

DAVID S. FELDMAN, MD

ORTHOPEDIC SURGERY

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SPINAL FUSION for SCOLIOSIS



Scoliosis, simply put, is a sideways curvature of the spine. **Congenital Scoliosis** is present at birth and typically associated with an abnormal (vertebra) architecture. **Idiopathic Scoliosis** presents in children around the age of nine with no definite cause. If developed in children younger than three years old, it is referred to as **Infantile Scoliosis**. The severity of a scoliosis curve is measured in degrees and based on the angle of the curve in the spine shown on X-rays; 20 degrees or less is a mild curve, 20-40 degrees is a moderate curve and 40 degrees or more is a severe curve.

While the exact cause of scoliosis is unknown, unless attributed to another underlying medical condition, it usually runs in families and typically affects girls and young women more often and severely than boys and young men. Children with mild cases of scoliosis may not exhibit any symptoms. Moderate to severe scoliosis may cause parts of the torso and/or pelvic area to become uneven. For example, one shoulder may be higher than the other or the waist may be uneven.

Cases that are moderate to severe and with or without pain or discomfort require treatment which is determined on a case by case basis. Our approach to scoliosis at the Paley Orthopedic and Spine Institute is a multidisciplinary one consisting of physical therapy (Schroth Method) and access to excellent orthotists for braces. Surgical management is always the last resort.

A spinal fusion is the most common surgical treatment option for scoliosis. Rods and screws are attached to the vertebrae to fuse (weld) the bones together helping to straighten the spine. This procedure is only utilized for severe curves where all other treatment methods have failed. There is often no need for bracing after this surgery and patients may return to their activities in as little as one to two months. Movement and physical therapy are important after scoliosis surgery.

Non-fusion surgeries such as Apifix™ and Vertebral Body Tethering (VBT) are performed as well and described on Dr. Feldman's website (www.davidsfeldmanmd.com) as alternatives in a minority of cases to avoid welding the spine together. Preparing for spine surgery is similar whether it is fusion, tethering or decompression.

How To Prepare For Spine Surgery

In preparation for surgery, you will be scheduled to have Pre-Admission Testing (PAT) completed prior to surgery in the Kimmel building. At this appointment a nurse will perform a blood test and basic vital signs, unless you have already done so with your primary care provider within thirty days of the surgery date. Specific instructions such as when to discontinue eating and drinking the night before surgery will be discussed. A cleansing soap, Hibicleanse, will be provided and must be used while showering the night before and morning of surgery. You will also meet with anesthesia at this appointment to discuss the process of 'going under' and postoperative pain control options. After your appointment in the Kimmel building, you will then go up to the Paley Institute clinic to see one of the physician assistants and Dr. Feldman. They may take another set of x-rays. You will then go over your surgical plan. Please voice any questions or concerns to Dr. Feldman and the physician assistants at that time.

It is important that you discontinue all anti-inflammatory medications (NSAIDS), both prescription and over the counter, for two weeks prior to surgery and three months after (unless otherwise instructed). These include: Advil, Aleve, Motrin, Ibuprofen, Naprosyn or Naproxen, Celebrex, Celecoxib, Voltaren, Diclofenac, Toradol, Ketorolac, Mobic, Meloxicam, etc. In addition to NSAIDS, you should also discontinue all blood thinning medications such as aspirin (unless otherwise instructed by your medical doctor or cardiologist), multi-vitamins and any over the counter supplements at least seven days prior to your surgery date. You will be instructed when to resume these upon discharge from the hospital. If you take antidepressant medications, these may be discontinued or adjusted prior to your surgery and you should reach out to your prescribing provider with how to discontinue such medications as these typically need to be discontinued in a tapering fashion. If you are on a prescription anticoagulant (Coumadin, Xarelto, Plavix, Eliquis, Pradaxa, Heparin, etc.) you must receive specific instructions from your

clearing physician as to when these should be discontinued and when these can be resumed after surgery.

