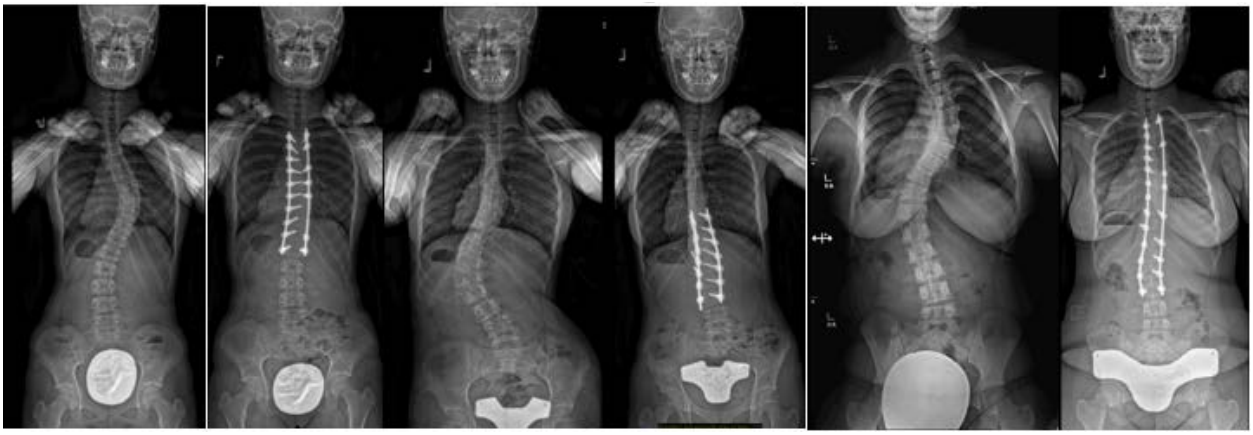
Your Child's Spine Surgery



What to Expect

AMAZING THINGS ARE HAPPENING HERE FOR KIDS

Division of Pediatric Orthopedics

NewYork-Presbyterian/Morgan Stanley Children's Hospital
Columbia University Medical Center
Department of Orthopedic Surgery

Tel: 212.305.5475
Fax: 212.305.8271

columbiaortho.org

Welcome to Columbia Doctors Pediatric Orthopedics

Dear Parent,

This book contains information that will help guide and prepare you for your child's upcoming spine surgery. Your primary care provider and any other doctors that care for your child may also be interested in some of this material, so feel free to share it with them.

Our spine service here at New York-Presbyterian/ Morgan Stanley Children's Hospital (MSCHONY) is one of the top programs in the country. Our clinical and academic expertise are second to none. We have a broad experience taking care of children with spinal deformities ranging from the otherwise well teenager with idiopathic scoliosis to the medically complicated child with underlying neuromuscular problems. We have used this experience to develop best practice guidelines, many of which are used nationally, that help us deliver the safest and best experience for you and your child.

MSCHONY is the major children's hospital in the tri-state area and offers a multidisciplinary approach to care. Your child will benefit from a range of nationally recognized pediatric care providers including Anesthesiology/ Pain Service, Physical and Occupational Therapy, Child Life, Nurse Practitioners and more. Our team treats hundreds of surgical spine patients every year and that expertise leads to improved outcomes, like having one of the lowest infection rates in the country.

Our goal is to deliver the safest and best experience for your child and family during what we know is a difficult time. We thank you for entrusting your child's care in our hands, and we are always available to answer any further questions.

Sincerely,

Doctors Michael G. Vitale, David P. Roye, Benjamin D. Roye, and Joshua E. Hyman

ColumbiaDoctors | Pediatric Orthopedics

Table of Contents

Dr. Michael G. Vitale

For clinical questions please contact:
Amber Sentell Mizerik PA-C
Physician Assistant
Kyla Lafond, RN
Nurse
212-305-5475 Option 2 and then option 3

Surgical Scheduler:
Ashley Rivera
212-305-5475
Fax 212-305-9754

Dr. Benjamin D. Roye

For clinical questions please contact:
Ameeka George, CPNP
Pediatric Nurse Practitioner
Nikki Bainton, CPNP, ONP-C
Pediatric Nurse Practitioner
212-305-5475 Option 2 and then option 2

Surgical Scheduler:
Ashley Rivera
212-305-5475
Fax 212-305-9754

Dr. David P. Roye

For clinical questions please contact:
Tahina Paul, RN
Nurse
212-305-5475 Option 2 and then option 1

Surgical Scheduler:
Gabriela Padilla
212-305-5475
Fax 212-305-9754

Dr. Joshua E. Hyman

For clinical questions please contact:
Nikki Bainton, CPNP, ONP-C
Pediatric Nurse Practitioner
Ameeka George, CPNP
Pediatric Nurse Practitioner
212-305-5475 Option 2 and then option 4

Surgical Scheduler:
Sandy Hernandez
212-305-5475
Fax 212-305-9754

Contact Information (continued)

Online Message - Patient Portal

Columbia Doctors offers a patient portal that allows you to send messages to the clinical staff and office via the patient portal. To create an account for portal access, you will need to complete an application at your next office visit to request an invitation. You cannot sign up online without an invitation so please make sure to fill out the appropriate paperwork at your office visit.

School Notes, Physical Therapy Prescriptions and X-ray Requisition Requests:

Our Medical Assistants, Anne and Tiara are available to help with these requests.

Please call **212-305-5475** and submit a request and any details that you would like included. Please have a fax number or address available.

Inpatient Nurse Practitioner

Jennifer Crotty, CPNP

Leah Granucci, CPNP

Plastic Surgery

Dr. Thomas Imahiyerobo

Office Coordinator: Jenn Ruiz 212-305-5868

Columbia Cerebral Palsy Center

http://www.columbiaortho.org/specialties/cpcenter

Organizations and Other Websites

National scoliosis foundation: http://www.scoliosis.org/

Scoliosis Research Society: http://www.srs.org/

Other Resources:

www.iscoliosis.com

www.spineuniverse.com

Patient to Patient Program

We have a program that connects you with other patients who have already gone through the surgery. If you are interested in connecting with another family who has gone through the surgery, please let us know. We will then reach out to another family to get their permission to give out their phone number. We will then contact you with their name and number. This process can take a few days but we will get back to you to the requested information.

Parking

Discounted parking is available for families staying 5 days or more. While most of our patients with idiopathic scoliosis stay for about 3 days, some may stay longer. If you are interested in receiving a letter to enable you to get discounted parking, please contact our surgical scheduler who will mail you the letter as part of your pre-op packet.

Medical Records

If you require a copy of your child's medical records, please contact our medical records office so that they can help you with this request. The phone number for medical records is 212-305-0099. A release form must be signed before a copy can be released – these forms are available in the office or you can visit our website at http://www.columbiaortho.org/patients/medical-record-information to obtain the form online.

Insurance and Financial Information

Pre-Op

Our surgical schedulers work with your insurance to obtain prior authorization for the surgery and the hospital stay. They will contact you if there are any issues prior to the date of surgery.

Anesthesia

If you have questions about whether the anesthesiologist is par with your insurance please call their billing office at 914-709-8150.

Post-Op

If you have questions after the surgery about the surgical part of the bill, please contact our billing office at 201-346-7190. If you have a hospital billing question, please call 212-305-6253

Red Booklet

You may obtain a red booklet at the hospital during your pre-operative visit that was created specifically by New-York Presbyterian Hospital to help you prepare for your hospital stay. You will find a wealth of knowledge including information about hospital tours, places to stay near the hospital, parking, area maps and other useful material. You may also view them online at the below websites:

http://www.nyp.org/pdf/patientguides/mschony_preparing.pdf

http://www.nyp.org/pdf/patientguides/mschony_preparing_spanish.pdf

http://www.nyp.org/pdf/patientguides/mschony_during.pdf

http://www.nyp.org/pdf/patientguides/mschony_during_spanish.pdf

Websites

Pediatric Orthopedics: http://www.columbiaortho.org/specialties/peds

NewYork-Presbyterian Morgan Stanley Children's Hospital: www.childrensnyp.org

Pre-Operative Tours

The Pre-Operative tours are offered by Child Life Specialists who are professionals specially trained to help children (birth – adolescence) and their families understand and manage challenging life events and stressful healthcare experiences.

What Child Life Specialists Can Offer:

› Developmentally appropriate medical, hospital and procedural education
› Comfort and support when a patient expresses specific fears regarding hospitalization, doctors and/or procedures
› Preparation for any medical procedure, treatment or surgery
› Information and techniques for relaxation, pain management, & coping
› Distraction, alternative focuses & support during procedures and surgery to help ease anxiety and decrease fears

During a preoperative tour you will be able to:

› Have your questions answered
› Tour the preoperative area, operating room (if available), recovery area and the inpatient unit (if necessary)
› Learn what to expect on the day of the procedure
› Learn about medical equipment, anesthesia and what it's like to fall asleep for the operation

Tours are offered Monday-Friday 11:00am-2:00pm

In most cases we are flexible, so if these times do not work for you we can try to schedule a time that best fits your needs.

Every tour is individualized to fit the specific needs of each patient and family

If you are interested in scheduling a tour for your child's upcoming surgery please call 212-342-0688

When the Decision for Surgery is Made

☐Contact Surgical Scheduling to arrange a date for surgery that works with your schedule

☐Review your Spine Surgery Guide

☐Speak with the Surgical Scheduler about any medical clearances that you may need prior to surgery. Most patients need to only see their pediatrician, but if you regularly see any specialists (such as a pulmonologist for asthma) then please be prepared to make an appointment to see those physicians as well. All clearance notes must be dated within two weeks of your scheduled spine surgery.

☐Back Acne – if you have back acne, your doctor should either refer you to a dermatologist for treatment or they will recommend a specific treatment prior to surgery to decrease risk of infection.

One Month Prior to Surgery

☐If recommended by your surgeon, start gaining weight – generally at least 5-10 pounds. This will make up for the weight loss that often occurs during the post-operative period.

☐Start taking Ferrous Sulfate (iron) supplements to improve your body's ability to regenerate blood after your surgery. You may also need a stool softener because iron can cause constipation. Both of these medications are available over the counter

Ferrous Sulfate

- If child weighs more than 40 kg (88) lbs – one Ferrous Sulfate 325 mg tablet or Ferrous Sulfate Elixir one time a day in the morning.
- If child weighs less than 40 kg – 2 mg/kg per day – divided as 1 mg/kg in am and the same in the pm

Docusate (Colace) – stool softener

- Ages 3- 6 years: Colace solution 25 mg twice a day
- Ages 7–12 years: Colace solution 50 mg twice a day
- Ages 13 and up: Colace 100 mg twice a day

☐ Please reference the Iron –Rich Foods List and try to increase your intake of these foods before and after surgery.

☐Pre-Operative appointment with your surgeon **within** 30 days of the surgical date. During this visit, labs and x-rays will most likely be obtained. If forms are needed (e.g. school/FMLA), please give us plenty of notice as it is usually at least a 48 hour turnaround time for paperwork. The surgical scheduler will provide you with a Pre-Operative Requirements Form that will list the tests you will need to have done.

☐Refer to the Red Patient and Visitor Guide if you would like to set up a hospital tour the same day that you come for your pre-operative appointment. Please set this up beforehand by calling 212-342-8517.

☐ If you are planning on taking time off during your child's recovery, your job may require you to fill out a Family Medical Leave Act form. Please give us this paperwork as soon as possible. There is at least a 72 hour turnaround time on this paperwork so it is helpful if we have it well in advance. Please also let us know how long you are planning on taking off, so we can fill in the paperwork accordingly.

