The promise of achieving higher standards in children’s health.

Nemours/Alfred I. duPont Hospital for Children, named one of the best children’s hospitals in the nation by U.S. News & World Report, is ranked in all 10 surveyed specialties including cancer, cardiology and heart surgery, diabetes and endocrinology, gastroenterology (GI) and GI surgery, neonatology, neurology and neurosurgery, nephrology, orthopedics, pulmonology and urology.

For Spine and Scoliosis Center Appointments:
(302) 651-4200
For Spine and Scoliosis Center Questions:
(302) 651-5904 or (302) 651-5740
The promise to care for every child as if they were our own.

As one of the premier pediatric health care systems in the nation, Nemours has made a promise to do whatever it takes to prevent and treat the most disabling childhood conditions. Every day at Nemours, the country’s top pediatric specialists, researchers, educators and caregivers are working together with our physician partners, schools and communities to fulfill that promise.

Established in 1936 as a legacy of Alfred I. duPont, Nemours cares for a quarter of a million children annually in Delaware, Pennsylvania, New Jersey, Maryland and Florida, as well as children from across the nation and around the world.

At Nemours, we’re dedicated to achieving the highest standards in children’s health. We begin by caring for children as if they were our own. For more than 70 years, this has been the Nemours Way.

The Nemours Spine and Scoliosis Center

Welcome

Welcome to the Nemours Spine and Scoliosis Center. It is of the utmost importance to us that our patients and families are as knowledgeable and as comfortable as possible throughout their treatment. The following information will answer many of your questions about what to expect as you prepare for spinal surgery and recovery. If you have any additional questions, we urge you to call us or schedule a conference with your doctor. Your full awareness of what’s involved will help to minimize stress and improve the overall experience.

Meet the Staff

At the Nemours Spine and Scoliosis Center, we’re experts in treating the full range of scoliosis in children and teens. As one of the premier referral destinations for spine disorders in the Mid-Atlantic region, we performed more than 300 scoliosis procedures in 2013. Our hospital stays, infection rates and re-operations are below the national average. Attending physicians Peter Gabos, MD, and Suken Shah, MD, lead our staff. Dr. Gabos attended New York University School of Medicine with an internship and residency at St. Luke’s Roosevelt Hospital Center. Dr. Shah attended medical school at Jefferson Medical College with an internship at Pennsylvania Hospital and residency at Thomas Jefferson University Hospital. Both physicians completed their fellowship training at Nemours/Alfred I. duPont Hospital for Children and have published in numerous peer-reviewed journals and texts regarding pediatric spine surgery. Both Dr. Gabos and Dr. Shah are members of the Scoliosis Research Society and are actively involved in prospective outcome studies regarding spine surgery. They lecture on spinal deformity nationally and internationally, and are involved in developing leading-edge techniques to improve patient outcomes.

Your primary contact for questions, scheduling and planning will be the surgeons’ administrative assistants. You may call them at any time with questions or concerns.
A nurse practitioner (NP) works with the Nemours Spine and Scoliosis Center surgeons: Alicia McCarthy, CPNP-AC. Alicia has earned a bachelor’s and master’s degree in nursing, and holds a board certification in acute care pediatrics. Also working with the Spine and Scoliosis Center team is a clinical services specialist, Lisa Nichols. Lisa is a certified medical technician and brings many years of experience at Nemours to the team. These team members primarily focus on care coordination, work with the surgeons in the outpatient clinics and respond to parent phone calls throughout the day. Urgent calls will be answered or returned as quickly as possible. Non-urgent calls are usually returned at lunch or the end of the day as time allows.

During an inpatient stay, you may meet many different members of our staff. Several nurse practitioners work with our patients while they are in the hospital, and the care they provide is closely coordinated with your child’s attending physician. You may also meet fellow and resident physicians. They are doctors who have graduated from medical school and are in specialty training in orthopedics. Fellows are surgeons who have completed their orthopedic residency and are training as subspecialists in pediatric orthopedics.

These doctors are present in the operating room to assist the attending surgeons, but the attending physician will perform your child’s surgery. Resident and fellow physicians will participate in following your child’s progress on a daily basis, but they are not a substitute for the attending physician. Our surgeons also visit their patients every day while they are in the hospital.

