log roll when getting in and out of bed to avoid straining your surgical site.

## Post-Operative Diet

Anesthesia and medications can temporarily slow digestion. To support your recovery:

- Start with small amounts of clear liquids (broth, juice, Jello, and water) to stay hydrated and avoid constipation.
- Your care team will monitor your digestion by checking bowel sounds, asking about nausea, and tracking bowel movements.
- Once you tolerate clear liquids, you'll gradually transition to full liquids, soft foods, and eventually a balanced diet.

# Recovering at Home

## Typical Discharge Timelines

Your care team will evaluate your progress, mobility, and ability to manage daily activities before deciding when you can go home. You may go home the same day, or you may stay overnight.

Once you're home, continue practicing the skills you learned in the hospital. Your first post-operative appointment at Spine Colorado is usually 3 weeks after surgery.

Until your first post-op appointment, focus on the daily goals below, follow post-op restrictions, and call the office if you have any questions or concerns.

## Daily Goals

- **Walk often:** Aim for at least 1 mile per day. Gradually reduce the use of your walking sticks as you become more stable and confident.
- **Wear compression stockings:** Continue wearing them for the first 7 days, or until you're walking 1 mile daily. If you're walking a mile consistently, you can stop wearing them. If you have any issues with the stockings, it's okay to stop wearing them (but call the office for guidance).
- **Use your incentive spirometer:** Use it twice a day for 2 weeks to help with lung recovery.
- **Get up regularly:** Stand or walk a little every 20 minutes to improve circulation and prevent blood clots.
- **Care for your incision:** Keep your incision clean and dry. Change dressings as instructed.
- **Eat a balanced diet:** Focus on eating healthy foods to support your recovery.
- **Log roll:** Continue using the log roll technique when getting in and out of bed.



## Pain Management After Surgery

Pain levels after spine surgery can vary depending on the type of surgery, your pain tolerance, and how your body heals. Here's what to expect and how to manage pain during recovery:

- **First 24–72 hours:**
  - Pain is usually most intense during the first few days due to surgical trauma and inflammation. It's common to feel soreness, stiffness, and sharp pain around the incision site. Pain can be managed with medications (like opioids or muscle relaxers) and ice.
- **Gradual decrease in pain:**
  - As your body heals, the pain should gradually get better. However, some soreness and fatigue can still be expected during the first few weeks.
- **Ice:**
  - Apply ice or an ice pack for 20 minutes on, then 20 minutes off to help reduce pain and swelling. Make sure to ice is in a waterproof bag.
- **Activity:**
  - Walking and changing positions frequently can help relieve pain.
- **Relaxation:**
  - Deep breathing and meditation are great ways to help manage pain.
- **Distractions:**
  - Focusing on something other than pain (like reading, making art, or talking with a friend) can help take your mind off it.
- **Pain improvement:**
  - Your pain should continue to improve as you heal. However, if you experience new pain or a sudden increase in pain, be sure to call the office for guidance.

## Wound and Dressing Care

- **Keep your dressing clean, dry, and intact:**
  - If the dressing falls off or gets wet, call the office for guidance.
- **Change the dressing weekly:**
  - After 1 week, the Mepilex dressing should be replaced with a new one for the second week.
  - Steri-strips should remain on for 2 weeks. It's normal for them to fall off on their own.
- **Check for signs of infection:**
  - Look out for fever, redness, swelling, increased pain, or drainage around the incision site. If you notice any of these signs, contact the office immediately.



## Showering

- You can shower after 3 days. Before then, take sponge baths.
- If you have a waterproof Prevena dressing, you can shower sooner.

## Post-Operative Medication

- **Medication refills:**
  - To request a medication refill, call the office Monday–Friday.
- **Narcotic Management:**
  - Do not drive while taking narcotics.
  - Take a stool softener if you are on narcotics to prevent constipation.
- **Other Medications (including muscle relaxers):**
  - You are usually okay to continue taking medications like Gabapentin, Lyrica, and muscle relaxers unless otherwise advised.



## Physical Therapy

Physical therapy after surgery is usually optional, but your healthcare provider will discuss whether it's right for you at your post-operative appointment.



## Restrictions After Surgery

Your recovery progress will determine when you can safely increase your physical activity.

**These restrictions should be followed until your post-operative appointments, where you can discuss your recovery and when it's safe to advance certain activities.**

- **No driving** if you're taking opioids.
- **No nicotine** for at least 1 year after surgery.
- **No alcohol** for at least 1 week after surgery.
- **No vigorous bending or twisting**, and do not lift more than 5 lbs. for the first 3 weeks.
- **Avoid sitting for longer than 20 minutes at a time.** Stand up and walk around to improve circulation and reduce the risk of blood clots.
- **Do not submerge your wound** in water (no bathing, swimming, or hot tub use) for at least 4 weeks.
- **Do not apply creams, lotions, or ointments** to your surgical wound for 6 weeks after surgery.
- **Returning to work** will depend on the type of work you do. Discuss this with your healthcare provider during your post-op appointments.