One to Two Weeks Prior to Surgery

☐Visit with the pediatrician for clearance for surgery. Please check with your pediatrician as to what their guidelines are for appointments for surgery clearance. Each pediatrician is different as to when they prefer the appointment to be. The hospital will accept a clearance up to two weeks prior to the surgery. Please have them fill out the history and physical clearance form that we will provide to you. Please have them fax the forms to 212-305-9754, but also please bring a paper copy of this with you the day of surgery.

☐Do not give your child Ibuprofen (Advil/Motrin) for at least one week prior to surgery. You may give them Tylenol if they are having pain.

Night Before Surgery

☐You will receive a phone call from the OR nursing staff the evening before surgery. They will tell you what time to arrive at the hospital as well as when to stop eating and drinking. If you do not hear from them by 5:00 PM, you may call the nurses' station for arrival time and instructions at 212-305-8670. If surgery is scheduled for a Monday they will call you the Friday evening before the surgery.

☐The night before surgery, your child will shower and use antibacterial disposable wipes over the entire back. Please refer to "Preparing the Skin the Night Before Surgery" page in this packet for specific information. These products will be given to you at your pre-operative appointment.

☐Remove any nail polish from your hands

☐ For girls with long hair, we recommend French braiding your hair the night before or the morning of surgery.

☐Stop taking the iron supplement if applicable

Morning of Surgery

☐Take Gabapentin (Neurontin) as prescribed by your surgeon with a small sip of water on your way to the hospital

☐ Nothing to eat or drink the morning of surgery, except for Neurontin (this includes no gum, candy, or water)

☐You may brush their teeth but please make sure that they spit out all the water

☐Do not take a shower

☐No makeup

☐No hair product

☐Remove all jewelry

☐Bring your Spine Surgery Guide to the hospital

☐Bring all the necessary paperwork (refer to the red resource guide page 8)

☐Report to the security desk on the first floor of Children's Hospital. You will be directed to the surgical unit on the fourth floor.

Iron-Rich Foods

Food	Serving Size	(mg)
Bran flakes cereal	1 cup	24.0
Product 19 cereal	1 cup	24.0
Clams, steamed	3 oz	23.8
Total cereal	1 cup	18.0
Life cereal	1 cup	12.2
Raisin bran cereal	1 cup	9.3
Beef liver, braised	3 oz	5.8
Kix cereal	1 cup	5.4
Cheerios cereal	1 cup	3.6
Prune juice	1 cup	3.0
Potato, baked with skin	1 med	2.8
Sirloin steak, cooked	3 oz	2.8
Shrimp, cooked	3 oz	2.6
Navy beans, cooked	1/2 cup	2.3
Figs, dried	5	2.1
Lean ground beef, broiled	3 oz	2.1
Swiss chard, cooked	1/2 cup	2.0
Rice krispies cereal	1 cup	1.8
Kidney beans	1/2 cup	1.6
Oatmeal, cooked	1/2 cup	1.6
Spinach, raw	1 cup	1.5
Tuna, canned in water	3 oz	1.3
Green peas, cooked	1/2 cup	1.2
Halibut, cooked	3 oz	0.9
Whole-wheat bread	1 slice	0.9
Apricot halves, dried	5	0.8
Raisins	1/4 cup	0.8
Broccoli, cooked	1/2 cup	0.6
Egg, boiled	1 large	0.6

Preparing Your Skin with Chlorhexidine Disposable Cloth or Wipes (Pediatric)

Why should I clean my child's skin?
Your child's condition, treatment, or medicine can lower his/her ability to fight infection while in the hospital. Germs on your child's skin can cause infection. It is important to clean your child's skin before surgery to decrease the risk for infection. CHG is available as a liquid soap or as a disposable wipe, which makes skin cleaning easy. These disposable, moistened cloths contain 2% Chlorhexidine Gluconate (CHG) antiseptic solution and are rinse free. They kill many bacteria on your child's skin.

When should I clean my child's skin?
Clean your child's skin the night before his/her surgery. Adolescents who clean themselves will need help from an adult to wash hard to reach areas (such as their backs).

How do I use CHG wipes?
First, shower and shampoo your child's hair. Dry your child's skin with a clean towel. Open all packages of wipes. You will have two to six wipes total. Use all wipes provided to clean your child's body in the order indicated on page three of this guide. **Do not shave your child's hair.**

When cleaning neck, shoulders, and chest, **do not** use CHG wipes on your face, eyes, nose, mouth, or ears. When cleaning arms, be sure to clean front and back, both hands, between fingers, and armpits. When cleaning legs, be sure to clean front and back, feet, and between toes.

Your child's skin may feel sticky after using CHG wipes. Do not rinse after using CHG wipes. Let your child's skin air dry. Dress your child in clean sleepwear. Do **not** shower or bathe them on the morning of surgery. They may come to the hospital in that sleepwear or clean clothing the morning of surgery.

What if I have soap instead of wipes?
Use CHG soap to lather a clean wet washcloth, and lather your child's entire body from the neck down in the same order as in the diagram (except do not use the soap on or around your child's groin). With the shower water off, gently scrub your body for three (3) minutes. Rinse the soap off completely. Pat skin dry with a clean towel.

Can I use lotion after using CHG wipes?
Many lotions are **not** okay to use after CHG wipes. Do not apply any lotions, powders, deodorants, or makeup after using CHG.

Are there any reasons not to use CHG wipes?

- Do not use CHG if your child is less than two months old. (For cardiac procedures, CHG wipes should be used for patients after 37 weeks gestation.)
- Do not use CHG wipes if your child has an allergy to chlorhexidine (CHG).
- Do not use CHG wipes on open sores or rashes. You can still use the CHG wipes on the areas of skin that do not have sores or rashes.
- Stop using CHG soap if your child develops a new rash.

NewYork-Presbyterian

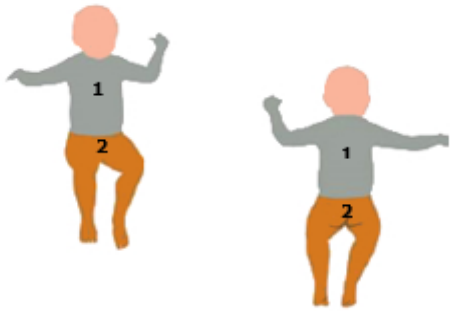
Bathing with CHG Wipes for Children

This guide indicates what parts of the body should be bathed with each CHG wipe, in order starting with #1 and ending with #6.

For children less than 10 Kg (22 lbs)

Wipe #1 Chest, Both Arms, Back

Wipe #2 Both Legs, Outer Groin (not inside), Buttocks



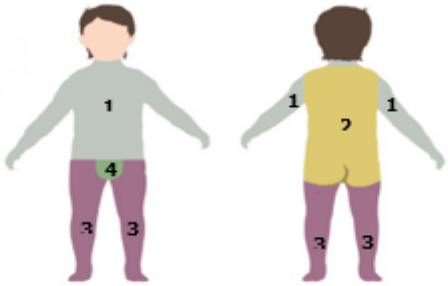
For children 10-30 Kg (22-66 lbs)

Wipe #1 Chest, Both Arms

Wipe #2 Back and Buttocks

Wipe #3 Both Legs

Wipe #4 Outer Groin (not inside)



For children more than 30 Kg (66 lbs)

Wipe #1 Chest, Both Arms

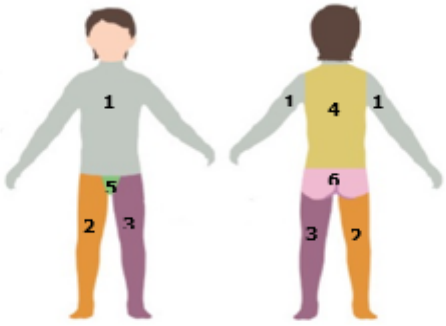
Wipe #2 Right Leg

Wipe #3 Left Leg

Wipe #4 Back

Wipe #5 Outer Groin (not inside)

Wipe #6 Buttocks



This resource provides brief, general information about this health care topic. It does not take the place of instructions you receive from your doctor and other health care providers. For answers to other questions, talk to your doctor or other health care provider.

Pre-Operative Neurontin

Multiple Randomized Control Studies have found that administration of analgesic (pain relief) medication before the onset of a painful stimulus contributes to better overall pain management.

Based upon this evidence, we begin the process of controlling your child's pain before surgery.

At the pre-op appointment we will order one dose of Neurontin (Gabapentin) that your child is to take before leaving the house on the morning of surgery. Although you will be instructed not to allow your child to have anything by mouth on the day of surgery, this medication is an allowed exception. Your child may have a small sip of water with the medication.

In addition to contributing to pain management, Neurontin can also reduce pre-operative anxiety and may make your child slightly drowsy.

There are instances when Neurontin is contraindicated (i.e. use of seizure medications, or other medical conditions). If you have any concerns please address them with your surgeon at the pre-op appointment.

At NewYork-Presbyterian Morgan Stanley Children's Hospital, we understand that your child's surgery may raise fears or concerns—both for you and for your child. Knowing what to expect can help.

We invite you to view these videos to help inform you and your child about having surgery at Morgan Stanley Children's Hospital. The videos provide helpful information for parents and children—from pre-schoolers to school-age children to pre-teens. We will guide you through the process—from reception to the operating room—so both you and your child will be able to understand what will happen at each step along the way. You will also have the opportunity to hear from other parents and get the benefit of their experience at Morgan Stanley Children's Hospital.

Video Playlist

What to Expect When Your Child Has Surgery - Parents' Questions

What to Expect When Your Child Has Surgery - Pre-School-Age Children

What to Expect When Your Child Has Surgery - Elementary School-Age Children

What to Expect When Your Child Has Surgery - Teens and Pre-Teens

You can access these videos through the below link:

http://childrensnyp.org/mschony/patients/what-to-expect.html

Blood Transfusions

The vast majority of spine surgery done for idiopathic scoliosis is done without the need for blood transfusions. We use many established techniques to limit blood loss in the operating room. We even recycle much of the blood that is lost during the surgery and give it back at the end of the case. However, despite our best efforts some children do require a blood transfusion during or after surgery to keep them safe and healthy.

Many people are worried about the risks of blood transfusions, but in the United States the risk of getting an infection from a blood transfusion is extremely low because all blood donors are screened and their blood is tested extensively. For example, the risk of getting the HIV or hepatitis B virus is approximately 1 in 2 million.

References:
Transfusion-transmitted infections**.** J Transl Med. 2007; 5: 25. Published online 2007 Jun 6.
doi: 10.1186/1479-5876-5-25

https://www.healthychildren.org/English/health-issues/conditions/treatments/Pages/Are-Blood-Transfusions-Safe-for-Children.aspx

Surgical Site Infections

Infections can occur after any surgery, and spine surgery is no exception. Here at MSCHONY, your surgeons take the risk of infection very seriously and take many steps to minimize the risk. We have created cutting edge protocols that have dramatically reduced infection rates at our hospital and other hospitals around the country. Our protocol starts with YOU and the chlorhexadine wipes you use the night before surgery. It continues to include a multiple stage skin cleaning at the hospital as well as carefully selected and dosed antibiotics that are used throughout the surgery.

Neuromonitoring During Surgery

One of the greatest concerns about spine surgery of any type is the potential for injury to the spinal cord and spinal nerves. Such complications are exceedingly rare in modern day scoliosis surgery, in large part because of tremendous improvements in our ability to monitor spinal cord function in real time during the surgery. We have an extremely experienced team of neurophysiologists who are present for the entire operation, and who utilize an array of techniques to ensure your child's safety. We certainly credit our experienced team of neurophysiologists with contributing to our incredible safety record here at MSCHONY.

