



(470) 293-9800
southernneurosurgery.com

YOUR SURGERY PACKET

Scoliosis and Spinal Deformity Surgery

Patient name: _____
Surgery date: _____
Surgery location: _____
Follow-up appointment: _____

What's in this packet

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Before you go

- Read Part 1 before surgery so you know what to expect.
- Keep Part 2 handy at home. It covers recovery, medicines and when to call us.
- You will also get a separate Surgery Day Guide for the hospital or surgery center where your operation is scheduled. It has arrival and parking details.
- Have a question after surgery? Our Virtual Assistant answers 24/7 (see Part 3).
- Bring this packet to your appointments and write down your questions.

**Questions? Our Virtual Assistant is available 24/7:
md-aid.com/c/southernneurosurgery · or call (470) 293-9800**

For chest pain or trouble breathing, call 911 or go to the nearest ER.

This packet is for educational purposes only. It is not medical advice and does not replace individualized care from a licensed physician. Always follow the specific instructions Dr. Grunch and her team give you, and contact your provider about your personal symptoms.

ABOUT YOUR SURGERY

Scoliosis and Spinal Deformity Surgery

Living with a spine that curves, tilts or pitches you forward can be exhausting, painful and discouraging. When bracing, therapy and time are no longer enough, surgery can often correct the problem by straightening and rebalancing the spine so you can stand upright and move more comfortably again.

What Is Scoliosis and Spinal Deformity Surgery?

A healthy spine looks straight from the front and has gentle, balanced curves from the side. Spinal deformity surgery corrects a spine that has moved out of that alignment. It treats several related problems, often in the same operation:

- **Scoliosis:** a sideways curve of the spine, often with rotation. In adults, it most often develops as the discs and joints wear down (degenerative scoliosis), or it is a curve from earlier in life that has worsened over time.
- **Kyphosis:** excessive forward rounding of the upper or mid back, from age-related changes, fractures, Scheuermann's disease or prior surgery.
- **Sagittal imbalance and flatback:** loss of the normal inward curve of the lower back, which pitches the body forward so you have to bend your knees or lean on a cane or cart to stand up straight.

Surgery uses screws and rods to straighten and hold the spine, along with bone graft so the corrected levels fuse into solid bone. When the spine is stiff or a prior fusion has healed in the wrong position, carefully planned bone cuts called osteotomies allow the spine to be reshaped. The goal is not a perfectly straight spine on an X-ray, but a balanced spine with your head centered over your pelvis, which is what relieves pain and fatigue and lets you stand and walk comfortably.

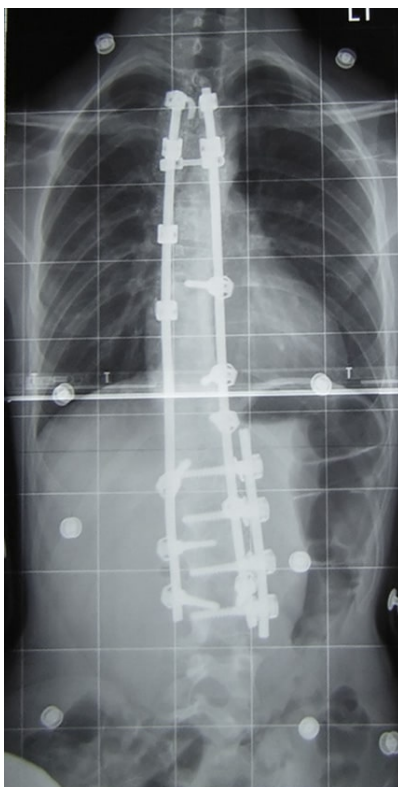


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Who Needs Scoliosis or Deformity Surgery?