**Ask your provider at your post-op appointments when it's safe to ease into activities like biking, skiing, and golfing.**





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## Post-Operative Appointments

We hope your recovery is smooth and fast. We love to see you make progress! The number of post-op appointments you will have depends on your surgery and recovery:

- **3 Weeks After Surgery:**
  - All patients should come in for a visit at 3 weeks after surgery. During this visit, we'll check how your surgical site is healing.
- **Follow-up Visits:**
  - Most patients will return for follow-up visits at 3 months to monitor progress.

### When to call the office:

- Pain control is not sufficient.
- New pain, numbness, or weakness in your legs.
- Nausea or vomiting.
- Fever or chills.
- Severe headaches.
- Concerns with your wound, like yellow discharge or increased drainage.
- Problems with your bandage or dressing.
- Loss of bladder or bowel control.
- Prolonged constipation (if you haven't had a bowel movement in 2 days).
- Difficulty swallowing or walking.
- Pain, swelling, or redness behind your knees or calves.

We want to make sure you're healing well, so don't hesitate to reach out if you have any concerns.

**Call 911 if you have difficulty breathing or chest pain.**

# Frequently Asked Questions

## Q What is a Well-Balanced Diet?

A well-balanced diet is key to helping your body heal, reduce inflammation, and stay strong. Before and after surgery, it's important to eat foods that support tissue repair, recovery, and overall health. Here's a general guide to what a balanced diet should include:

- **Lean Protein:** Helps repair tissues and muscles around the surgical site.
  - Sources: Lean meats (chicken, turkey, fish), plant-based proteins (beans, lentils, tofu), dairy (yogurt, cheese, milk), eggs, nuts/seeds, bone broth.
- **Healthy Fats:** Omega-3 fatty acids reduce inflammation and help speed up recovery.
  - Sources: Fatty fish (salmon, mackerel, tuna), avocados, olive oil, flaxseeds, walnuts.
- **Fiber-Rich Complex Carbohydrates:** Provide energy and prevent constipation.
  - Sources: Whole grains (brown rice, quinoa, whole wheat bread), vegetables, fruits, legumes.
- **Vitamins**
  - Vitamin C: Helps with wound healing and collagen formation.
    - Sources: Citrus fruits, strawberries, bell peppers, broccoli.
  - Vitamin D: Aids in calcium absorption for bone health.
    - Sources: Fortified dairy, sunlight, fatty fish.
  - Vitamin B: Supports energy production and nerve repair.
    - Sources: Whole grains, eggs, dairy, leafy greens.
- **Minerals**
  - Calcium: Important for bone strength and healing.
    - Sources: Dairy, leafy greens.
  - Magnesium: Helps muscle relaxation and nerve function.
    - Sources: Nuts, seeds, whole grains, spinach.
  - Zinc: Promotes wound healing and immune function.
    - Sources: Meat, shellfish, seeds, legumes.
- **Hydration:** Staying hydrated is crucial for preventing constipation, supporting circulation, and helping nutrients reach your cells for healing.
  - Sources: Water, herbal teas, broths.
- **Avoid Refined Sugars and Carbs:** These can cause inflammation and slow the healing process.
  - Limit: Sweets, pastries, white bread, sugary drinks.
- **Avoid Processed Foods:** These foods are often high in unhealthy fats, salt, and preservatives, which can hinder recovery.
  - Limit: Fast food, packaged snacks, processed meats.
- **Limit or Avoid Alcohol and Caffeine:** Both can interfere with medications, cause dehydration, and slow wound healing.





## Q Why can't I eat or drink before surgery?

You are asked not to eat or drink before surgery to reduce the risk of complications, especially during anesthesia. When you are under general anesthesia, there's a risk of stomach contents coming back up and getting into your lungs, which could cause pneumonia or block your airway. To help prevent this, it's important to avoid eating or drinking (including gum) for several hours before your surgery.

## Q What is Deep Vein Thrombosis (DVT) and is it really such a big deal?

DVT is a condition where blood clots form in the deep veins, often in the legs, and it is more common after surgery. Symptoms of DVT include swelling, redness, warmth, and pain in the affected leg. The major concern is if a clot breaks loose and travels to the lungs, leading to a pulmonary embolism, which is life-threatening. Pulmonary embolism symptoms include sudden shortness of breath, chest pain, and coughing up blood. While DVT is serious, it is preventable. After surgery, walking, wearing compression stockings, staying hydrated, and avoiding sitting for long periods help reduce the risk of developing blood clots.

## Q Why do I need Compression Stockings?

Compression stockings, also known as TED (Thrombo-Embolic Deterrent) stockings, are worn after surgery to help prevent blood clots, particularly deep vein thrombosis (DVT). These stockings provide graduated pressure to your legs, improving blood circulation and preventing blood from pooling in the veins. After surgery, when movement can be limited, the risk of clot formation increases due to factors like immobility, anesthesia, and surgical trauma. TED stockings help maintain proper circulation, reduce swelling, and support your healing process.

## Q When can I travel after surgery?

It is usually recommended to wait at least three weeks before traveling or flying. If you have special circumstances or travel plans, please discuss them with your surgeon to determine the safest timing based on your individual recovery.