A technologist, skilled in all phases of intraoperative monitoring, sets up the patient in the OR suite, following administering of anesthesia. Electrode application is performed by placement of sterile subdermal (needle) electrodes over the scalp and torso, as well as nerves and muscles of the arms and legs. These electrodes, when linked to the IOM system, provide the means of stimulating and recording responses from the patient throughout the procedure. The patient, being under anesthesia, feels nothing. Additionally, the systems here at Columbia, are networked directly to Neurologists who oversee the procedure and have the capability of interacting with the surgeon, anesthesiologist, and monitoring technologist at a moment's notice. The electrodes are removed at completion of the operative procedure, prior to the patient's waking up from anesthesia.

Although the benefits far outweigh the risks, there is some minimal downside associated with IOM. Possible tongue bite during motor stimulation is avoided by placement of a bite block between the patient's upper and lower teeth. Minor bleeding and bruising from the site of subdermal electrode placement is possible, albeit temporary.

We are proud of our longstanding and continuing relationship with Pediatric Orthopedics. The positive outcome of these corrective spine procedures is very much a collaborative effort by a team of dedicated individuals. If you have any other questions related to monitoring, feel free to contact us:

Contact: Neurophysiology/IOM – The Neurological Institute of NY (212)-305-0392

Preparing for Surgery

If your Pediatric Orthopaedic surgeon requests an anesthesia consultation because of a specific medical issue then you will have an anesthesiologist call you prior to surgery.

Before administering anesthesia, we make sure our young patients are at their healthiest. Nursing Staff will call parents the night before, for example, to ensure that their child does not have a cold and would therefore be unable to undergo anesthesia. We also require patients to keep an empty stomach prior to surgery or a procedure so that there is no risk of obstructing the airway. After the procedure, an anesthesiologist closely monitors the child in the recovery room.

What to Expect

The night before surgery, you will receive a phone call from a post anesthesia care (PACU) nurse. They will ask questions about your child's current state of health; review your child's medications; and review your child's NPO (when to stop eating/drinking) guideline in preparation for surgery.

In the pre-op area, your child may or may not receive pre medication prior to going into the OR. If you feel that this would benefit your child, please speak with the team in the preop area.
You will meet with your anesthesiologist on the day of surgery. The anesthesiologist will meet your child; exam your child; and answer all of your questions.

When it is deemed medically appropriate, parents may accompany their child into the operating room and stay until the child falls asleep from anesthesia. Parents may also be present in the recovery area before their child wakes up. These transitions help to provide a more secure and less anxiety-provoking experience for the child, as well as the family.

During surgery, your child will be given some form of anesthesia, or medication administered for the relief of pain and sensation during surgery. The type and dosage of anesthesia is determined by the anesthesiologist but for spine surgery it will be general anesthesia. When your child is scheduled for surgery, you and your child will meet with the anesthesiologist or nurse anesthetist before the procedure to review your child's medical condition and history to plan the appropriate anesthetic for surgery.

Contact

Pediatric Anesthesiology

(212) 305-2413

PACU nurse

(212) 305-8670

Day of Surgery

After the surgery has been completed, you will go to the Pediatric Intensive Care Unit (PICU) for your first night in the hospital. Here you will be cared for by a team of intensivists that focuses on orthopedic and neurosurgical patients. You will leave the OR with many tubes in your body! These include:

Arterial Line – an IV in your wrist that measures your blood pressure and makes it easier to draw blood tests. This will be removed when you leave the PICU, usually the day after surgery.

Intravenous Line (IV) – there will probably be 2 or more IV's in your arms to provide you with fluid and medications. These will stay in place until you are ready to leave the hospital.

Foley Catheter – this is a tube that goes into your bladder to drain urine and allows your nurses and doctors to carefully track how much urine you are making. This is usually removed the day after surgery once you are able to get out of bed.

Surgical Wound Drain – there will be 2 or 3 drain tubes coming out of your back next to the surgical incision. These are there to prevent fluid from accumulating under the incision. These are usually removed before you go home.

You will also have special wraps on your lower legs, called venodynes, that are connected to a pump that fill them with air ever few minutes. This encourages normal blood circulation in your legs and is used to prevent blood clots from forming in your legs (a very rare complication of surgery).

Pain will be treated with a pump that gives you a dose of pain medicine through your IV when you push a button – this is called PCA (patient controlled analgesia). If you feel you are not getting enough pain medication let your nurse or the Pain Service know and they can help you.

The Days After Surgery

The day after surgery you will probably leave the PICU and go to the regular hospital floor. Most patients go home on the third day after surgery (for example, if your surgery is on a Monday, most patients go home 3 days later on Thursday). We encourage parents to stay with their children. There are pull-out beds or sleeper chairs in the rooms so that you are able to stay.

Here is what you can expect to happen while you are in the hospital:

Early in the morning (usually before 7:30am) members of the Orthopedic Team will come by to examine you; to see how everything is going; and to answer any questions you may have. The orthopedic team consists of your orthopedic surgeon, the orthopedic fellow, orthopedic residents and orthopedic nurse practitioners. Your surgeon may come by later in the day.

The pain service will check on you every morning to make adjustments to your pain medications.

A phlebotomist may come by to draw blood tests.

Throughout the day a nurse or a Nurse's Aid will come by to record your vital signs every few hours.

You will be encouraged to use your *Incentive Spirometer* regularly. It is a plastic device that measures how forcefully you are able to take a deep breath. This helps to keep your lungs fully inflated and healthy. Your nurse will show you how it works. It is very important to use your incentive spirometer while you are in the hospital as well as when you go home. Please bring this home with you so that you can continue this at home for the first several weeks.

What to Expect In The Hospital After Your Spine Surgery (continued)

Over the course of the day you will be seen by physical and occupational therapists to get you up and out of bed and start your rehabilitation. They will walk you around your room, around the floor and up and down stairs.

Eating and Drinking After Surgery

Meals will be brought three times a day. You will start with clear liquids. Gradually as your "belly wakes up" and your appetite returns, you can begin to eat your regular diet. You are welcome to bring in food from the outside if you have something else you would rather eat. It is important to eat – you need the calories to heal your body! Sometimes sugarless chewing gum is used to help encourage your digestive system get started again.

Who are the people on the therapy team?

Typically, on the day after your surgery, the physical and occupational therapists will work with you at your bedside. The PT helps you with walking, strengthening, improving balance and endurance. The OT helps you with your activities of daily living which include dressing, using the toilet, and bathing.

Expectations:

We will make an effort to contact the nurse (& family) before we arrive to your room. This is to allow for the patient to be prepared for participation such as giving pain medication if needed. You can also prepare by having your gown and socks/shoes on if necessary. Lastly it will allow your family to be ready to help transfer you out of bed. You will be seen daily until you leave the hospital OR until your parents can safely get you out of bed and walk in the halls.

Activity:

- You will be assisted to roll to your side; (hips & shoulders at the same time) then to sit at the edge of the bed.
- After sitting at the edge of the bed we will help you try some or all of these actives: standing with assistance at bedside, marching in place, taking steps at bedside, walking along the length of the bed, sitting in a bedside chair, walking further with help
- Some examples of exercises include: deep breathing (Incentive spirometer), ankle pumps (circulation), quad sets (muscle activation), heel slides, leg and arm lifts (mobility), active arm movements throughout the day

Post-op day 1

- The first day after surgery PT/ OT will arrive separately to your hospital room and begin helping you get out of bed and begin to walk.
- walking in room & to bathroom if you are able
- patient to practice putting on socks & pants
- parents educated on using bed controls to sit patient up in bed during the day
- patient to perform exercises as suggested
- The first session usually ends with the patient tired

Post-op day 2

- Increases distance walking and maybe attempt stairs with therapist.
- Parents begin learning to assist patient out of bed to a chair and walking to the bathroom.
- Patient to sit in bedside chair as tolerated.
- Patient feeds self and brushes teeth sitting or standing.
- Patient continues to perform dressing with less assistance
- Parents expected to help patient to sit in bedside chair and take short walks if cleared by therapist.

Post-op day 3

- We want the patient to spend most of the time out of bed, walking or sitting up.
- Patient should be able to get dressed, eat and brush their teeth without assistance.
- Parent(s) will be taught to give the patient help while performing therapy activities.
- Increased walking and activity.

The information above is a general guideline. Reaching the stated goals may take some patients a little longer or shorter depending on each patient's experiences during their hospital stay.

Pain Control

This gives a general overview of pain control, but please see the section over the next few pages for a more in depth view of this topic.

We take your pain management very seriously and use a multi-modal approach to minimize pain as well as the side effects of pain medications.

PRE-OPERATIVELY

The medication gabapentin that you take the morning of surgery has been shown to decrease pain post-operatively and reduce the need for narcotic pain medication

POST-OPERATIVELY

There is a pain service run by the anesthesia department that is well versed in managing post-surgical pain in scoliosis patients. They typically use a pain pump (PCA – patient controlled anesthesia) that allows the patient to safely give themselves medication when they need it. This is usually stopped on post-operative day one and oral medications are started.

In most cases after spine surgery, you will need to go home with pain medication. If your child will still require narcotics, you will be given these prescriptions before your child is discharged.

However, there is more than just medicine to keep your child comfortable. Our Child Life specialists can work with you to help keep children occupied with various activities and games, distracting them from their pain. Music is another strategy that has been shown to have positive effects on children and even to reduce muscle tension

SIDE EFFECTS OF PAIN MEDICATION

Many of the medications used for pain control can be constipating – stool softeners are used to help counter this effect. However, because even the surgery itself can slow the motion of your intestines temporarily, many patients do not have a bowel movement for 5-7 days after surgery (so after you have left the hospital). This is normal and should not be a cause for concern. We also recommend that you drink lots of water, eat fruits and vegetables and food that are high in fiber. The medicine in narcotics (opioids) can cause side effects that can be treated or reduced. Report the following side effects to your/your child's medical team as soon as possible: Itchiness, excessive drowsiness, confusion or hallucinations, nausea/vomiting, slow or shallow breathing or difficulty urinating

Numbness/Tingling

You may experience numbness and/or tingling in and around the surgical incision. You can also feel some numbness and/or tingling in your arms and/or legs. These symptoms often diminish with time. It is important to let your doctor know about these symptoms.

Pain Control After Surgery

One of the advantages of being a major children's hospital is that we have specific programs focused on your child's needs. We work closely with the pediatric pain team to optimize your child's comfort after surgery. This group of specialists will see your child immediately following the surgery and make changes in pain medicines as needed throughout your stay

Will my child be in pain after surgery?

After surgery, there may be physical causes of pain, but the sensation of pain also depends on complex mental and emotional factors. Determining the level of pain that your child has can be very challenging. The surgical team may use a scale of 0 to 10 or illustrations of faces to help your child describe pain. The physicians caring for your child can determine what is usual discomfort for a certain operation and give the prescribed medication; however, as parents, you know your child best. If your child is unusually agitated or withdrawn, you should let your child's healthcare team know so they can further assess the effectiveness of the prescribed medication.

What pain medications will my child receive?

There are a wide variety of pain medications that your child can receive. Your child's physician will order the specific medication(s) he/she thinks will be most effective. Your child's physician will determine this by the type of surgery your child had, your child's age and development, and any previous experience your child has had with surgery and administration of pain medications.
If your child has moderate to severe pain, he/she will most likely receive narcotics during and after surgery. If your child is in the ICU after surgery, he/she may also receive sedatives along with analgesics (pain medications.) Sedatives can decrease anxiety, induce sleep, and eliminate the memory of unpleasant events. Narcotics are not addictive when used for appropriate pain control.

How will my child receive pain medication?