- A curve that is large or getting worse over time, especially a scoliosis curve greater than about 45 to 50 degrees
- Back pain or fatigue from standing and walking that hasn't improved with nonsurgical care
- Leg pain, numbness or weakness from nerves pinched inside the curve (spinal stenosis)
- Pitching forward or leaning to one side so that you can't stand upright without bending your knees or using support
- Severe kyphosis from wedge-shaped vertebrae, healed compression fractures or a prior surgery
- Flatback or imbalance after an earlier fusion (revision fusion)
- Rarely, a curve severe enough to affect breathing

Deformity surgery is a major operation, and the decision is personal. Dr. Grunch takes full-length standing X-rays to measure your curve and your overall balance, and weighs your symptoms, bone health and medical conditions before recommending surgery. For some patients, a smaller, targeted decompression or fusion is the better choice.

How Scoliosis and Deformity Surgery Is Done

- **Careful planning:** Full-length standing X-rays, CT and MRI are used to measure your alignment and plan exactly how much correction is needed and where.

- **Anesthesia and monitoring:** You'll be fully asleep. Nerve monitoring watches the spinal cord and nerves throughout surgery.
- **Front or side work, if needed:** Some patients first have lateral (LLIF) or anterior (ALIF) spacers placed to open collapsed discs and begin the correction through small incisions.
- **Placing screws:** Through the back, screws are placed into the vertebrae using X-ray or navigation guidance.
- **Osteotomies, when needed:** In a stiff or rounded spine, small wedges of bone are removed so the spine can be bent back into a healthier position.
- **Correcting the curve:** Rods are shaped to the planned alignment and connected to the screws, gradually straightening and rebalancing the spine.
- **Decompression and fusion:** Pinched nerves are freed, and bone graft is placed so the corrected levels fuse together.
- **Closing:** The muscles and skin are closed in layers.

Some corrections are done in one surgery, and larger ones may be staged over two surgeries a few days apart.

Benefits and Risks

Benefits

- Less back pain and fatigue when standing and walking
- The ability to stand upright with your head centered over your pelvis
- Relief of leg pain from pinched nerves
- Stopping a curve from getting worse
- Improved posture and appearance, and often better quality of life

Risks

- Bleeding, which may require a blood transfusion
- Infection or wound healing problems
- Nerve or spinal cord injury, which is uncommon but serious
- The bones not fusing, or rods or screws loosening or breaking, which can require another surgery
- Problems at the levels just above the fusion over time (proximal junctional kyphosis or adjacent segment disease)
- Loss of flexibility in the fused part of the spine
- Risks related to anesthesia and a longer surgery, including blood clots, pneumonia and heart or lung problems

Risks are higher in people who smoke, have osteoporosis or have other medical conditions. Dr. Grunch's team works to optimize your health before surgery to lower these risks.

What to Expect

Before surgery

You'll meet with Dr. Grunch or one of her physician assistants to review your imaging, your exam and your goals, and to decide together whether deformity surgery is right for you. Because this is a larger surgery, you may need a bone density test, medical clearance from your primary care doctor or cardiologist, and treatment for osteoporosis or other conditions first. Our team will coordinate pre-operative testing, review your medications (including blood thinners you may need to pause) and walk you through the day of surgery so nothing is a surprise. Smoking and nicotine slow bone healing and raise the risk of complications, so stopping before surgery is strongly recommended. Our office can help.

Procedure day

Surgery often takes four to eight hours or more, depending on how many levels are corrected, and larger corrections may be staged. Most patients stay in the hospital for about three to seven days, sometimes starting in an intensive care unit for close monitoring. Physical therapy begins within a day or two, and some patients spend time in an inpatient rehabilitation unit before going home.

Recovery timeline

- **First two to four weeks:** Focus on walking several times a day, managing pain and resting. You'll need help at home.
- **Four to six weeks:** Your follow-up visit, with standing X-rays to check your alignment and hardware.
- **Three to six months:** Restrictions are gradually lifted, and physical therapy helps rebuild strength and endurance. Many people return to desk work in about three months.
- **Twelve months and beyond:** The fusion becomes solid. Most patients notice steady improvement in posture, pain and stamina throughout the first year.

Every patient heals differently. Your exact timeline will depend on the size of your correction, your job and your overall health.

