

Scoliosis (pronounced sko-lee-o-sis) is a condition that creates a twisting of the spine in three dimensions, similar to a towel being rung out. It appears as a curvature of the spine on X-rays. Surgery is recommended for curves that have become too large to brace or have progressed even with bracing. This surgery is called a spinal fusion and is recommended for curves over 45-50 degrees. During spinal fusion surgery, metal rods are placed alongside of the spine and held into place with screws. Bone graft is used to bridge the gaps between the vertebrae (bones that make up the spine) in order to get them to fuse together. The goal of spinal fusion surgery is to stop the curve from getting bigger and correct the curvature as much as is safe. The part of the spine that is fused will not move, and does not grow. The patient will feel stiffer but will be able to participate fully in sports and other activities.

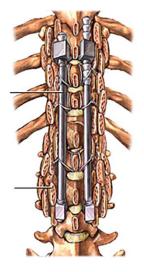
UCSF Benioff Children's Hospitals Orthopaedic Spine Team will partner with you and collaborate with other experts and departments to offer your child comprehensive services and ensure your child is receiving the full spectrum of care. The thought of your child having surgery can be stressful and we are here to support you. Every team member is focused on your child's safety and well-being. We encourage you to sign up for our MyChart system so that you can easily send messages to your care team electronically, access appointments and see test results.



Spinal fusion

Steel rods help support the fusion of the vertebrae

Bone grafts are placed to grow into the bone and fuse the vertebrae



Preparing for Surgery

Scheduling

Once you and your spine surgeon mutually decide to proceed with surgery, the surgeon will submit a surgical plan of care to their scheduler. The surgery scheduler will obtain approval from your insurance company. This usually takes about one week. Once the authorization for surgery has been obtained, the scheduler will contact you to pick a date that is convenient for you and your surgeon.

Pre-Operative Readiness

We want to optimize your child's health prior to surgery to promote the best outcome after surgery. Depending on whether your child has other medical conditions, we will communicate with their other specialists to ensure your child is healthy and ready for surgery. You may be asked to see your primary care doctor or other specialists prior to surgery. Your providers may recommend starting supplementation with vitamin D, calcium, and iron before surgery. Your surgeon may also want to have additional imaging completed such as an MRI, CT scan or bending x-rays to help plan for surgery.

Pre-Operative Visit with Surgeon



You will have a pre-operative visit with your surgeon a few weeks before surgery. During this visit, we will discuss your child's individual surgery plan as well as review the risks and benefits of surgery. The following events will take place at this visit:

- 1. Your child will have a nasal screening swab for bacteria collected during this appointment. A cotton swab will be gently rubbed on the inside of your child's nose. It may tickle, but will not hurt. All humans carry bacteria on their skin and in their body. The normal bacteria that we carry can cause infection after surgery. One type of bacteria is called Staphylococcus Aureus. To decrease your risk of infection after spine surgery it is important to find out if you carry this bacteria in your nose. If you are positive for this bacteria, you will receive a phone call from our department and a prescription for a medication called Mupirocin will be called into your pharmacy. You will put a pea sized amount of this ointment on a q-tip in the nose morning and evening for 5 days. A positive test does not mean you have an infection, only that you tested positive for carrying this bacteria. Your surgery will not be cancelled if you test positive.
- 2. You will be provided special wipes with chlorhexidine (CHG) to use three days before surgery to cleanse the skin and reduce the risk of infection. This is another way to decrease the risk of infection. These cloths help to reduce bacteria on the skin before surgery and need to be used whether you tested positive or negative for Staphylococcus Aureus. You will be given complete instructions on how to use these cloths at this pre-operative visit.
- 3. After the appointment, you may be directed to the lab to have blood drawn to prepare for surgery. Your child will need to be poked twice to confirm their blood type for surgery. Spinal fusion surgery is a long operation with a risk of blood loss. Our hospital blood bank will have blood for a transfusion ready for your child if they need it during or after surgery.

All caregivers should plan on attending, either by phone or in-person. Write a list of questions you have about the procedure and bring them with you to the appointment. You may be asked to start your child on a bowel stimulation medication to counteract constipation brought on by pain medications after surgery. Your surgeon may also order a custom back brace to be worn after surgery. If this is ordered, the orthotist (brace maker) will measure your child for the brace while in the hospital after surgery.