Your child may have an intravenous (IV) line after surgery, especially if he/she is staying in the hospital overnight or being admitted for several days. Many pain medications can be given in the intravenous (IV) fluids that are infusing into your child's vein. Then they will be transitioned to either a pill or liquid to prepare you for discharge.

Relieving my child's discomfort

Parents can comfort their child better than anyone else. The following are some suggestions that might prove helpful in comforting your child:

- All children need to be held, stroked, and touched by those that are most important to them. Ask for help from the nursing staff if you would like to hold your child, but are not exactly sure how to go about it because of equipment or bandages.
- Play is a familiar part of your child's day. It can help relieve tension for both of you, and can also provide distraction that helps your child feel better. If your child is able to be up out of bed, ask about the playroom in the hospital that he/she can go to. Also, bring story books, coloring books, puzzles, board games, and other toys that can be used in bed.
- Ask if a DVD is available so that your child can watch movies or children's entertainment programs. Ask about the hospital's video game center that your child can use in bed or in the playroom.
- Music can be very comforting and has been shown to relieve muscle tension.

Patient Information on Patient Controlled Analgesia (PCA)

How a PCA Pump Works

Patient controlled analgesia (PCA) is a way to give pain medicine using a special pump attached to you/your child's intravenous (IV) line. Your pain management team will decide which type of pain medicine should be given and how much. Here are some terms you may hear about the PCA:

A **"demand"** dose: a dose of pain medicine given to the patient after they press the PCA demand button. **ONLY** the patient may press the button. The parent, nurse, or physician **CANNOT** press the button. Usually the PCA demand button is not given to children 8 years old and younger.

A **"lockout"** time: the amount of time between doses allowed to be given by the PCA demand button. If the patient pushes the button during the lockout period, the pump will not give another dose. This is a safety feature of the PCA.

A **"clinician bolus"** dose: this is usually a slightly larger dose than can be given by the PCA demand button and can only be given by the patient's nurse.

A **"continuous infusion"**: this may or may not be used depending on the patient's age and the amount of pain they are having. It is a small, continuous amount of pain medicine given through the PCA.

The pain management team will visit you/your child to review the number of times the patient pressed the demand button and will assess his/her pain score. The pain management team may increase or decrease the amount of pain medicine depending on how much pain the patient is having.

Helpful Hints

- After the patient pushes the demand button, wait a few minutes for the pain medicine to work.
- The patient should ONLY push the button to help control pain, not to help with falling asleep or to help decrease anxiety.
- The patient should be encouraged to push the button before certain activities that may hurt, such as having a surgical dressing changed or getting out of bed.
- If the patient/parent still feels the pain is not improved after pushing the demand button, they should tell the nurse and have the primary or pain management team called to help.
- A clinician bolus may be needed a few minutes before activities that may cause a lot of pain such as physical therapy.

Assessment Tools:

- The pain management team and the primary team engage the parent/guardian to help with pain assessment because the parent/guardian knows the child best.
- There may be reasons for discomfort in a young child for reasons other than pain including: hunger, cold, tired, or afraid. These causes of discomfort must be ruled out before giving pain medication.
- The pain and primary teams will also use a patient's vital signs and clinical picture to assess pain.

Helping Children Take Their Medications

`

Liquid Medications that taste bad

Bitter medicines often lead to refusal unless some of the following preventive steps are taken:

- Have your child suck on a Popsicle beforehand to partially numb the mouth.
- Serve the medicine cold to reduce the taste.
- Mix it with a strong flavor (such as Kool-Aid powder, chocolate syrup, or pancake syrup) to hide the bad taste.
- Dilute the medicine as much as possible (for example, one dose mixed in 2 glasses of cold apple juice), if you're certain your child can drink it all.
- Mix crushed pills with one of your child's favorite foods that doesn't require any chewing. Consider ice cream toppings (especially chocolate), honey, maple syrup, applesauce, ice cream, sherbet, or yogurt. Before adding the medicine, have your child practice swallowing the food alone without chewing it (because chewing would bring out the bad taste of the medicine).
- Have a glass of your child's favorite cold drink ready to rinse his mouth afterward - a sort of "chaser."

Overcoming Difficulties with Pills or Capsules

- Some advantages of taking pills over liquid is that they do not taste bad; they are easy to travel with; they do not have to be refrigerated; and you know exactly how much of the medication was taken.
- Place the pill or capsule far back on the tongue and have your child quickly drink water or Kool-Aid through a straw. If your child concentrates on swallowing (even gulping) the liquid, the pill will follow downstream without a hitch.
- If your child is over age 7 or 8 and unable to swallow pills, he should practice this skill when he's not sick or cranky. (Some children can't swallow pills until age 10, however.) Start with small pieces of candy or ice and progress to M&M's. Try to use substances that will melt quickly if they get stuck. If necessary, coat them with butter first. Use the liquid and straw technique. Once candy pellets are mastered, pills will usually be manageable. Please make sure though that the child understands the difference between candy and medication.
- Some pills can be split into halves. Check with the pharmacist about the specific medication before trying this since some medications cannot be split.
- Mix the pill with soft foods. Examples of soft foods are applesauce, yogurt, peanut butter, ice cream, or a jello cube.

References:

Schmitt, MD, B.D. "Medicines: Helping Children Swallow Them." Pediatric Advisor 2011.1 Index. 4 June 2010. Children's Physician Network. 28 Oct. 2011
http://www.cpnonline.org/CRS/CRS/pa_swallmed_hhg.htm

"Helping Children Swallow Pills." KidsGrowth. 28 Oct. 2011
http://www.kidsgrowth.com/resources/articledetail.cfm?id=428

What to Expect After Your Spine Surgery – Discharge Planning

Day of Discharge – It is important to communicate with the team on the time of discharge so that you can be prepared to go home in a timely manner.

Social Work/Patient Care Coordinators – Start communicating with them well in advance if you need any equipment, school notes, visiting nurses or physical therapy referrals or an ambulance for transport. They can plan to have these in place before you leave the hospital.

Hospital Bed - If your child's bedroom is not on the main floor of the house and they are having difficulty with stairs during their stay at the hospital, you can speak with the social worker about renting a hospital bed for the main floor of the house. Often these are not fully covered by insurance.

Physical/Occupational Therapy - Most of the idiopathic patients do not need physical/occupational therapy upon discharge. If they do it will be recommended either by the therapists while you are in the hospital or by the surgeon. If you have any concerns about this please mention it to your surgeon and/or clinical team member that works with them. If you did Schroth or Physical Therapy prior to surgery you may find it helpful to do a few sessions after surgery as well.

Pain Medication - At discharge, you will receive a prescription for pain medication. If needed in liquid form, please fill the prescription before leaving the hospital, as most pharmacies do not carry the pain medication in liquid form.

Melbran Pharmacy - is located across the street from the hospital and will be able to accommodate this request. Please make note of their hours so that you are able to obtain the medication prior to discharge. If you know that you are being discharged on Sunday, please obtain the medication on Saturday.

Melbran: Address: 605 W 168th St. Phone Number: 212-568-1300

Hours: M-F 9 am – 6 pm; Sat. 10 am – 3 pm; CLOSED ON SUNDAY AND HOLIDAYS

Reread your Spine Surgery Guide – Often when you read the guide prior to surgery you don't pay as much attention to post operative details. Please reread the spine surgery guide after the surgery

Incision

Most of the time, the incision is closed with self-absorbing sutures so there is no need for sutures to be removed. Sometimes staples are used and these need to be removed 2-3 weeks after the operation.

The bandage on your back may be changed before you leave the hospital. That bandage usually comes off 7-10 days after the operation during your first post-operative visit in the office. We ask that you do not shower prior to that first post op appointment. You may sponge bathe during that time. It is very important for infection prevention to continue your daily hygiene routines in and out of the hospital. This includes brushing your teeth, sponge bathing, etc.

Underneath the bandage there is a strip of tape that is called Prineo tape. In many of the cases, this tape is used to close the very top layer of skin. At the post op appointment, we will often take the bandage off but leave the Prineo tape on. This will continue to protect the incision and help to flatten it. The tape will come off over time. This usually takes about 3-4 weeks, but it is okay if it comes off prior to that. You can still shower and use soap over this tape. We ask that you do not submerge the incision fully into water until 4 weeks after the surgery. Please call us if it looks like the Prineo is going into the incision instead of staying flat on top of the incision.

It is best to keep the incision out of the sun for a year after surgery. If you will be going swimming you can cover up with a swimshirt, tshirt or a bathing suit that covers the incision. Also use sunscreen under these as well. The other option is using a tape to cover the incision. You can find this at a pharmacy, medical supply store, or online. The name of the tape is 3M micropore tape. It is the flesh colored version.

Call the Office at (212) 305-5475 if:

- You develop a fever (>101 degrees)
- Your suture line becomes red, swollen, warm to touch, or if there is significant drainage from the wound
- If you have significant pain that is not being controlled by pain medication
- If you experience numbness, tingling or weakness in your legs or feet
- If you start vomiting

Post-Operative Appointments

☐**7-14 days after the surgery** with either Amber (Dr. Vitale patients) or Nikki (Dr. Benjamin Roye and Dr. Joshua Hyman patients). Dr. David Roye's patients may make an appointment with either Nikki or Amber. You will not need xrays at this appointment. Please bring your Spine Surgery Guide with you to the appointment

☐**6 weeks after the surgery** with your surgeon. You will get scoliosis xrays at this visit and the subsequent visits.

☐**6 months after the surgery** with xrays

☐**1 year after the surgery** with xrays

☐**On an annual basis** with xrays

The pain team will work with the orthopedic team during your hospital stay. They will suggest what medications you should be discharged on. You will receive prescriptions from orthopedics based on those recommendations.

The prescriptions will consist of several medications. They usually will consist of a short acting opioid (narcotic) pain medication such as oxycodone and sometimes a long acting opioid pain medication such as methadone. Usually acetaminophen (Tylenol) and non-steroidal anti-inflammatory medications such as ibuprofen (Advil/Motrin) are also added to the medication recommendations. Lastly medications for nausea and vomiting are occasionally prescribed.

You will start to come off of the opioid medications around 2 weeks post op. You will need to come down slowly on the oxycodone. You will do this over several days. You can start this by increasing the amount of time in between the doses. You can start by stretching the doses to about every 6-8 hours for a couple of days. Then you can decrease to every 12 hours for a couple of days. Finally you can take the medication at nighttime only for a few days.

As soon as you have stopped all opioid medications, they must be discarded, especially if there are young children in the household.

While you are decreasing the narcotic medications, you can use ibuprofen and acetaminophen in between the oxycodone doses to help manage the pain.

The pain medications cause constipation so it is important to use a stool softener (Colace®) and a laxative (Senna®) while on the narcotics. As you come off of the narcotics, you can start to decrease the stool softener and laxative based on symptoms.

General Guidelines for the Colace and Senna

Ages 3- 6 yrs: Colace soln 25 mg twice a day & Senna soln 5 ml twice a day

Ages 7–12 yrs: Colace soln 50 mg twice a day & Senna soln 10 ml twice a day or Miralax 8.5 gms

Ages 13 and up: Colace 100 mg twice a day and Senna 2 tabs twice a day or Miralax 17 Gms

Do NOT wake your child if they are sleeping in order to give medication

Medication Disposal: When you no longer need the opioid medication, it is important to safely dispose of the medication. Here are several websites with additional information:

https://www.fda.gov/Drugs/ResourcesForYou/Consumers/BuyingUsingMedicineSafely/EnsuringSafeUseofMedicine/SafeDisposalofMedicines/

https://www.deadiversion.usdoj.gov/drug_disposal/

Website to find a DEA authorized collector of opioid medication in your area:

https://apps.deadiversion.usdoj.gov/pubdispsearch/spring/main?execution=e1s1

Medication Tracking

- A system to keep track of medications – when they were last given and when they are due next is helpful to write down.