If you are on oral contraceptives, this must be discontinued as soon as possible or at least one month before your scheduled surgery date. You will not be able to resume an oral contraceptive for at least three months following your surgery, therefore you must use an alternative form of birth control in the interim. If you have any questions regarding current medications and whether or not they can be taken prior to surgery, please reach out to Dr. Feldman's physician assistants.

It is advisable that you begin an over the counter stool softener three days prior to surgery to prevent constipation which oftentimes occurs following spinal fusion surgery. You should continue with a stool softener or laxative postoperatively, especially while on narcotic pain medication as these do have a tendency to cause constipation. Stool softeners and laxatives are over the counter and can be purchased at your local pharmacy.

You cannot be exposed to first hand or second hand smoke of any kind for one month prior to surgery and for at least six months following surgery. That includes cigarettes, e-cigarettes, vape, and/or Marijuana. Smoke will inhibit fusion and is a significant cause of surgical failure.

It is very important that you notify us if you have a personal history or a family history of early cardiac disease, phlebitis, blood clot to the leg or lung (pulmonary embolism) or a history of a bleeding disorder.

If you cannot receive blood products due to a religious reason or have an objection to receiving blood products for any other reason, you must also notify us of this before surgery. You do have the option of donating blood before surgery. It is not advised to donate blood on behalf of yourself, however you can opt to do so for religious purposes. If you would like to donate blood prior to your surgery, please let us know and you will be provided with a prescription to One Blood donation bank. You also have the option of having a trusted family member donate for you. Blood needs to be donated by a family member at least 7 days before surgery. If you wish to donate for yourself, this will need to be done at least 15 days before surgery but not more than 30 days before surgery. Please contact your local One Blood facility and they will provide additional instructions with regards to timing of donation of blood.

We typically order iron infusions post operatively in an effort to restore your red blood cell count and prevent you from having to have a transfusion.

Please remove acrylic nails, and all nail polish from your hands and feet.

Please remove all jewelry and piercings.

If you have long hair we ask that you please braid your hair the morning of surgery with one braid on each side of your head (braided pigtails).

In the event that you have any scheduling issues with your pre-operative appointment or surgery date, please contact Dr. Feldman's Executive Assistant, **Jennifer Enterkin** at **jenterkin@paleyinstitute.org** or **(561) 844-5255 ext. 310**. All scheduling for follow up appointments should be referred to **Andrea Mower** at **amower@paleyinstitute.org** or **561-844-5255 ext. 245**.

Prior to surgery, you may be sent for additional imaging over at St. Mary's Hospital main building. If you need assistance scheduling an MRI, CT Scan or additional x-rays, please contact **Maribel Almonte** at **malmonte@paleyinstitute.org** and **(561) 844-5255 ext. 309**

It is preferred that these additional studies be completed at St. Mary's Hospital. If this is not feasible, you may have the study performed elsewhere. In that case, the front office will send you the Rx to do so. If you have the study performed at an outside facility, you **MUST** bring the study with you on a CD-ROM to your pre-operative appointment or mail it in advance to our office with attention to **Africa Tyrell**.

The Paley Institute
Attention: Africa Tyrell
901 45th Street
West Palm Beach, Florida 33407

Should you have further questions regarding imaging studies or how to mail in a copy of the disc, you can reach out to **Africa Tyrell** at **atyrell@paleyinstitute.org** or **(561) 844-5255 ext. 234**

For a faster process, you may upload the images yourself to the **My Medical Images** website. Please have the imaging facility place the images on a disc for you so that you can upload them yourself to the My Medical Images website at **www.mymedicalimages.com**. Please notify **Africa Tyrell** at **atyrell@paleyinsitute.org** or at **(561) 844-5255 ext. 234** when you are ready to upload your images so she can send you an email with a one-time free upload link. She will need the patient's full name, date of birth, which email address to use to send you the link, and the type of imaging being uploaded (x-ray, MRI, CT, etc). Once you receive the email with the link, follow the prompts to upload your images. There is no need to create an account.