The nursing staff will participate in your child’s care as well and will provide frequent updates during your child’s surgery, in the recovery room and on the inpatient floor. While on the inpatient floor, a registered nurse and a patient care assistant will be assigned to your child for each eight- or 12-hour shift. Each shift also has a charge nurse who manages the floor. Monica M. Boyle, BSN, RN, serves as the nurse manager for our inpatient floor, 3 West. The nursing staff is always available to answer questions or address any concerns you have regarding your child’s care.

Preparing for Surgery

The Nemours Spine and Scoliosis Center team plans for each patient in great detail in order to keep every child safe.

Once surgery is scheduled with the surgical administrative assistant(s) you will receive a letter detailing the dates and times of your child’s preoperative visits. We will make every effort to minimize the number of days you will have to miss work or school.

All spine surgery patients will meet with one of our pediatric hospitalists for medical clearance prior to surgery. Children with additional medical concerns will meet with one of our pediatricians specializing in medically complex patients. This specialist will work in coordination with a multidisciplinary team to manage every issue before, during and after the surgery. If your child has care provided by specialists outside of the Nemours network, it may be necessary to obtain records or letters from them to facilitate total care for your child.

Your Presurgical Visit

About a week prior to the date of the surgery, you will have a variety of appointments at the Presurgical Care Center located on the second floor of the hospital. A staff member will contact you with information about what to bring with you including medications, insurance cards and proof of guardianship, if applicable. During the presurgical visit a nurse practitioner will review your child’s history and complete a physical exam. She will tell you what to expect the day of surgery, including how your family will be kept informed during the procedure, when you can expect the doctor to speak with you, and when you can join your child in the recovery room. You and your child will be shown the incentive spirometer. This is a tool your child will use to help expand his or her lungs and prevent pneumonia from developing during recovery. Routine lab work, clinical photographs and X-rays will be completed. If you have agreed to participate in our research database, you will meet with one of our research coordinators for assessment and consent paperwork. Your child’s anesthesiologist will meet with you the morning of surgery.

Blood Donation

Many advances have been made to minimize blood loss in surgery and reduce the need for blood transfusions. At Nemours/Alfred I. duPont Hospital for Children, we have significantly reduced the need for blood transfusions through improvements in anesthesia, perioperative medications and use of a cell saver in the operating room. This system collects and filters the patient’s own lost blood so it can be returned to the patient during the procedure.

Despite these advances, blood transfusions are sometimes needed during or following spine surgery. The Blood Bank provides enough blood products for the surgery, which are prepared and set aside for your child. Eligible patients may choose to donate a unit of their own blood before surgery. If you are interested in having your child auto-donate blood, discuss this with your surgeon and you will receive further instruction from the Blood Bank. Office assistants will help arrange for the blood donation at least two to three weeks before the surgery date. Please have your child start iron supplements three to four weeks prior to the auto-donation. Details regarding iron supplementation can be found in “The Month Before Surgery” section of this booklet. If you have any questions about the donation, please call the Hematology Day Therapy Unit at (302) 651-5500.
A parent or other family member must be available at home to care for the child while he or she recovers after surgery. We will complete the necessary Family and Medical Leave Act (FMLA) paperwork for one caregiver to be available. Call the office with any questions. Our department fax number is (302) 651-5951.

Emmi Educational Program
To help educate patients and families, we have created an online educational program called Emmi. You will receive login access to the program from your surgeon’s assistant via email. We recommend that you view this program before your family conference so your surgeon can address your questions.

School/Work
If the surgery takes place during the school year, students typically miss about three to four weeks of school. Many will ease back in with half days initially, gradually increasing the length of the school day. The Nemours Spine and Scoliosis Center team can help you to arrange homebound tutoring so the student does not fall behind. Every school district is different, so please obtain the necessary forms from your child’s school and we will complete them for you. If your school does not have its own forms, we have a generic form that can be used. When the student is ready to return to school, we will provide you with a letter for the school detailing all restrictions.

The Month Before Surgery
One month prior to surgery:
- Have your child STOP taking all NSAID (non-steroidal anti-inflammatory drugs) medications. This includes all ibuprofen, Motrin®, Advil®, Aleve® and naproxen products.
- If your child does not already take iron (Feosol®) supplements, start now. These are available over the counter. Your child should take one 325 mg. tablet by mouth two times a day with meals. This can cause constipation and dark stools. Please give a stool softener such as MiraLax® or Colace® as needed to help avoid constipation at the time of surgery. We also recommend iron-rich foods – please see a list of these foods on the next page.
- If your child does not currently take acid-reducing medication such as Pepcid®, Zantac®, Tagamet®, or Nexium®, it should be started now. These help prevent stomach pain and ulcers. Please ask your child to continue this medication at least six weeks after surgery.