OXYCODONE	Medicine can be given for severe pain every 4 hours as needed.	Date: Time:
TYLENOL/ACETAMINOPHEN	Medicine can be given for mild to moderate pain every 6 hours as needed.	
MOTRIN/IBUPROFEN	Medicine can be given for mild to moderate pain every 6 hours as needed.	
COLACE	Medicine can be given for constipation every 12 hours	
SENNA	Medicine can be given for constipation every 12 hours.	

NOTES:

DATE:

Time Given:												
OXYCODONE (Medicine can be given for severe pain every 4 hours as needed)												
ACETAMINOPHEN/TYLENOL (Medicine can be given for mild to moderate pain every 6 hours as needed)												
IBUPROFEN/MOTRIN (Medicine can be given for mild to moderate pain every 6 hours as needed)												
SENNA (Medicine can be given for constipation every 12 hours)												
COLACE (Medicine can be given for constipation every 12 hours)												
OTHER:												

DATE:

Time Given:												
OXYCODONE (Medicine can be given for severe pain every 4 hours as needed)												
ACETAMINOPHEN/TYLENOL (Medicine can be given for mild to moderate pain every 6 hours as needed)												
IBUPROFEN/MOTRIN (Medicine can be given for mild to moderate pain every 6 hours as needed)												
SENNA (Medicine can be given for constipation every 12 hours)												
COLACE (Medicine can be given for constipation every 12 hours)												
OTHER:												

Timeline of What to Expect

You will be in the hospital for about 3-5 days

You will be tired and not have too much of an appetite for the first 2 weeks post op. We recommend eating anything that sounds good to the patient.

As soon as you are comfortable, you may take short walks outside or go on short errands. You will tire quickly in the first two weeks so you will be in bed or sitting down most of the time for the first 2 weeks.

You will be out of school for 4-6 weeks. You can go back to school as soon as you are able to sit up for an extended period of time. You may also want to start back with half days to make the transition easier.

You should set up home schooling for the period of time that you will be out of school. This can start about 1 ½ - 2 weeks after the surgery. This way you are coming off of the narcotics and are able to concentrate on the schoolwork. Please speak with the school about getting this set up. You can also speak with the social worker in the hospital who can assist with this as well.

You may use scar management medicine such as Mederma® or Biodermis (http://www.biodermis.com) starting 6 weeks after surgery. Most of our patients do not use this because they are happy with the scar but the option is up to you.

There may be a rebound of the pain at around 3 weeks after the surgery. At that point, most of our patients are moving around very well and can sometimes do too much. If this occurs, take some over the counter pain medication and take it easy over the next day or two. If you have concerns about continued pain, please call our office.

Activities

- Please refer to the graph for specific activities and when you are allowed to do them
- Immediately after surgery you are able to twist, bend, or rotate as tolerated
- You are able to sleep in any position that is comfortable once you go home

Activity	**4 weeks**	**3 Months**
School	Return to class 4-6 wks or earlier if comfortable	
Shower	After wound check (around 7-10 days)	
Swimming (pool, lake, ocean)	4 weeks after surgery	
Submerge the incision (bath/hot tub)	4 weeks after surgery	
Lifting Weights	As soon as comfortable	
Light Workout – walk on treadmill/exercise bike/bicycling	As soon as comfortable	
Light Jogging/Running	As soon as comfortable	
Dance/Yoga	As soon as comfortable	
Driving	Per pre-op ability at 4 weeks	
Gym/Contact Sports	As soon as comfortable	
Contact Sports	As soon as comfortable	
Amusement Park Rides	As soon as comfortable	
Horseback Riding	As soon as comfortable	
Collision Sport (boxing, ice hockey, football, lacrosse, rugby)	Not Allowed	Allowed
Skiing/Ice Skating	Not allowed	Allowed
Skateboarding	Not allowed	Allowed

School Note

This is the school note you will receive from us either preop or at the first post op visit in preparation of your return to school.

Date: _____

To Whom It May Concern,

I am the treating Orthopedic Surgeon for _____. This patient has severe scoliosis and is scheduled to have Spinal Fusion surgery on - _____. The recovery from this surgery involves approximately 4 days in the hospital, and several weeks of recovery at home. Post-operatively patients are unable to attend school because they must take pain medication around the clock, they have difficulty sitting in a chair for long periods of time, and they require assistance with some activities of daily living.

_____ will need to be out of school for 4-6 weeks following the surgery. Please provide home instruction as soon as the student feels able to participate and allow them to return to school on a part-time schedule once able.

Once the student returns to school please excuse them from gym until further notice and allow them extra time between classes. In addition, please provide the student with an elevator pass and second set of books, as applicable.

Please feel free to contact my office with any further questions. Phone: (212) 305- 5475; Fax: (212) 305-5094.

Sincerely,

Here are some common questions that we receive after surgery

Is it normal to have numbness around the incision?

It is normal to have numbness around the incision. The area of numbness will get smaller and resolve over time but this can take up to a year or possibly even longer.

Is it normal to have pain or numbness on the front of the thigh after surgery?

This is caused by pressure on the lateral femoral cutaneous nerve during the surgery. This usually resolves within the first 6 weeks.

Is it normal to have pain around the shoulder blade after surgery?

This is caused by the derotation of the spine during the surgery. This usually resolves within the first 6 weeks but may take longer.

Do I need antibiotics before dental work or a dental cleaning?

You do not need antibiotics prior to dental work after spinal surgery

May I sleep on my stomach right after surgery?

Yes you may sleep however is comfortable for you

May I get a massage after surgery?

Because of discomfort, it is probably better to wait until at least 6 weeks after surgery but then after that you can have a massage as tolerated.

May I get my ears pierced or belly button pierced right after surgery?

You may from an orthopedic standpoint at your parents' discretion

Do I need a letter to go through airport security?

You do not need a letter for security. They do not accept letters from physicians anymore. Most of the time, the metal does not trigger the alarm at the airport. If it does cause the alarm to go off then let security know that you had surgery. They may want to see the top of your scar.

Do I need to stop birth control before the surgery?

No you do not need to stop your normal medications prior to surgery. The PACU nurse will go over when to take the medications and what ones to bring to the hospital when they call you the night before surgery.

Frequently Asked Questions (continued)

Why do I still have a small prominence on my back or uneven shoulders after surgery?

All patients will have a decrease in the prominence of their scoliosis and shoulder/hip asymmetry after the surgery. Sometimes if there is a large prominence or asymmetry, then there will be some residual prominence/asymmetry after the surgery. Some of this may improve even more during the recovery process.

Will I be able to go up the stairs when I go home?

Yes you will be able to go up and down the stairs when you get home. You will be more tired than usual so you will not want to take the stairs often during the first two weeks. Please speak with the PT/OT while in the hospital that you have stairs in your home or building so that they can practice the stairs with you while you are in the hospital.

Am I able to shower once I go home?

You will not be able to shower while you have the post op dressing on for the first 7-14 days. Once you have your post op appt and the bandage is removed, then you may shower if the incision has healed.

What if I have my period or get my period while in the hospital?

Many times, girls do end up having their period while in the hospital because your body has been through the stress of surgery. Please free feel to bring your own supplies in anticipation of this happening.

Some ideas and suggestions for preparing for & recovering from scoliosis surgery

By Parent: Julie Ehlers

The Tour is Really Useful - Columbia-Presbyterian offers a pre-surgical tour, so you can see where you will check in, where you will wait, what the facilities are for parents, what the ICU is like, what the regular rooms are like, etc. Well worth doing.

Parking - Columbia Presbyterian has a parking garage and a valet service. Going on the tour was a good opportunity to figure out where to go, so we didn't drive in circles in traffic on the big day.

Things to bring to the hospital

- Button down shirt for going home – raising arms overhead hurts for a while.
- Sweatshirt or sweater for parents – it can get really cold there.
- Several pillows for the car ride home – we didn't bring one, and regretted it
- Electronics and chargers – we weren't sure we would be able to use them in the hospital, but in fact we could. Cell phone, ipad, ipod, laptop, whatever. The recovering person actually isn't much up for using them, but it's a comfort to have them, and they are useful for the parents.
- Chapstick – Lips can be very dry following surgery. Louise sipped a lot of apple juice, but Chapstick may also be helpful.
- A book or two to read aloud – it's easier to listen to a story being read aloud then to watch TV, and it gives the parents something concrete to do to help. Also useful: a clip-on booklight.
- Optional - a camera – afterwards, we wished we had taken pictures of us dressed in the funny cover-ups before surgery, and the operating room, and other memorable sights. On the other hand, we were so nervous about something going wrong, that maybe 'playing tourist' wouldn't have worked. Sometimes the patient likes to see a pic of scar when the dressing is changed right before discharge.
- Optional - a second driver to get home with – Having a second driver enables one person to focus on driving to try and avoid too many bumps and the other person could help to keep the child comfortable
- Neck Pillow

Stuff to Have at Home

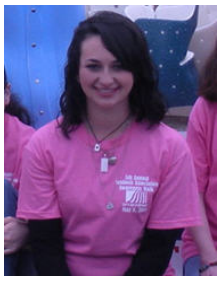
- Pillow, lots of pillows – the first couple of weeks can be challenging, there's no way around it. The recovering patient will want pillows (regular full sized bed pillows) behind her everywhere she sits (dining room, car, living room, etc). At some point it's easier to buy more than to carry them around constantly. Also, a variety of pillows helps trying to sleep: get one extra-long pillow and one firm (tempur pedic-type) in addition to regular ones. When they go back to school, it is possible that they may want one at school for a period of time.
- Straws that bend – for help sipping liquids.

Stuff to Have at Home (continued)

- A couple of button-down shirts – more comfortable than t-shirts for the first two weeks.
- A Non-Slip Insert or a Shower Chair for the Shower – Ask for a prescription for either of these prior to discharge
- Hospital bed – may or may not be a good idea. We rented one. On one hand, it made getting in and out of bed easier, and being able to adjust the angle helped with the pain. On the other hand, the mattress was lumpy and after the first few days, Louise preferred to sleep on a mattress on the floor. During weeks 2-7, she has found it's more comfortable to sleep on a sofa, because she likes the support on one side. You can also ask for a prescription for this prior to discharge
- Extra large bandaids – after 7-10 days, they take off the big dressing on the wound, and give clearance for showering. Louise found it very comforting to have some bandaids on afterwards for a feeling of protection. Make sure to change them regularly (easiest during showers) and give the wound some time to air, so it can dry up.
- Hair washing tray – Louise ended up getting showering clearance on day 11, so she really needed her hair washed. My mom got this for us, and it worked well, except that we also needed a protective cape from a hair salon to keep her back dry. My hair salon sold the cape to me for $7.00. We practiced washing hair using the tray (with the cape and towel under it) twice before the surgery, and were glad we did. You can also go to the hair salon to get their hair washed while they are unable to take a shower.
  http://www.bedbathandbeyond.com/product.asp?SKU=15952253
  http://cgi.ebay.com/NEW-HAIR-CUTTING-CAPE-SALON-SHAMPOO-BARBER-STYLING-/290482722665?pt=LH_DefaultDomain_0&hash=item43a21e9769

Useful Stuff to Know

- The recovering patient will eat hardly anything the first week – this is normal. For some reason, the main food she would eat was yogurt with granola, plus apple juice. Other people have told me their kids liked jello or pudding. You'll have to experiment to find what they'll eat. Once they start eating, they make it up.
- The surgery increases height – the process of straightening out the curve makes the kids taller. Louise gained over an inch. The result of gaining an inch and losing several pounds: she looks great!
- You can ask your doctor for a printout of the x-ray from his computer – we have a very cool "after" picture. You can obtain this in the hospital or at the first post op appt.
- Sleeping arrangements at home - A parent should plan to sleep near or in the kid's room during the first few days at home
- Coughing and sneezing hurt – try bracing when it starts coming on.
- Going back to school can be difficult - The obvious part is that the kid gets tired easily and needs to lie down in the nurse's office or go home early, or take a day off in the very beginning. It may be helpful to start back with half days and then work into full days.
- Meet with the school ahead of time – This allows things such as home schooling, second set of books and the transition back to school easier. See Exhibit A for things to ask for when meeting with the school.
- Minimize weight for back to school – we got lightweight plastic binders for each subject with a small amount of lined paper, so Louise could take out only what she needs for each class. We also got a pocket folder and pencil bag for each one. She of course has a rolling backpack that she is not allowed to carry, only pull.