Your post-operative guidelines explain how to care for yourself at home, and when to call our office.

Questions after surgery? Our Virtual Assistant answers common questions 24/7 at md-aid.com/c/southernneurosurgery, or call our office at (470) 293-9800. For chest pain or trouble breathing, call 911.

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AFTER YOUR SURGERY

Postoperative Guidelines for a Posterior or Lateral Lumbar Fusion

Incision care

- Your incision is closed with sutures (also called “stitches”) on the inside of your skin. These are absorbed over time by your body. The outside of your skin is closed with a skin glue. The skin glue will eventually come off in its own time.
- Sometimes patients may need sutures or staples on the outside of their skin. If you have sutures on the outside, these will be removed at your follow up appointment (in 10-14 days).
- You may take a shower the day after surgery if your incision is closed with skin glue. If your incision is closed with sutures or staples, you may take a shower in 3 days. Do not scrub your wound, but gently cleanse it and pat dry.
- Do not submerge into water or a tub for 6 weeks.
- Leave the wound open to dry unless otherwise directed.
- It is normal to have a small amount of brown to reddish colored ooze for a few days.
- Do not apply ointments or creams to the incision.
- We recommend wearing a back brace when out of bed and moving around.
- Some patients may also need a bone growth stimulator. If so, the company will contact you after your surgery. If you have questions about this, please contact our office.

Hospital Expectations after Surgery

- You will start on a liquid diet after your surgery. This is because it is very important for the bowels to wake up after this surgery to avoid an ileus.
- An ileus is an absence of movement in the bowels which leads to a buildup of gas. This requires treatment with medicines and diet control.
- It is important to participate in physical therapy and walk while in the hospital because this helps your bowels to wake up and move normally.
- After you have a successful bowel movement, we will advance your diet.

Pain Expectations

- It is normal to expect pain after back surgery. That is why we prescribe medication to ease you through the healing process.
- After surgery, common pain areas are in the low back, hips, and around the incision.
- This pain will get better with time as your body heals, so it is important to be patient as your body is healing.
- Many patients report that their prior back pain and/or leg pain is much improved soon after surgery.
- It is normal to have a sore throat after endotracheal intubation, and this will improve over the week after surgery.

Medications

- You will be given prescriptions for a pain medication and a muscle relaxer.
- Do not take pain medication on an empty stomach. This may make you feel nauseated.
- Do not drink alcohol if you are taking pain medication.
- Most patients can taper off the pain medication within a few weeks. The muscle relaxer may be needed a little longer.
- If you feel that your pain is well tolerated, you may begin to wean yourself off of your pain medication sooner than your post-op visit.
- Because pain medication can cause constipation, it is important to have stool softeners and laxatives at home such as Colace or Senna to prevent constipation.
- Take the stool softener daily and use the laxative as needed.
- If you still have constipation after using these medicines, you may use an over-the-counter suppository or enema.

Medications to avoid

- NO Advil, Aleve, Motrin, Naprosyn, Ibuprofen, Naproxen, Mobic, Meloxicam, Celebrex, Diclofenac or any other anti-inflammatory medication. These are anti-inflammatory medications and may impair fusion.
- If you normally take these medications for other medical conditions such as arthritis, we ask that you hold these until otherwise discussed at your office visit.
- NO blood thinners such as Aspirin, Coumadin, Warfarin, Xarelto, Plavix, etc. for 5-7 days after your surgery. We will tell you when you may resume your blood thinners.

Therapy

- You will receive physical therapy while you are in the hospital. This will help you to walk and move around for normal daily activities before you are discharged.
- When you are at home, walk between 30-60 minutes a day, but not all at the same time. Divide your walks into smaller intervals of 10-15 minutes at a time.
- It is important to walk for your overall recovery for a number of reasons. Getting out of bed is good for your lungs, it prevents blood clots from forming in your legs, and speeds your recovery.
- Do not sit for more than 30 minutes at a time. Move around to prevent your muscles from tightening and becoming stiff, which can lead to more discomfort.
- Use your common sense, if your body says that it is tired, listen to it.