Pre-Operative Anesthesia Appointment

You will have an appointment with the Pre-Operative Anesthesia team either in person, through telehealth or phone around one week before surgery. During this appointment, the provider will conduct a health assessment, discuss how your child will go to sleep for surgery, the risks of anesthesia and when to stop eating and drinking before surgery. Bring any medications that your child takes to this appointment. They will advise you when to stop taking your medications before surgery. Every child reacts differently to anesthesia. Many children wake up groggy or confused. Some children develop nausea. Let your Pre-Op Anesthesia provider know if your child or any close blood relatives have a history of previous problems with anesthesia.

Pre-Operative Visit with Orthopaedic Nurse

Your surgeon's nurse will arrange a convenient time through phone or telehealth to go over the surgery again as well as answer any questions you may have about the recovery process. They will order any equipment that you may need after surgery. The nurse will also help to answer any questions you may have about pre- op or



post-op care, arranging home schooling, letters for school/work, Paid Family Leave/FMLA or handicap placards.

5 – 7 days Before Surgery

If your child's MRSA screen came back positive, your surgeon may start using an ointment which should be applied to each nostril 5 days before surgery as prescribed.

3 days Before Surgery

Your child will need to start using the special wipes that were given to you at the pre-operative visit. You can also purchase chlorhexidine gluconate (Hibiclens) at your local pharmacy. This is an important step to reduce the risk of skin infection after surgery. Hibiclens reduces the number of normal bacteria on the skin. Please follow the instructions provided on the Pre-Operative Bathing Instructions and remember to have your child sleep in clean pajamas after showering.

The Day Before Surgery

You will receive a phone call from the pre-operative nurse to confirm the time of your arrival to the hospital. In general, you will be asked to get to the hospital 1 - 1.5 hours before surgery to allow time for registration and meeting a child life specialist. The pre-op nurse will also review instructions on when to stop eating and drinking in preparation for surgery the following day.

What to Pack for the Hospital

When packing for your child's hospital stay, please bring items to make your stay more comfortable.

- Comfortable clothing and a change of clothes
- Containers for glasses, contact lenses, or any assistive devices such as hearing aids
- Your child's favorite toy, blanket, pillow, or comfort item
- Something to occupy your time while you are waiting, such as books, magazines, laptop, or tablet

When to Stop Eating and Drinking Before Surgery

Please follow the directions given to you by the pre-operative nurse. If your child does not follow the guidelines, the surgery may be delayed or canceled. These guidelines are in place for your child's safety to prevent complications associated with vomiting during surgery.

As a general guideline, you will not be allowed to have any food or drink after midnight.

The Day of Surgery

On the day of surgery, arrive on time to the Surgery Registration. Make sure you bring the following information with you:

- Picture ID Card for parents/patients over 18 years
- Child's insurance card
- Proof of guardianship if you are not the birth parent (foster parent papers/court orders/adoption papers)



The child's caregiver is required to remain at the hospital for the entire procedure. We understand that you know your child best and want you involved in their care throughout the entire process. Please do not bring other children to the surgery.

Girls older than 10 years or who have already started their menstrual cycle are required to give a urine sample to check for pregnancy. Please have your daughter pee in any clean container you have at home (Tupperware or glass jar) when she wakes up in the morning, be sure to bring the urine to the hospital with you.

Pre-Operative Room:

After you register for surgery, you will be taken to the pre-operative room. This is where your child will put on a hospital gown or pajamas, meet with the child life specialist, your surgeon and the anesthesiologist to discuss the procedure and answer any questions that you may have. If your child is anxious or scared, we may give them a pre-medication that will help them relax.

Operating Room (OR)

Your child will have a team working together to maximize safety. Expect the surgery to take several hours.. A nurse will give you updates throughout the procedure. The anesthesiologist will decide on the safest way for your child to go to sleep. This will either be done in the induction room or operating room. Your child will go to sleep by breathing into a mask or medicine through an IV. Once your child is asleep, the team will place several devices to monitor your child closely such as:

- A breathing tube to monitor breathing
- An IV to give fluids and medications
- A special IV called an arterial line to monitor blood pressure
- In some cases, a special IV called a central line to give IV fluid, blood products and medications
- A urinary catheter to monitor urine output
- Leads which are placed on the child's head, arms, and legs to check the spinal cord and nerves during the operation