Fitting in isn't easy when you're a teenager wearing a body brace 23/7. I was finishing my first year in middle school when I was diagnosed with Adolescent Idiopathic Scoliosis and had to wear that "thing" to school. I wore my brace faithfully despite arguments and failed attempts to hide my brace in my locker. Ultimately, I required surgery to correct the two curves growing in my back. On June 27, 2006, I had two titanium rods and twenty-two screws affixed to my spine. My biggest concern was that I wouldn't be able to dance for a year.

Leah Stoltz (Founder)

How did Curvy Girls begin?
My intention was simple--- I wanted to talk to other girls who were going through the same thing--- feeling alone, different, angry that I had to wear a brace, and worried about having to have surgery.
After an all adult group meeting, I said, "I wish they had this for kids" to which my mom said that I could make my own group. So I did. At my orthopedic appointment I told them about my idea and they offered to send out flyers to all their "scoli" patients. That's when the calls started coming in. I held our first group in 2006 right before my before my fourteenth birthday with 4 girls—one of which was me! At our first group we talked about clothes and I brought down shirts to show how to disguise their brace by layering tops.

What do you talk about in group? We discuss things like how to tell other kids about your scoliosis. We give each other clothing tips. We talk about regular stuff that teenagers talk about. Most of all we support each other so we don't feel alone.

What makes Curvy Girls a success?
It's a kids group run by a kid! Some girls travel up to 2 hours to attend our monthly meetings.

Curvy Girls Website
http://www.curvygirlsscoliosis.com/

Curvy Girls Groups in the Tri State Area
Connecticut: http://www.curvygirlsscoliosis.com/groups/connecticut.html
NJ – Jersey Shore: http://www.curvygirlsscoliosis.com/groups/jerseyshore.html
NJ/PA: http://www.curvygirlsscoliosis.com/groups/newjerseyPA.html
NY – Long Island: http://www.curvygirlsscoliosis.com/groups/longisland.html
NY – Hudson Valley: http://www.curvygirlsscoliosis.com/groups/newyork-hudsonvalley.html
NY – Manhattan: http://www.curvygirlsscoliosis.com/groups/manhattan.html

Here are a few places to eat in the neighborhood:

Antika
Family Style Pizzeria
Location: 3924 Broadway btw 164th and 165th
Monday - Sunday 11:00 am - 11:00 pm
(212)781-9100

Burger Heights
Location: 79 Audobon Ave/btw 169th and 170th
11 am – 10 pm, 7 days a week
212-951-0626

Carrot Top
The best carrot cake…muffins… in Manhattan and more (soups, salads, sandwiches, etc).
Location: 3931 Broadway b/w 166th and 167th (on same side of street as MSCHONY)
Monday through Saturday 6am-9pm, Sunday 9am-4pm
(212) 927-4800

Coogan's
Full service restaurant 'featuring a variety of beers, good food, and friendly service.'
Location: 4015 Broadway/corner of 169th (on same side of street as MSCHONY)
11am-12am, 7 days a week
(212) 928-1234

Chipotle
Mexican grill
Location: 4009 Broadway b/w 168th and 169th (on same side of street as MSCHONY)
11 am- 10 pm, 7 days a week

Dallas Barbeque
Full service restaurant featuring ribs, chicken, and steak
Location: 3956 Broadway/corner of 166th (across the street from MSCHONY)
11am-12am, 7 days a week
(212) 568-3700

Dunkin Donuts
4030 Broadway/between 169th and 170th
5 am-11pm, 7 days a week
212-923-2222

D'Vinci's Cuisine Restaurant
Full service restaurant featuring Italian and Spanish specialties.
Location: 1091 St. Nicholas Ave/corner of 165th (down the block from MSCHONY)
11:00am-4am
(212) 543-1200

Famiglia Pizza
Pizza store
Location: 4020 Broadway/corner of 169th
9am-12am, 7 days a week
(212) 927-3333

El Presidente
A full service restaurant featuring Spanish and Italian specialties
Location: 3938 Broadway/corner of 165th (across the street from MSCHONY)
Open 24hours
(212) 927-7011

El Malecon Restaurant
Full service restaurant featuring Dominican specialties
Location: 4141 Broadway and 175th
Open 24 hours
(212) 727-2775

Garden Express at Energy Court
Food cart featuring sandwiches, bagels, baked goods, and beverages
Location: Energy Court, Broadway Entrance at 168th St.
Monday through Friday 6:30am-2:30pm

Heights Tavern
One of the newest restaurants in the area. Serves American cuisine
Location: 3910 Broadway (at 164th St)
Hours: Sun-Thurs 11 am – 2 am; Fri & Sat 11 am – 3 am
212-740-5700
May order delivery/pickup through Seamless or GrubHub
http://heightstavernnyc.com/

Hispaniola Restaurant
Full service restaurant featuring Dominican-Asian fusion fare
Location: 839 W181st St/corner of Cabrini Blvd
11am-4pm, 5:30pm-12am
(212) 740-5222

Jou Jou Café
Café featuring baked goods, soups, sandwiches, salads and drinks
Location: Tower Building Main Lobby
Monday through Friday 7:00am-4:00pm, 4:30pm-7:30pm
Saturday and Sunday 8:00am-3:30pm

Kuhinya
Full service restaurant featuring various pastas and grilled meats
Location: 4005 Broadway b/w 168th and 169th (on same side of street as MSCHONY)
11:30am-11:30pm
(212) 781-2222

Mike's Bagels
Fresh bagels made on the premises, sandwiches, coffee, drinks, etc.
Location: 4003 Broadway/corner of 168th (on same side of street as MSCHONY)
Hours: 5am-5pm
(212) 928-2300

New Leaf Café
Full service restaurant featuring American cuisine. Serves brunch on Sundays
Location: 1 Margaret Corbin Dr. inside Fort Tryon Park. (A train/190th St stop)
12pm-3pm, 6pm-9:30pm, Tue-Sat ; 11am-3pm, 6pm-9:30pm, Sundays

Places to Eat (continued)

Parrilla Steakhouse
A full service restaurant featuring Spanish specialties
Location: 3920 Broadway b/w 164th and 165th (across the street from MSCHONY)
11am-3am
(212) 543-9500 (main); (212) 543-9012 (delivery)

Starbucks
Location: 4001 Broadway at 168th street
917-521-0342

Streets of New York
Buffet-style cafeteria featuring hot food, deli, sandwiches, salads, salad bar, sushi, soups, beverages, baked goods, and desserts
Location: Milstein Hospital (177 Ft. Washington Ave/168th St), 2nd Floor
Monday through Friday 6:30am-7:30pm
Weekends and Holidays 7:30am-4:00pm

Strokos
Café featuring baked goods, soups, sandwiches, salads, salad bar, pizza, pasta station and drinks
Location: 1121 St. Nicholas Ave at 166th St
Monday through Friday 7am-5pm
(212) 927-1171

Subway
Sandwich shop
Location: 3922 Broadway b/w 164th and 165th (across the street from MSCHONY)
8am-12am
(212) 740-9180

Sushi Yu 2
Full service restaurant featuring Japanese fare and sushi
Location: 827 W181st b/w Pinehurst and Cabrini
12 noon-11pm
(212) 781-8833

Tasty Deli
4020 Broadway, b/w 169th and 170th
6 am – 7:15 pm M-F; 8 am – 4 pm Sat/Sun
212-923-0700

Wendy's
Fast food chain featuring hamburgers, etc.
Location: Corner of 165th and Broadway (same side of the street as MSCHONY)
10am-2am

Windows on the Hudson
Full-service sit down restaurant with view of the Hudson River.
Location: Milstein Hospital (177 Ft. Washington Ave/168th St), 9th Floor
Monday through Friday 11:30am-3:00pm, 5:30pm-7:00pm
For reservations call 212-305-4242

Columbia Pediatric Orthopedics Scoliosis Publications

1. Roye BD, Campbell ML, Matsumoto H, Pahys JM, Welborn MC, Sawyer J, Fletcher ND, McIntosh AL, Sturm PF, Gomez JA, Roye DP, Lenke LG, Vitale MG, Children's Spine Study Group. Establishing Consensus on the Best Practice Guidelines for Use of Halo Gravity Traction for Pediatric Spinal Deformity. J Pediatr Orthop. 2019 April 15. PMID: 30994582

2. Polly DW Jr, Ledonio CGT, Diamond B, Labelle H, Sucato DJ, Hresko MT, Emans JB, Vitale MG, Erickson MA, Larson AN, Spinal Deformity Study Group. What Are the Indications for Spinal Fusion Surgery in Scheuermann Kyphosis? J Pediatr Orthop. 2019 May/June. 39(5):217-221. PMID: 30969249

3. Baranek ES, Maier SP 2nd, Matsumoto H, Hyman JE, Vitale MG, Roye DP Jr, Roye BD. Gross Motor Function Classification System Specific Growth Charts-Utility as a Risk Stratification Tool for Surgical Site Infection Following Spine Surgery. J Pediatr Orthop. 2019 Apr;39(4):e298-e302. PMID: 30839482

4. Sethi RK, Yanamadala V, Shah SA, Fletcher ND, Flynn J, Lafage V, Schwab F, Heffernan M, DeKleuver M, Mcleod L, Leveque JC, Vitale M. Improving Complex Pediatric and Adult Spine Care While Embracing the Value Equation. Spine Deform. 2019 March;7(2):228-235. PMID: 30660216

5. DeFrancesco CJ, Pasha S, Miller DJ, Betz RR, Clements DH, Fletcher ND, Glotzbecker MG, Hwang SW, Kelly MP, Lehman RA, Lonner BS, Newton PO, Roye BD, Sponseller PD, Upasani VV, Cahill PJ, Harms Study Group. Corrigendum to: Agreement Between Manual and Computerized Designation of Neutral Vertebra in Idiopathic Scoliosis [Spine Deformity 6/6 (2018) 644-650]. Spine Deform. 2019 March; 7(2):380. PMID: 30660240

6. Russo C, Trupia E, Campbell M, Matsumoto H, Smith J, Samdani A, Emans J, Roye D, Vitale M, Children's Spine Study Group. The Association Between the Classification of Early-onset Scoliosis and Smith Complications After Initiation of Growth-friendly Spine Surgery: A Preliminary Study. J Pediatr Orthop. 2019 January 19. PMID: 30672765

7. DeFrancesco CJ, Pasha S, Miller DJ, Betz RR, Clements DH, Fletcher ND, Glotzbecker MG, Hwang SW, Kelly MP, Lehman RA, Lonner BS, Newton PO, Roye BD, Sponseller PD, Upasani VV, Cahill PJ; Harms Study Group. Agreement Between Manual and Computerized Designation of Neutral Vertebra in Idiopathic Scoliosis.Spine Deform. 2018 Nov – Dec; 6(6): 644-650. PMID: 30348338