Restrictions

- Activities such as bending at the waist, lifting >10 lbs, and twisting are restricted during your recovery period, which is about 6 weeks.
- This means NO household chores such as vacuuming and laundry, hobbies such as golfing, and yard work and gardening.
- If you have young children or grandchildren, do NOT pick them up.
- Allow someone else to help you at home.

- You may drive as long as you are not taking narcotic pain medication.
- It is ok to ride as a passenger if you are taking narcotic pain medication.
- If you are unable to work due to these restrictions, please let us know if we need to complete any paperwork for your employer.

Diet

- When you have a successful bowel movement, you may advance your diet to solid foods.
- It is important to remember to eat and drink fluids so that your body may properly heal.
- If you are experiencing nausea, follow a “BRAT diet” which is Bananas, Rice, Applesauce, Toast and advance as tolerated.

Smoking

- Smoking constricts your blood vessels which carry oxygen and nutrients to your healing bone and muscles.
- It also slows down the bone healing process and may possibly lead to failure of fusion of the bone graft, which is the ultimate goal of your surgery.
- Vaping and other nicotine products also slow healing.
- If you would like help in smoking cessation, please let us know.

Sexual Activity

- Back pain can interfere with your sex life, but we want you to resume normal relations with your partner as soon as possible after surgery. We recommend avoiding sex for 6 weeks after surgery. Once you have begun the healing process, use the position that is most comfortable. You may find that lying on your back is the most comfortable if you can support your partner’s weight or your partner can support him/herself with arms and knees. Side lying may also be comfortable since neither partner is bearing the burden of the weight. Decide if a small pillow at the waist is helpful in supporting the spine and you will probably want a pillow located under your neck and head. Be careful not to twist the lower back. Be sure you communicate your fears and concerns with your partner before you resume sexual relations.

Call our office if you have any of these symptoms:

- Fever over 101°F.
- Constipation that is not relieved by stool medications.
- Redness, warmth, or significant drainage from your incision.
- Pain, swelling, or redness in your calves.
- Unexplained incontinence or accidents involving your bladder or bowel, or if you are unable to urinate.
- Worsening pain radiating down the leg.

Call 911 or go to the nearest emergency room for chest pain, shortness of breath or trouble breathing.

Follow up appointment

- We have scheduled a follow up appointment for you that is 4-6 weeks after your surgery.
- You will be provided with a card listing the date and time.
- If you need this appointment changed, please call our office.

If you are experiencing any problems or have any questions, please call our office.

6 Tips for Recovery from Spine Surgery

1. Put commonly used items within reach.

In the early stages of recovery from spine surgery, patients should avoid bending, lifting, and twisting. It is helpful to place items you use daily on the countertops or shelves where you can easily reach them. Keep toiletry items near the sink. Place dishes on the kitchen counter. You may choose to purchase disposable plates, cups, and cutlery to avoid the need to wash dishes for the first few days after you return home.

2. Arrange for someone to stay with you.

If you live alone, it is a good idea to have a friend or family member stay with you for the first few days after surgery. You may need help with errands or getting around the house. If you require more extensive help after surgery, our office may arrange for home health services.

3. Prepare meals ahead of time.

It can be difficult to prepare healthy meals the first few days you are recovering from back surgery. Prepare your meals ahead of time that you can keep in your freezer. You should also stock your refrigerator and pantry with healthy snacks so you are not tempted to reach for unhealthy convenience foods.

4. Items like slip-on shoes and grabbers can help to avoid bending.

Bending is restricted after surgery. You may want to have shoes that you can easily slip on to avoid bending over to tie your shoes. If you are doing physical therapy exercises or walking for longer periods of time, you may want to have someone help you lace up your shoes instead of wearing slip-on shoes. Grabbers are hand-held devices that are about 2-3 feet long and have a grabber on the end to pick up small items. They can be purchased at large department stores and pharmacies.