The night before surgery:
- A member of the presurgical staff will call you after 2 p.m. to confirm your scheduled arrival time and give you directions for when your child should stop eating and drinking. If you have any questions, they can be reached at (302) 651-5050.
- Encourage your child to have a bowel movement (BM). Avoid constipation to keep your child as comfortable as possible.

The morning of surgery:
- Dress your child in comfortable clothes and leave all jewelry at home.
- Tie long hair out of the way such as in a braid, pigtails or a bun.
- RELAX.

During Your Stay
Every patient is unique and care at the Nemours Spine and Scoliosis Center is tailored to each individual.

Most patients undergoing spine fusion surgery should expect a three- to five-day stay at the hospital. Most of the first day will be spent in the operating room and recovery area. When your child wakes up from surgery he or she will have compression boots on both legs. These help prevent clots from developing during your child’s period of inactivity. Once your child has been transported to the inpatient floor, he or she will spend much of the first night sleeping and recovering. A designated nurse and a patient care aide will care for your child. They will orient you and your child to the room and the unit, and make sure you have everything you need for the night. Your child will have a PCA (patient-controlled analgesia) pump connected to the intravenous line (IV). This will allow for continuous flow of IV pain medication, but enables the patient to get a boost of additional medication if needed. The amount and timing of medication is all controlled and recorded by a computer to ensure that the amount of pain medication delivered is safe and appropriate for the patient.

Iron-Rich Foods
- Seafood
cod, sardines, tuna, clams, oysters, shrimp
- Poultry
chicken, eggs, yolk
- Meats
beef, lamb, veal, pork, liver
- Nuts and Beans
soybeans, lentils, green beans, peas, kidney beans, navy beans, pinto beans, black beans, hazelnuts, almonds, peanuts
- Vegetables
broccoli, chard, spinach, greens, asparagus, tumips, parsley, kale, watercress, Brussels sprouts
- Fruits
dates, prunes, figs, apricots, apples, raisins, coconut
- Bread
enriched, fortified and whole-grain breads
- Grains
wild rice, corn meal, oats, soybean, wheat, bran, rye, buckwheat, popcorn, barley, wheat germ, millet
- Cereals
Farina, Cream of Wheat®, Shredded Wheat, Cheerios®, Rice Krispies®, Grape nuts
- Please note that milk and dairy products are poor sources of iron and hinder the absorption of iron. Tea (iced or hot) also hinders the absorption of iron. Do not use these foods one hour before or one hour after the ingestion of iron-rich foods or iron supplements.
- Foods high in vitamin C help to absorb the iron from foods. Foods that can help enhance absorption include: tomatoes, oranges, cabbages, lemons, green peppers, limes, grapefruit, tangerines, cantaloupe, broccoli, tangelo and strawberries.

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- Bring loose sweatpants, a robe and slippers for your child to wear in the hospital once he or she is able to get out of bed. A hospital gown (instead of a shirt) provides easy access for caregivers to check your child’s back. Your child will need a comfortable outfit to wear home. Although we have toiletry products available, most people are more comfortable with their own. Your child may also want to bring a comfort item (such as a stuffed animal or blanket), music, or an electronic device to provide a welcome distraction during their stay
- Wash your child’s back with the anti-bacterial wash provided to you at your presurgical visit.
- Remove all nail polish.

To help educate patients and families, we have created an online educational program called Emmi. You will receive login access to the program from your surgeon’s assistant via email. We recommend that you view this program before your family conference so your surgeon can address your questions.
night before discharge, so you can ask questions if anything is not clear. While most patients do not require additional care in the home, our social workers will work with you if there are any accommodations that need to be made for this transition. They can be reached at (302) 651-4232.

Once home, we recommend that your child continue taking iron supplements for one month. The stool softeners may be adjusted as needed, but most patients require them until they no longer require the narcotics and iron.

Home Recovery

Every patient has a unique response to pain and a unique recovery experience. Most patients will be discharged from the hospital with prescriptions for Percocet® and Valium®. Percocet has acetaminophen (Tylenol®) in it as well as a narcotic (oxycodone). This is purely for pain. Valium is a muscle relaxant that also can be used to treat anxiety. We find it is most helpful in the early stages for the muscle spasms and strain from surgery. Percocet is a powerful pain medication, but it has several strong side effects.