8. Baranek ES, Maier SP 2nd, Matsumoto H, Hyman JE, Vitale MG, Roye DP Jr, Roye BD. Gross Motor Function Classification System Specific Growth Charts-Utility as a Risk Stratification Tool for Surgical Site Infection Following Spine Surgery. J Pediatr Orthop. 2018 Nov 2. doi: 10.1097/BPO.0000000000001285. [Epub ahead of print] PMID: 30395003

9. Wen TC, Lall S, Pagnotta C, Markward J, Gupta D, Ratnadurai-Giridharan S, Bucci J, Greenwald L, Klugman M, Hill NJ, Carmel JB. Corrigendum: Plasticity in One Hemisphere, Control From Two: Adaptation in Descending Motor Pathways After Unilateral Corticospinal Injury in Neonatal Rats. Front Neural Circuits. 2018 Sept 25; 12:80. doi: 10.3389/fncir.2018.00080 [eCollection 2018] PMID: 30310380

10. Nielsen E, Andras LM, Bellaire L, Fletcher ND, Minkara A, Vitale MG, Troy M, Glotzbecker M, Skaggs DL. Don't you wish you had fused to the pelvis the first time: a comparison of reoperation rate and correction of pelvic obliquity. Spine. 2018 Oct 5. doi: 10.1097/BRS.0000000000002888. [Epub ahead of print] PMID: 30299416

11. Larson AN, Ledonio CGT, Brearley AM, Sucato DJ, Carreon LY, Crawford AH, Stevenson DA, Vitale MG, Moertel CL, Polly DW Jr. Predictive Value and Interrater Reliability of Radiographic Factors in Neurofibromatosis Patients With Dystrophic Scoliosis. Spine Deform. 2018 Sept – Oct; 6(5):560-567. PMID: 30122392

12. Roye BD, Vitale MG. Nonoperative treatment of infantile spinal deformity. Current Orthopaedic Practice. 2018 Sept-Oct; 29(5): 436-39.

13. Beauchamp EC, Anderson RCE, Vitale MG. Modern Surgical Management of Early Onset and Adolescent Idiopathic Scoliosis. Neurosurgery. 2018 July 17. doi: 10.1093/neuros/nyy267. [Epub ahead of print] PMID: 30016462

14. Imahiyerobo T, Minkara AA, Matsumoto H, Vitale MG. Plastic Multilayered Closure in Pediatric Nonidiopathic Scoliosis Is Associated With a Lower Than Expected Incidence of Wound Complications and Surgical Site Infections. Spine Deform. 2018 Jul - Aug;6(4):454-459. doi: 10.1016/j.jspd.2017.12.009. PMID:29886919

15. Bachabi M, McClung A, Pawelek JB, El Hawary R, Thompson GH, Smith JT, Vitale MG, Akbarnia BA, Sponseller PD, Children's Spine Study Group, Growing Spine Study Group. Idiopathic Early-Onset Scoliosis: Growing Rods Versus Vertically Expandable Prosthetic Titanium Ribs at 5-Year Follow-up. J Pediatr Orthop. 2018 June 8. doi: 10.1097/BPO.0000000000001202. [Epub ahead of print] PMID: 29889772

16. Park JH, Stegall PR, Roye DP, Agrawal Sk. Robotic Spine Exoskeleton (RoSE): Characterizing the 3-D Stiffness of the Human Torso in the Treatment of Spine Deformity. IEEE Transactions on Neural Systems and Rehabilitation Engineering. 2018 May;26(5):1026-1035. doi: 10.1109/TNSRE.2018.2821652. PMID: 29752238

17. Feinberg N, Matsumoto H, Hung CW, St Hilaire T, Pawelek J, Sawyer JR, Akbarnia BA, Skaggs DL, Roye BD, Roye DP Jr, Vitale MG. Expert Consensus and Equipoise: Planning a Randomized Controlled Trial of Magnetically Controlled Growing Rods. Spine Deform. 2018 May - Jun;6(3):303-307. doi: 10.1016/j.jspd.2017.11.002. PMID: 29735141

18. Matsumoto H, Williams B, Park HY, Yoshimachi JY, Roye BD, Roye DP Jr, Akbarnia BA, Emans J, Skaggs D, Smith JT, Vitale MG.The Final 24-Item Early Onset Scoliosis Questionnaires (EOSQ-24): Validity, Reliability and Responsiveness. J Pediatr Orthop. 2018 Mar;38(3):144-151. doi: 10.1097/BPO.0000000000000799.PMID:27299779

19. Jenkins KJ, Beekman RH, Vitale MG, Hennrikus WL, Minich LL, Ackerman MJ, Berger S, Jaquiss RD, Mahle WT, Marino BS, Vincent JA, Morrow WR, Otsuka NY, Abzug JM, Ganley TJ, Herman MJ, Hyman JE, Segal LS, Shaw BA, Schwend RM. Off-Label Use of Medical Devices in Children. Section on Cardiology and Cardiac Surgery. Section on Orthopaedics. Pediatrics 2017 Jan;139(1). pii: e20163439. doi: 10.1542/peds.2016-3439.

20. Robotic Spine Exoskeleton (RoSE): Characterizing the Three-dimensional Stiffness of the Human Torso in the Treatment of Spine Deformity TNSRE-2017-00289. IEEE TNRSE.

21. Vitale M, Minkara A, Matsumoto H, Albert T, Anderson R, Angevine P, Buckland A, Cho S, Cunningham M, Errico T, Fischer C, Kim HJ, Lehman R Jr., Lonner B, Passias P, Protopsaltis, Schwab F, Lenke L. Building Consensus: Development of Best Practice Guidelines on Wrong Level Surgery in Spinal Deformity. Spine Deform. 2018 Mar – Apr;6(2): 121-129. DOI: 10.1016/j.jspd.2017.08.005. Epub 2017 Oct 18 PMID: 29413733

22. Mackenzie WGS, McLeod L, Wang K, Crotty J, Hope JE, Imahiyerobo TA, Ko RR, Anderson RCE, Saiman L, Vitale MG. Team Approach: Preventing Surgical Site Infections in Pediatric Scoliosis Surgery. Journal of Bone and Joint Surgery. 2018 Feb;6(2):e2. doi: 10.2106/JBJS.RVW.16.00121. PMID: 29406434
23. Minkara A, Bainton N, Tanaka M, Kung J, DeAllie C, Khaleel A, Matsumoto H, Vitale M, Roye B. High Risk of Mismatch Between Sanders and Risser Staging in Adolescent Idiopathic Scoliosis: Are We Guiding Treatment Using the Wrong Classification? Journal of Pediatric Orthopaedics. 2018 Jan 22. doi: 10.1097/BPO.0000000000001135. [Epub ahead of print] PMID: 29360659

24. Mercuri E, Finkel RS, Mutoni F, Wirth B, Montes J, Main M, Mazzone ES, Vitale M, Snyder B, Quijano-Roy S, Bertini E, Davis RH, Meyer OH, Simonds AK, Schroth MK, Graham RJ, Krshner J, Iannaccone ST, Crawford TO, Woods S, Qian Y, Sejersen T; SMA Care Group. Diagnosis and management of spinal muscular atrophy: Part 1: Recommendations for diagnosis, rehabilitation, orthopedic and nutritional care. Neuromuscul Disord. 2018 Feb;28(2):103-115. doi: 10.1016/j.nmd.2017.11.005. Epub 2017 Nov 23. PMID: 29290580

25. Finkel RS, Mercuri E, Meyer OH, Simonds AK, Schroth MK, Graham RJ, Kirschner J, Iannaccone ST, Crawford TO, Woods S, Muntoni F, Wirth B, Montes J, Main M, Mazzone ES, Vitale M, Snyder B, Quijano-Roy S, Bertini E, Davis RH, Qian Y, Sejersen T; SMA Care Group. Diagnosis and management of spinal muscular atrophy: Part 2: Pulmonary and acute care; medications, supplements and immunizations; other organ systems; and ethics. Neuromuscul Disord. 2018 Mar;28(3):197-207. doi: 10.1016/j.nmd.2017.11.004. Epub 2017 Nov 23. PMID: 29305137

26. El-Hawary R, Kadhim M, Vitale M, Smith J, Samdani A, Flynn JM; Children's Spine Study Group. VEPTR Implantation to Treat Children With Early-Onset Scoliosis Without Rib Abnormalities: Early Results From a Prospective Multicenter Study. Journal of Pediatric Orthopaedics. 2017 Dec; 37(8):e599-e605. doi: 10.1097/BPO.0000000000000943. PMID: 28141685

27. Hughes M, Dua K, N O'Hara N, Brighton BK, Ganley TJ, Hennrikus WL, Herman MJ, Hyman JE, Lawrence JT, Mehlman CT, Noonan KJ, Otsuka NY, Schwend RM, Shrader MW, Smith BG, Sponseller PD, Abzug JM. Variation Among Pediatric Orthopaedic Surgeons When Treating Medial Epicondyle Fractures. J Pediatr Orthop. 2017 Oct 18. doi: 10.1097/BPO.0000000000001092. [Epub ahead of print] PMID: 29049267

28. Glotzbecker MP, St Hilaire TA, Pawelek JB, Thompson GH, Vitale MG; Children's Spine Study Group, Growing Spine Study Group. Best Practice Guidelines for Surgical Site Infection Prevention With Surgical Treatment of Early Onset Scoliosis. J Pediatr Orthop. 2017 Oct 23. doi: 10.1097/BPO.0000000000001079. [Epub ahead of print] PMID: 29064871

29. Minkara AA, Lin AY, Vitale MG, Roye DP Jr. Acute Kidney Injury Secondary to Cell Saver in Posterior Spinal Fusion. Spine Deform. 2017 Nov;5(6):430-434. doi: 10.1016/j.jspd.2017.03.010.

30. Park HY, Matsumoto H, Feinberg N, Roye DP, Kanj WW, Betz RR, Cahill PJ, Glotzbecker MP, Luhmann SJ, Garg S, Sawyer JR, Smith JT, Flynn JM, Vitale MG. The Classification for Early Onset Scoliosis (C-EOS) Correlates with Vertical Expandable Prosthetic Titanium Rib (VEPTR) Proximal Anchor Failure. Journal of Pediatric Orthopaedics. 2017 Sep; 37(6):381-386. doi: 10.1097/BPO.0000000000000682. PMID: 26566066 PMCID:PMC5664192

31. Yang J, Skaggs DL, Chan P, Shah SA, Vitale MG, Neiss G, Feinberg N, Andras LM. Raising Mean Arterial Pressure Alone Restores 20% of Intraoperative Neuromonitoring Losses. Spine (Phila Pa 1976). 2017 Oct 18. doi: 10.1097/BRS.0000000000002461. [Epub ahead of print] PMID: 29049087

32. Kelley BJ, Minkara AA, Angevine PD, Vitale MG, Lenke LG, Anderson RC. Temporary occipital fixation in young children with severe cervical-thoracic spinal deformity. Neurosurg Focus. 2017 Oct; 43(4): E11. DOI: 10.3171/2017.7.FOCUS17287. PMID: 28965445

33. El-Hawary R, Sturm P, Cahill P, Samdani A, Vitale M, Gabos P, Bodin N, d'Amato C, Harris C, Al Khudairy A, Smith JT. What is the Risk of Developing Proximal Junctional Kyphosis During Growth Friendly Treatments for Early-onset Scoliosis? J Pediatr Orthop. 2017 Mar;37(2):86-91. doi: 10.1097/BPO.0000000000000599. PMID: 26192880 [PubMed - indexed for MEDLINE]

34. LaGreca J, Flynn T, Cahill PJ, Samdani A, Vitale MG, El-Hawary R, Smith JT, Phillips JH, Flynn JM, Glotzbecker M, Garg S; Children's Spine Study Group. Patients Without Intraoperative Neuromonitoring (IONM) Alerts During VEPTR Implantation Did Not Sustain Neurological Injury During Subsequent Routine Expansions: A Retrospective Multicenter Cohort Study. J Pediatr Orthop. 2017 Mar 21. doi: 10.1097/BPO.0000000000000976. [Epub ahead of print]

35. Mercuri E, Finkel R, Muntoni F, Wirth B, Montes J, Main M, Mazzone ES, Vitale M, Snyder B, Roy SQ, Bertini E, Davis RH, Meyer OH, Simonds A, Schroth M, Graham R, Krischner J, Iannaccone S, Crawford T, Wood S, Sejersen T, Qian Y for the SMA Care group. Diagnosis and management of Spinal Muscular Atrophy: Part 1: diagnosis, rehabilitation, orthopedic and nutritional care. The Lancet. [Accepted March 2017, publication information to be added shortly].