## Q Why should I use an Incentive Spirometer?

The Incentive Spirometer is an important tool after surgery to help you breathe deeply and prevent problems like pneumonia or atelectasis (lung collapse). After surgery, especially under anesthesia, your lungs may not expand fully due to pain or being immobile. The spirometer encourages you to take deep breaths by giving visual feedback and guiding you to inhale deeply and hold your breath. This helps your lungs expand, increases oxygen levels, and clears out mucus, which can reduce the risk of lung issues after surgery. Using it regularly can help you recover better and breathe easier post-surgery.

## Q Why do I need to walk so much after surgery?

Walking regularly after spinal surgery is a key part of the recovery process and offers multiple benefits for healing and overall well-being:

- **Promotes Circulation** - Walking helps improve blood flow, which reduces the risk of blood clots like deep vein thrombosis (DVT), a common concern post-surgery.
- **Prevents Stiffness** - Gentle movement helps prevent joint stiffness and muscle atrophy, which can occur with prolonged inactivity.

- **Supports Recovery** - Walking aids in restoring mobility and improving the flexibility of the spine and surrounding muscles, helping you regain normal function faster.
- **Enhances Healing** - Light activity like walking stimulates tissue healing by delivering oxygen and nutrients to the surgical area.
- **Boosts Mental Health** - Walking can reduce stress, anxiety, and depression, which may arise after surgery. It can also improve your overall outlook on recovery.
- **Improves Core Strength** - Walking activates your core muscles, which support the spine, aiding in maintaining good posture and reducing strain on the surgical site.
- **Encourages Independence** - Early mobility helps patients regain confidence and self-sufficiency in daily activities, accelerating the transition to normal routines.
- **Reduces Pain** - While it might seem counterintuitive, walking can alleviate certain types of post-operative pain by preventing tightness in the muscles and improving alignment.

## Tips for Walking After Spinal Surgery:

- **Start Gradually:** Begin with short walks and increase duration and distance as tolerated.
- **Use Support if Needed:** Walking aids like walking sticks can provide stability during the early recovery phase.
- **Avoid Overexertion:** Listen to your body and stop if you experience sharp pain or significant discomfort. Discuss any challenges with your care team.

## Q What can I do to help manage pain?

Relaxation techniques can be powerful tools to help manage pain, reduce stress, and promote healing. These methods work by calming the nervous system, reducing muscle tension, and shifting focus away from pain.

Here are some effective relaxation techniques:

### Deep Breathing Exercises

- **How It Works:** Deep, slow breaths signal your body to relax and can reduce the intensity of pain by improving oxygen flow and calming the mind.
- **Steps:**
  - Sit or lie down in a comfortable position.
  - Inhale deeply through your nose for a count of 4.

- Hold your breath for a count of 4.
- Exhale slowly through your mouth for a count of 6.
- Repeat for 5–10 minutes.

### Guided Imagery

- **How It Works:** Visualization helps shift focus away from pain by engaging your mind in a positive, calming scenario.
- **Steps:**
  - Close your eyes and imagine a peaceful scene (e.g., a beach, forest, or mountain).
  - Use all your senses: feel the warmth of the sun, hear the sound of waves, and smell the fresh air.
  - Spend 5–10 minutes immersed in this imagery.

### Meditation and Mindfulness

- **How It Works:** Teaches you to focus on the present moment and accept sensations without judgment, reducing pain perception and emotional distress.
- **Steps:**
  - Find a quiet place and sit comfortably.
  - Focus on your breathing or repeat a calming word (e.g., “peace”).
  - If your mind wanders, gently bring your focus back.
  - Practice for 10–20 minutes daily.

## Listening to Music

- **How It Works:** Calming or favorite music can distract from pain and improve mood.
- **Tips:**
  - Create a playlist of soothing instrumental music or songs that make you happy.
  - Use noise-canceling headphones to enhance the experience.

## Cold Therapy with Relaxation

- **How It Works:** Ice or cold packs paired with relaxation reduces inflammation and enhances pain relief.
- **Steps:**
  - Apply a cold pack to the painful area.
  - Sit quietly, close your eyes, and focus on your breathing for up to 20 minutes.

## Aromatherapy

- **How It Works:** Certain scents (like lavender, chamomile, or eucalyptus) can promote relaxation and reduce stress-related pain.
- **Tips:**
  - Use essential oils in a diffuser or apply diluted oils to your skin.
  - Pair with deep breathing or meditation for enhanced effect.

## Cognitive Behavioral Techniques

- **How It Works:** Changing negative thought patterns about pain can help you cope more effectively.
- **Steps:**
  - Recognize negative thoughts (e.g., "I can't handle this").
  - Replace them with positive affirmations (e.g., "I am strong and healing").

## Gentle Activities for Distraction

- **How It Works:** Engaging in light activities or hobbies redirects attention away from pain.
- **Examples:** Reading, knitting, drawing, word puzzles, sudoku, and even watching TV.



**Thank you for entrusting us with your spine care. Your recovery is our priority and we look forward to seeing you heal and return to the activities you love!**