5. Take precautions to avoid slipping.

Patients are encouraged to get up and walk around to avoid stiffness. You will want to make sure to avoid any slipping hazards in your walking path. Before surgery, make sure that the areas where you will be walking are clear of tripping hazards. Electrical cords should be secured and out of the way. Rugs should be removed or taped down. A shower mat can help avoid slipping in the shower.

6. Make sure you have extra pillows for support when sitting or lying down.

When lying on your back, a pillow placed under the knees can help to take pressure off your lower back. If you prefer to lay on your side, you can place a pillow between your knees. Reclining chairs and donut pillows can sometimes help to increase a patient's comfort while sitting.

By taking time to prepare yourself and your home before surgery, it will help to ease your mind to know that everything is in place for you when you return home from surgery.

Questions after surgery? Our Virtual Assistant answers common questions 24/7 at md-aid.com/c/southernneurosurgery, or call our office at (470) 293-9800. For chest pain or trouble breathing, call 911.

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PART 3

Questions After Surgery? We're Here 24/7.

Recovering from surgery often brings up questions between appointments: about your activity restrictions, your collar or brace, incision care, or what's normal and what's not. You don't have to wait for a call back. Our Virtual Assistant answers common post-operative questions 24 hours a day, 7 days a week, using information approved by our clinic.

Fastest way: scan the code

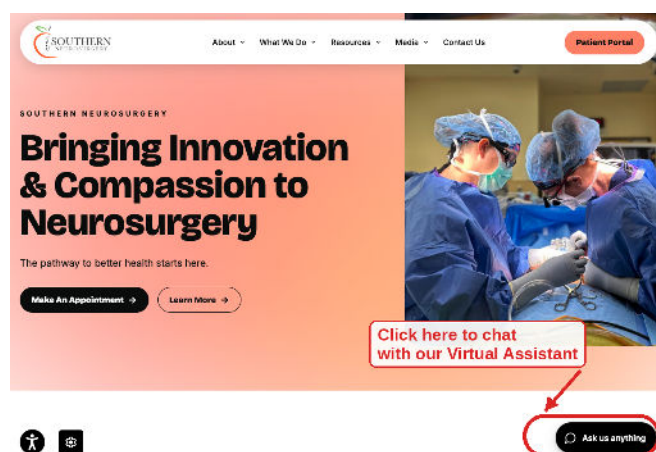
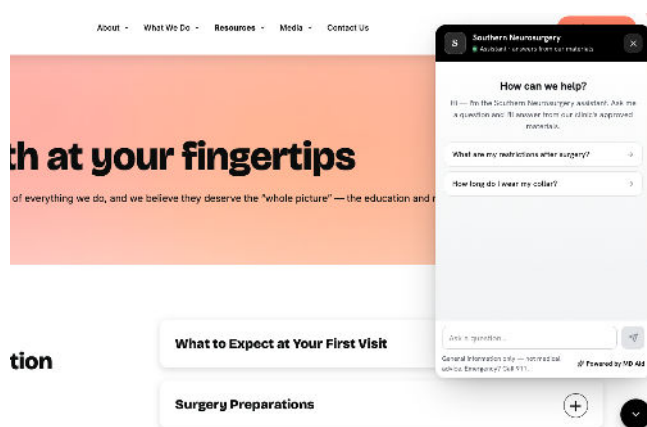
Point your phone's camera at the QR code to open the Virtual Assistant directly, or type this address into your web browser:

md-aid.com/c/southernneurosurgery



Or use our website

1. Go to southernneurosurgery.com and click the black "Ask us anything" bubble in the bottom right corner of the screen (left picture).
2. Type your question, or tap one of the suggested questions to get started (right picture).



Need to talk to a person?

If you don't find your answer or would rather speak with our team, call our office at (470) 293-9800.

Medical emergency? Call 911.

Do not use the Virtual Assistant or wait for a call back in an emergency.

The Virtual Assistant provides general information only. It is not a substitute for medical advice from your physician.