Your child is then turned onto their stomach (for posterior surgery), or onto their side (for anterior surgery, where the "front" of the spine is worked on) and we carefully pad all boney areas to decrease the risk of pressure sores and numb spots after surgery. The most common numb spots are on the front of the thighs, and these take a few days to wake up. The back (posterior surgery) or side (anterior surgery) is cleansed to decrease the risk of infection. The surgeon will make an incision, move the back muscles out of the way, and expose the bones ("vertebrae") of the spine. An "anchor" (a metal screw, wire or hook) is placed in each vertebra. One (anterior surgery) or 2 (posterior surgery) rods are placed and the anchors grabbing each vertebra are pulled and locked to the rods, thereby straightening the spine as much as is safe. The gaps between the vertebrae are bridged with bone graft, taken locally from your child ("autograft") and from a bone bank from donors ("allograft"). The bone graft creates a scaffolding for new bone to grow, creating a solid block of fused bone. During the operation, an anesthesiologist will monitor your child carefully to make sure that your child stays asleep and does not feel any pain. A neurophysiologist (a trained expert in nerve signals) will monitor the function of the spinal cord. We will close the incision with



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dissolvable sutures and place a dressing over the incision to keep it clean. Your child may have special drains placed temporarily to help collect blood and body fluid and allow the incision to stay clean. Your child will be rolled onto their back and the breathing tube will be removed. When the surgery is complete, your child will be transferred from the OR to the recovery room or to the Intensive Care Unit (ICU), where you will be united with your child once he or she is settled and where the surgeon will talk to you.

Goals to be Discharged from the Hospital:

Everyone has different needs while recovering from surgery. Depending on your child's medical complexity, the orthopaedic team may partner with the pediatric medical team to ensure safe care and make sure all your child's complex medical needs are met to optimize recovery. Otherwise healthy children (who have "idiopathic" scoliosis) stay go home 3-4 days after surgery.

Pain Control:

We know that spine surgery hurts. The incision is long, the dissection of muscles is extensive, and several bones are drilled. We shall give your child the maximal dose of medications to relieve pain. The goal is to have a tolerable level of pain. If we give too many opioids (narcotic pain medicine) – in order to get rid of the pain – there can be dangerous side effects, including stopping breathing. Opioids also make you nauseated and constipated, and confused and light headed.

For the first couple of days after surgery, your child may have a PCA (patient-controlled analgesia) pump, which delivers pain medications through their vein. Your child will transition to oral pain medications once they can drink, in preparation for going home.

Common medications after spine surgery include:

- Morphine or Hydromorphone (Dilaudid): This medication is given for severe pain, through the IV PCA pump or additional IV dosages for breakthrough pain.
- Oxycodone: This oral opioid is given for severe pain to help transition off the PCA pump and is typically started once your child can drink liquids.
- Diazepam (Valium) or Lorazepam (Ativan): This medication helps with muscle spasms which are common due to manipulation of the muscles connected to the spine. It can be given IV or by mouth.
- Acetaminophen (Tylenol): This non-opioid medication helps with mild to moderate pain and can reduce fever. It helps make opioids work better and last longer. It will be given IV and then changed to oral once your child is drinking liquids.
- Ketorolac (Toradol): This non-steroidal anti-inflammatory drug (NSAID) works similarly to ibuprofen (Motrin or Advil) but is given through the IV. It helps to reduce swelling and inflammation.
- Ibuprofen (Motrin or Advil): This non-steroidal anti-inflammatory drug (NSAID) is given by mouth once your child has started drinking liquids and helps to reduce swelling.
- Gabapentin: This oral medication helps reduce pain and decrease opioid usage by reducing pain signals to the nerves.

Lines, Tubes, and Drains:

Your child will have lines, tubes and drains after surgery to help us monitor their recovery. The common devices include:



- IV lines (peripheral): A small, catheter placed in a vein to help give fluids and medications. This will remain in place until your child is ready to go home.
- Arterial line: A small catheter placed into an artery during surgery to monitor blood pressure continuously. It will be removed once transferred to the surgical floor.
- Central line: A catheter slightly larger than a peripheral IV that is placed into a central vein to help us give fluids, blood, medications at a more rapid rate than through a peripheral IV. Your surgeon or anesthesiologist will let you know if your child needs a central line.
- Cardiopulmonary Monitoring: This includes leads and wires hooked up to the child's chest to help us monitor the heart rate and respiratory rate.
- Pulse Oximeter: This looks like a band aid wrapped around the finger or toe to monitor the amount of oxygen in the blood.
- Nasal Cannula or Face Mask: Oxygen is given through a nasal cannula or face mask to help improve the blood oxygen saturation levels.
- Foley Catheter: A small, flexible tube placed into the bladder through the urethra. It is placed in the operating room and is used to monitor urine output. It is usually removed the second or third day after surgery. After it is removed, the child will begin to urinate as they normally would.
- Wound Drain: A tube is placed under the skin during surgery when the incision is closed to collect fluid and blood draining from the surgical site into a container outside the body. The drainage can be bright red, pink or clear. The drain is usually removed after a couple of days once it is not draining much fluid. Removing the drain is very quick and does not usually cause too much discomfort.