It can make people feel itchy, irritable or drowsy. It often causes a loss of appetite and constipation. While using Percocet your child will need to take the recommended stool softeners as outlined in the postoperative instructions. Most patients will continue to use their pain medications for two to three weeks at home. Some patients may not need medications as long and some will need them a bit longer, particularly at bedtime.

To discontinue the medications, you should first try to gradually extend the time between doses and decrease the number of tablets given at each dose. Percocet tablets can be split in half to help make this a gradual transition. As you discontinue the Percocet, you can give regular acetaminophen (Tylenol®) in place of the Percocet. DO NOT give Tylenol and Percocet at the same time to avoid overdosing. Remember, ibuprofen and naproxen are not permitted for the first six months following spine surgery.
Please call the office three to four days in advance if you will need a refill prescription for Percocet. We are not legally allowed to refill narcotic pain medication over the phone or by fax. The only way for pharmacies to dispense this medication is for the patient to take the original hard copy prescription to the store. If you call us early enough, we will write you a refill and overnight it to you if necessary. The muscle relaxant, Valium, can be called in over the phone.

The first week at home your focus will be on managing the pain and trying to increase your child’s food intake and hydration status. We encourage lots of fluids and high-fiber foods to help with constipation. Please encourage your child to be cautious when walking around and especially with showers throughout the first week or so, as a lack of nutrition and fluids combined with narcotics can cause some people to be more prone to fainting. Support your child until he or she is steady.

During the first few weeks at home, the biggest challenge is finding the right balance of activity. We would like to see each patient gradually increase daily activity to avoid stiffness. Movement helps get the bowels moving again and activity during the day will help your child sleep at night. It is common for a child’s day/night sleep cycle to be disturbed during the hospital stay. At home you will want to return to more normal hours. Each day your child should be able to walk a little farther than the day before. If, however, your child feels worse one day than the day before, he or she probably pushed too far and needs to rest for a day. It is a balancing act that will be different for every individual. Slow but steady advances generally do best.

Do not be alarmed if your child has pain in other places after back surgery. The back has many large muscles that attach to surrounding structures. It is quite common for patients to complain of pain in the shoulders, shoulder blades, hips and around the rib cage. This is due to the positioning of the muscles and will fade in time.

Also, it is common for patients to notice different sensations around the incision on their back. Some people will feel numb; others are hypersensitive and will describe a tingling, itching or even a warm sensation. This is all normal. Also, some people will have some numbness in the front outer thigh by the hip. This comes from the positioning on the operating table and will go away. If your child has shooting numbness or tingling around the torso or down a leg, please call the office to let us know.

Please call the office immediately if your child has:
- any numbness, tingling or weakness in the arms or legs
- excessive pain
- fever of more than 101° F
- drainage from the incision

In the evening or after hours, call (302) 651-4000 and ask for the orthopedic resident on call.

Most patients tell us that the hardest time is the first week at home. Many factors contribute, including being without the nurses’ support, lack of sleep for both patient and parent, and a general feeling of “cabin fever” from being sedentary for so long. It is helpful to arrange for friends to visit at home. It is equally helpful for you to take a break. Some parents have compared this experience to that of bringing home their first newborn. Additional caregivers to alleviate the burden and support everyone are always appreciated during this time.

Still Nervous?

No one understands what you are going through better than those who have been there. We have a group of former patients, male and female, who are available to speak with patients who are preparing for surgery. If you or your child would like to talk with someone, please let us know and we’ll be happy to put you in touch.
General Hospital Information

Partners in Caring 24 Hours A Day

We do not have traditional visiting hours and instead welcome families as our partners in caring 24 hours a day, in accordance with what is in the best interest of the patient’s care while maintaining an environment that supports safety and healing for the child.

After-Hours Entry

The outpatient lobby hours are Monday-Friday, 7 a.m. to 7 p.m.; Saturday, 7:30 a.m. to 1:30 p.m.; Sunday, closed.

After hours, families should enter and exit through the main hospital entrance, which is accessible 24 hours a day.

Food Options

The Sodexo Dining Area

Healthy food options, wood-fired pizzas, an expanded gluten-free selection and more are available for purchase in the dining area located just off the Anthony N. Fusco, Sr. Atrium on the first floor. All eateries accept cash and the following credit cards: Visa®, MasterCard®, Discover® and American Express®.