36. El-Hawary R, Kadhim M, Vitale M, Smith J, Samdani A, Flynn JM; Children's Spine Study Group. VEPTR Implantation to Treat Children With Early-Onset Scoliosis Without Rib Abnormalities: Early Results From a Prospective Multicenter Study. J Pediatr Orthop. 2017 Jan 30. doi: 10.1097/BPO.0000000000000943. [Epub ahead of print] PubMed PMID: 28141685.

37. Polly DW Jr, Ledonio CG, Diamond B, Labelle H, Sucato DJ, Hresko MT, Emans JB, Vitale MG, Erickson MA, Larson AN; Spinal Deformity Study Group. What are the Indications for Spinal Fusion Surgery in Scheuermann Kyphosis? J Pediatr Orthop. 2017 Jan 30. doi: 10.1097/BPO.0000000000000931. [Epub ahead of print] PubMed PMID: 28141687.

38. Chowdhury NA, Sewatsky ML, Kim H. Transdermal Scopolamine Withdrawal Syndrome Case Report in the Pediatric Cerebral Palsy Population. Am J Phys Med Rehabil. 2017 Jan 9. doi: 10.1097/PHM.0000000000000665. [Epub ahead of print] PubMed PMID: 28081025.

39. Jenkins KJ, Beekman RH, Vitale MG, Hennrikus WL, Minich LL, Ackerman MJ, Berger S, Jaquiss RD, Mahle WT, Marino BS, Vincent JA, Morrow WR, Otsuka NY, Abzug JM, Ganley TJ, Herman MJ, Hyman JE, Segal LS, Shaw BA, Schwend RM. Off-Label Use of Medical Devices in Children. Section on Cardiology and Cardiac Surgery. Section on Orthopaedics. Pediatrics 2017 Jan;139(1). pii: e20163439. doi: 10.1542/peds.2016-3439.

40. Cyr M, Hilaire TS, Pan Z, Thompson GH, Vitale MG, Garg S; Children's Spine Study Group, Growing Spine Study Group. Classification of Early Onset Scoliosis has Excellent Interobserver and Intraobserver Reliability. J Pediatric Orthopaedics. 2017 Jan;37(1):e1-e3. PMID:26600295

41. El-Hawary R, Samdani A, Wade J, Smith M, Heflin JA, Klatt JW, Vitale MG, Smith JT; Children's Spine Study Group. Rib-based Distraction Surgery Maintains Total Spine Growth. J Pediatric Orthopaedics. 2016 Dec;36(8):841-846.PMID:26090967

42. Tauchi R, Tsuji T, Cahill PJ, Flynn JM, Flynn JM, Glotzbecker M, El-Hawary R, Heflin JA, Imagama S, Joshi AP, Nohara A, Ramirez N, Roye DP Jr, Saito T, Sawyer JR, Smith JT, Kawakami N. Reliability analysis of Cobb angle measurements of congenital scoliosis using X-ray and 3D-CT images. Eur J Orthop Surg Traumatol. 2016 Jan; 26(1):53-7. doi: 10.1007/s00590-015-1701-7. PubMed PMID: 26377663.

43. Chan CM, Swindell HW, Matsumoto H, Park HY, Hyman JE, Vitale MG, Roye DP, Roye BD. Effect of Preoperative Indications Conference on Procedural Planning for Treatment of Scoliosis. Spine Deformity. 2016 January. 4(1): 27-32. DOI: http://dx.doi.org/10.1016/j.jspd.2015.05.003

44. Glotzbecker MP, Wang K, Waters PM, McCarthy J, Flynn JM, Vitale MG; POSNA committee on the Quality, Safety, Value Initiative (QSVI). Quality, Safety, and Value in Pediatric Orthopaedic Surgery. J Pediatric Orthopaedics. 2016 Sep;36(6):549-57. doi: 10.1097/BPO.0000000000000506. PMID:26296218

45. Glotzbecker MP, Gomez JA, Miller PE, Troy MJ, Skaggs DL, Vitale MG, Flynn JM, Barrett KK, Pace GI, Atuahene BN, Hedequist DJ. Management of Spinal Implants in Acute Pediatric Surgical Site Infections: A Multicenter Study. Spine Deform. 2016 Jul;4(4):277-282. doi: 10.1016/j.jspd.2016.02.001

46. Matsumoto H, Williams B, Park HY, Yoshimachi JY, Roye BD, Roye DP, Akbarnia BA, Emans J, Skaggs D, Smith J, Vitale MG. The Final 24 Item Early Onset Scoliosis Questionnaires (EOSQ-24): Validity, Reliability and Responsiveness. Journal of Pediatric Orthopaedics. 2016 June 13. Epub Ahead of Print. DOI: 10.1097/BPO.0000000000000799.

47. Wright ML, Skaggs DL, Matsumoto H, Woon RP, Trocle A, Flynn JM, Vitale MG. Does the Type of Metal Instrumentation Affect the Risk of Surgical Site Infection in Pediatric Scoliosis Surgery? Spine Deformity. 2016 May. 4(3): 206-210.

48. Skaggs DL, Seehausen DA, Yamaguchi KT Jr, Hah RJ, Wright ML, Bumpass DB, Kim HJ, Andras LM, Vitale MG, Lenke LG. Assessment of Lowest Instrumented Vertebra Tilt on Radiographic Measurements in Lenke "C" Modifier Curves Undergoing Selective Thoracic Fusion in Adolescent Idiopathic Scoliosis. Spine Deform. 2016 Mar;4(2):125-130. doi: 10.1016/j.jspd.2015.08.006

49. Salsgiver E, Crotty J, LaRussa SJ, Bainton NM, Matsumoto H, Demmer RT, Thumm B, Vitale MG, Saiman L. Surgical Site Infections following Spine Surgery for Non-idiopathic Scoliosis. Journal of Pediatric Orthopaedics. 2016 Feb 10. Epub Ahead of Print. DOI: 10.1097/BPO.0000000000000727

50. Del Mar Pozo-Balado M, Matsumoto H, Vitale MG, Praena-Fernández JM, Farrington DM. Reliability and Validity of the Adapted Spanish Version of the Early-onset Scoliosis-24 Questionnaire. Spine (Phila Pa 1976). 2016 May;41(10):E625-31. DOI: 10.1097/BRS.0000000000001322.

51. Tauchi R, Tsuji T, Cahill PJ, Flynn JM, Flynn JM, Glotzbecker M, El-Hawary R, Heflin JA, Imagama S, Joshi AP, Nohara A, Ramirez N, Roye DP Jr, Saito T, Sawyer JR, Smith JT, Kawakami N. Reliability analysis of Cobb angle measurements of congenital scoliosis using X-ray and 3D-CT images. Eur J Orthop Surg Traumatol. 2016 Jan; 26(1):53-7. doi: 10.1007/s00590-015-1701-7. PubMed PMID: 26377663.

52. Chan CM, Swindell HW, Matsumoto H, Park HY, Hyman JE, Vitale MG, Roye DP, Roye BD. Effect of Preoperative Indications Conference on Procedural Planning for Treatment of Scoliosis. Spine Deformity. 2016 January. 4(1): 27-32. DOI: http://dx.doi.org/10.1016/j.jspd.2015.05.003

53. Demirkiran HG, Kinikli GI, Olgun ZD, Kamaci S, Yavuz Y, Vitale MG, Yazici M. Reliability and Validity of the Adapted Turkish Version of the Early-onset Scoliosis-24-Item Questionnaire (EOSQ-24). J Pediatr Orthop. 2015 Dec;35(8):804-9. doi: 10.1097/BPO.0000000000000378.

54. Smith JT, Johnston C, Skaggs D, Flynn J, Vitale M. A New Classification System to Report Complications in Growing Spine Surgery: A Multicenter Consensus Study. J Pediatr Orthop. 2015 Dec;35(8):798-803. doi: 10.1097/BPO.0000000000000386.

55. Roye BD, Wright ML, Matsumoto H, Yorgova P, McCalla D, Hyman JE, Roye DP, Shah SA, Vitale MG. An Independent Evaluation of the Validity of a DNA-Based Prognostic Test for Adolescent Idiopathic Scoliosis. Journal of Bone and Joint Surgery. 2015 Dec 16; 97 (24): 1994-1998. PMID: 26677232.

56. Park HY, Matsumoto H, Feinberg N, Roye DP, Kanj WW, Betz RR, Cahill PJ, Glotzbecker MP, Luhmann SJ, Garg S, Sawyer JR, Smith JT, Flynn JM, Vitale MG. The Classification for Early Onset Scoliosis (C-EOS) Correlates with the unin of Vertical Expandable Prosthetic Titanium Rib (VEPTR) Proximal Anchor Failure. Journal of Pediatric Orthopaedics. 2015 Nov 13; Epub Ahead of Print

57. Cyr M, Hilaire TS, Pan Z, Thompson GH, Vitale MG, Garg S; Children's Spine Study Group, Growing Spine Study Group. Classification of Early Onset Scoliosis has Excellent Interobserver and Intraobserver Reliability. Journal of Pediatric Orthopaedics. 2015 Nov 13. [Epub ahead of print]

58. Glotzbecker MP, Wang K, Waters PM, McCarthy J, Flynn JM, Vitale MG; POSNA committee on the Quality, Safety, Value Initiative (QSVI). Quality, Safety, and Value in Pediatric Orthopaedic Surgery. Journal of Pediatric Orthopaedics. 2015 Aug 20. [Epub ahead of print]

59. Vitale M, Wang K, Pace G. The Wisdom of Crowds. J Pediatr Orthop. 2015 Jul-Aug;35(5 Suppl 1):S55-60. doi: 10.1097/BPO.0000000000000550.

60. Matsumoto H, Colacchio, Schwab FJ, Lafage V, Roye DP, Vitale MG. Flatback Revisited: Reciprocal Loss of Lumbar Lordosis Following Selective Thoracic Fusion in the Setting of Adolescent Idiopathic Scoliosis. Spine Deformity. 2015 July. 3(4): 345-351. DOI: http://dx.doi.org/10.1016/j.jspd.2015.01.004

Notes

Notes

Notes

ColumbiaDoctors | Pediatric Orthopedics

Division of Pediatric Orthopedics

NewYork-Presbyterian/Morgan Stanley Children's Hospital
Columbia University Medical Center

3959 Broadway, 8 North
New York, NY 10032

Tel: 212.305.5475
Fax: 212.305.8271

columbiaortho.org