Please keep in mind the following:

- The site is not supported by IE (internet explorer) **MUST** use Google Chrome or Safari.
- You will need a CD drive/reader to upload the images.
- There is **NO** need to create an account to use the one time free upload
- However if you choose to create an account, the cost is approximately \$30/year. You may use referral code ORTHOMD for \$10 off for the first year.

- If you have any trouble uploading the images please reach out to My Medical Images support line at **(855) 800-2851**.
- Once you have completed the process, please once again notify Africa Tyrell who will transfer all imaging from the MMI site to our Paley PACS System and notify Dr. Feldman's team that they are available for review. You can expect a call or email once these images have been reviewed after a few days.

If you have any clinical questions or concerns for the team, please email them and they will respond within a few days.

- **David Feldman, MD: dfeldman@paleyinstitute.org**
- **Aaron Huser, DO: ahuser@paleyinstitute.org**
- **Tiffany Brown, PA-C: tbrown@paleyinstitute.org**
- **Alyssa Clarke, PA-C: aclarke@paleyinstitute.org**
- **Katie Gauger, PA-C: kgauger@paleyinstitute.org**

If you need assistance with lodging, **Jessie Smith** can assist you with making lodging accommodations. Her email is **jsmith@paleyinstitute.org** or she can be reached by phone: **(561) 866-6866**.

What to Expect the Day of Surgery and During the Hospital Stay

A day or two prior to surgery you will be given your arrival time. Please arrive at the Kimmel Outpatient building at the designated time you were provided. Surgery will take place in the main hospital (you will be transferred from the Kimmel Building on a stretcher once you are prepped for surgery) and you will then be admitted and transferred to St. Mary's Palm Beach Children's Hospital or Waters 3 (adults aged 18+). Spinal fusion surgery typically takes six to eight hours and the expected inpatient hospital stay ranges from three to five days, depending upon your individual progress.

For children, Kaile Jo Scott, our certified Child Life Specialist, is available prior to surgery and throughout the entire process to make things a little less scary, easier to understand and even fun. If you have questions or concerns regarding your child's experience with surgery please reach out to them.

- **Jessie Smith: jsmith@paleyinstitute.org or (561) 866-6866**
- **Kaile-Jo Scott: kscott@paleyinstitute.org or (561) 334-9135**

After surgery, you will be followed daily by our clinical staff which includes Dr. Feldman, Dr. Huser and other Paley Institute physicians, Tiffany, Alyssa and Katie or other Paley Institute physician assistants as well as Marcia and Osiris, our nurse practitioners, who work on the floors of the hospital.

Post-operative pain control varies depending on the individual patient. You will receive pain medication intravenously as well as orally, and will be discharged home with oral

pain medication. As you progress in your post-operative recovery, pain medication should be weaned in a tapering fashion. The ONLY over the counter medication that is acceptable to take for pain relief after surgery is Tylenol (unless otherwise instructed) and you must refrain from all anti-inflammatories for approximately the first three months after surgery. It is advisable that you continue to take a stool softener or laxative while you are on narcotic medication as these do cause constipation. You can purchase these at your local pharmacy.

On post-op day one, a physical therapist will come to your room to get you mobilized and you will continue to receive physical therapy daily during your hospital admission. The therapist will review proper body mechanics and positioning with you as well how to use any assistive devices such as crutches or a walker. There are no restrictions with regards to your sleeping position. Initially we don't recommend heavy lifting and twisting.

You will likely not be in a brace following surgery unless otherwise specified by Dr. Feldman. If a back brace is necessary, a Prosthetist will come to your hospital room after surgery to take measurements and the brace will be provided and properly fit prior to discharge. All durable medical equipment (DME) such as a walker, crutches, shower chair, wheelchair etc. will be provided to you before you are discharged from the hospital. **Emily Ward** can assist with any DME you will require. Her email is eward@paleyinstitute.org.

You will have a urinary catheter placed during surgery and this will be removed on postoperative day one or two. You will also have two drains along your incision, these are typically removed just prior to discharge from the hospital.