Hours of operation are:

- Monday-Friday: 6:45 a.m.-10:30 a.m.
- 11 a.m. to 4:30 p.m.
- 5 p.m.-7:15 p.m.
- Saturday-Sunday: 7 a.m.-10:30 a.m.
- 11 a.m. to 4:30 p.m.
- 5 p.m.-6:45 p.m.

Einstein Bros® Bagels

A variety of breakfast and lunch items may be found on the menu including hot breakfast sandwiches, salads, soups, sandwiches, coffee and hand-dipped low-fat frozen yogurt. Located on the first floor of the Anthony N. Fusco, Sr. Atrium and open 24 hours/day.

Jazzman’s Café

A variety of gourmet coffee, tea, smoothies and a limited snack bar with baked goods, salads and sandwiches are available. Located on the first floor in the outpatient lobby.

Monday-Friday: 7 a.m. to 6 p.m.

At Your Request® Room Service

Families can order food to be delivered to their room between the hours of 7 a.m. and 7 p.m. Food is delivered within 45 minutes. To order, please call 53-6325 from any hospital phone.

ATM

A Wells Fargo® no-fee ATM is located near the Sodexo dining area on the first floor.

Family Resource Center/Ronald McDonald Family Room

The Family Resource Center and Ronald McDonald Family Room provides families with some of the comforts of home, just steps away from their child's bedside. Located on the third floor of the duPont Hospital for Children, the Family Resource Center — staffed by volunteers from Nemours and the Ronald McDonald House of Delaware — allows parents to take care of their own personal needs while their child is hospitalized. We currently offer the following amenities:

- a comfortable seating area available around the clock, to give families a break from the medical setting
- a business center with a copier, fax machine, computers and printers
- free wireless Internet access
- a library, provided through the generosity of the hospital's Auxiliary, stocked with books, periodicals and other materials
- a Family Education Center to facilitate individual or group instruction on skills parents need to care for their child (available by appointment)
- 24-hour laundry facilities
- a kitchenette and microwave oven, so parents can prepare a snack or light meal while staying close to their child's room
- three quiet, comfortable sleeping rooms in partnership with the Ronald McDonald House*
- shower facilities

*Reservations for the sleep rooms are arranged through the social workers assigned to each unit.

The Family Resource Center is a joint project of the duPont Hospital for Children and the Ronald McDonald House of Delaware.

Parking

We are happy to offer free valet parking. With our complimentary valet service, there’s no need to take time looking for a parking spot. Valet services are located at the main entrance (near the playground) Monday through Friday from 8 a.m. to 6 p.m.

Inpatient families and visitors can park free of charge in our underground parking garage, which features a pull-up drop-off area in front of elevators. There is also a pull-up area (no parking) outside of the main entrance. Surface parking lots are also available for patient families across the hospital campus.

Outpatient Pharmacy

The duPont Hospital for Children maintains an outpatient pharmacy for prescriptions and many basic over-the-counter medications such as acetaminophen (Tylenol), ibuprofen (Advil and Motrin) and diphenhydramine (Benadryl). To use this service, you'll need to present the doctor's written or electronic prescription along with your prescription plan card. The pharmacy accepts most insurance plans. The outpatient pharmacy is open Monday through Friday, 9 a.m. to 5:30 p.m.
Iron-Rich Foods

Seafood: cod, sardines, tuna, clams, oysters, shrimp

Poultry: chicken, eggs, yolk

Meats: beef, lamb, veal, pork, liver

Nuts and Beans: soybeans, lentils, green beans, peas, kidney beans, navy beans, pinto beans, black beans, hazelnuts, almonds, peanuts

Vegetables: broccoli, chard, spinach, greens, asparagus, turnips, parsley, kale, watercress, Brussels sprouts

Fruits: dates, prunes, figs, apricots, apples, raisins, coconut

Bread: enriched, fortified and whole-grain breads

Grains: wild rice, corn meal, oats, soybean, wheat, bran, rye, buckwheat, popcorn, barley, wheat germ, millet

Cereals: Farina, Cream of Wheat, Shredded Wheat, Cheerios, Rice Krispies, Grapenuts

Please note that milk and dairy products are poor sources of iron and hinder the absorption of iron. Tea (iced or hot) also hinders the absorption of iron. Do not use these foods one hour before or one hour after the ingestion of iron-rich foods or iron supplements.

Foods high in vitamin C help to absorb the iron from foods. Foods that can help enhance absorption include: tomatoes, oranges, cabbage, lemons, green peppers, limes, grapefruit, tangerines, cantaloupe, broccoli, tangelos and strawberries.