The likelihood of you requiring a blood transfusion after surgery is incredibly low, however is always a theoretical risk. We do use a cell saver device in surgery which spins down any blood loss obtained during surgery, which is then able to be transfused back to you in an effort to minimize the risk of you having to receive a transfusion. We do not recommend auto-donation (donating your own blood for yourself), it is best to have a trusted family member or friend donate for you. If you opted to have blood donated beforehand, these units of blood will be given to you in lieu of receiving blood from the hospital blood bank. If you need assistance with this process, please reach out to Jennifer Enterkin, jenterkin@paleyinstitute.org and **(561) 844-5255 ext. 310**.

What to Expect Once You Leave the Hospital

Your first postoperative appointment will be ten to fourteen days after surgery with one of Dr. Feldman's PAs; Tiffany, Alyssa or Katie. You will have x-rays taken and your first wound check. Pain medication, if it is narcotics, will legally need to be re-ordered with a visit every week. If you are from out of town, it is advised that you remain local until your first postoperative appointment. **Jessie Smith** can assist with making lodging accommodations. Her email is jsmith@paleyinstitute.org, and she can be reached at **(561) 866-6866**.

Your second postoperative appointment will be scheduled approximately six to twelve weeks from surgery. Some of your restrictions and exercises may be lifted or advanced. You may begin driving six to twelve weeks after surgery depending upon how your bone is healing and so long as you are off all narcotics. You may engage in sexual intercourse after six weeks.

Your incision will be linear, running along your spine. The sutures are absorbable (clear) which will dissolve in two to three weeks. You will have steri-strips applied to the incision, which is then covered with a waterproof island Tegaderm dressing. This island dressing will remain in place for one week. You may remove this Tegaderm and shower on postoperative day seven. You may notice the clear suture coming from each end of the incision, these strings will be removed for you at your first postoperative appointment. You should recover the incision with steri-strips, sterile gauze and paper tape after each shower. Do this dressing change daily until seen in follow up. The steri-strips will begin to fall off on their own. Please, do not actively remove them. Avoid submerging yourself in a bathtub or swimming pool for four weeks until the incision(s) are completely healed.

You will not need much physical therapy for the first twelve weeks after your surgery, however it is advisable to attend a few sessions at the Paley Institute so our therapists can establish your restrictions with body mechanics, ensure your safety while using a walker if necessary, and create a home exercise program for you. You may sleep in any position that is comfortable.

It is important to be mindful of the number of physical therapy sessions your insurance company will allow, please contact your insurance company to determine what the coverage is for physical therapy as you may want to reserve your physical therapy benefits for the more intense rehabilitation required later in the healing process. After you are completely healed, the typical progression is to enroll in formal physical therapy at that time, essentially get you sport ready while doing so in an incremental fashion. This is typically the timeframe when the intense therapy begins.

Your return to school or work will be discussed after your first post-operative appointment but is ordinarily outlined before surgery. We will be happy to provide any documentation or forms required by your school or work. Please contact our medical assistants **Keisha Bourne** who can be reached at **kbourne@paleyinstitute.org** or **(561) 844-5255 ext. 240** and **Dalia Hanna** who can be reached at **dhanna@paleyinstitute.org** or **(561) 844-5255 ext. 243**.

You will not be administered a TSA card for flying, however it is advisable that you notify the TSA agent that you have titanium hardware in your spine.

The hardware is not removed for elective purposes. It is advisable not to have elective dental procedures (including routine cleanings) for three months postoperatively. You should be treated with prophylactic antibiotics before each cleaning or procedure for two years or longer following your fusion. Your dentist may use the same protocol he uses for cardiac patients.

If after surgery you need to reach us for a medical question, we can be reached at **(561) 844-5255**. There is someone on-call 24 hours 7 days a week. For medical emergencies, please call **911** and go to the nearest emergency room. If you are staying locally, St. Mary's Emergency Room is the most convenient for Dr. Feldman and his team to be involved in your care.