Physical Therapy:

Our team consists of physical therapists who will help your child move on their own and learn how to care for themselves after surgery. Physical therapists will help your child learn specific movements and spinal precautions to protect their spine. It is never easy to get up the first time after surgery! But the sooner your child begins to move, the quicker they will feel better and be able to go home. Moving after surgery will help decrease stiffness and pain, improve strength, and keep your lungs healthy! Every day you will make progress from sitting on the side of the bed, moving to a chair, and eventually to walking. Your child will no longer need physical therapy when they are getting in and out of bed, walking and climbing stairs with assistance of family members. It is important to encourage your child to get out of bed for every meal starting the day after surgery.

- Spinal Precautions to Follow

- **No Bending-** Do not bend hips past 90 degrees. Bend at the knees if you must lift something off the floor and keep your back straight.
- **No Lifting-** Do not lift anything greater than 5 pounds
- **No Twisting-** Do not twist the back, keep your shoulders and hips in a line.

Other Monitoring After Surgery:

There are risks associated with any extensive operation, below highlights some of the issues that we monitor closely for and what you and your child can do to help.

- **Atelectasis:** Atelectasis is a common complication following surgery, especially in children. It is the collapse of air sacs in the lungs called alveoli. After surgery, one reason for atelectasis can be impaired



deep breathing and coughing due to pain. This can progress to pneumonia if not treated early. You can help prevent and resolve atelectasis by deep breathing exercises and using an incentive spirometer (a device that encourages deep breathing). Getting out of bed frequently, sitting in a chair and walking all help to prevent atelectasis.

- Anemia: Anemia is a drop in red blood cells, an expected outcome of blood loss during surgery. We will
 frequently monitor labs, called hemoglobin and hematocrit, to check for anemia after surgery. Signs of
 anemia after surgery include dizziness, fatigue, increased heart rate, pale skin, lips, gums, and nail
 beds. Your child may require a blood transfusion if the lab levels drop too low. You can help optimize
 hemoglobin and hematocrit before surgery by taking iron supplements if prescribed.
- Nausea, Vomiting, Dehydration and Constipation: Nausea and vomiting are common side effects of anesthesia and pain medications. We will give medications to help decrease or prevent nausea and vomiting or switch to a different pain medication if that is the culprit. It is important to stay hydrated and drink fluids when you are able. However, you should progress your diet slowly to help decrease the risk of vomiting. Constipation is common after spine surgery due to anesthesia, pain medications, and poor mobility. Constipation can be uncomfortable and progress to a post-operative ileus, a delayed return of bowel function, if not treated early. You can reduce the risk of constipation by taking probiotics and bowel stimulant medications prior to surgery if prescribed. Getting out of bed, walking as much as possible, staying hydrated and eating high fiber foods can help prevent constipation after surgery. If you are unable to have a bowel movement or are unable to pass gas, we have additional medications such as a suppository or enema to help.
- **Fevers:** It is normal to have a low-grade fever for 2-3 days after extensive surgery as your body adjusts and responds. However, if you continue to have fevers after the first few days, we will evaluate for infection such as surgical site infection, urinary tract infection, and pneumonia.
- Urinary Retention: Your child will have the foley catheter in for a few days after surgery, until they are able to get up to use the bathroom more comfortably. It is normal to have some difficulty urinating after the foley catheter is first removed. If your child is unable to urinate within 8-12 hours after the catheter is removed, they may be experiencing urinary retention. This can be a side effect of pain medications. Another catheter will be placed into the bladder to relieve pressure and allow urination. You can help decrease urinary retention by drinking a lot of fluids, walking frequently, and weaning off narcotic pain medication.
- Blood Clot: A blood clot, called a deep vein thrombosis (DVT) or pulmonary embolism (PE), is a rare complication after surgery. Signs of a DVT include pain or tenderness in a leg, most commonly by the calf or behind the knee, warmth, and swelling. Signs of a PE include sudden onset of having trouble breathing, a new cough, and chest pain. The best way to protect against blood clots is to move: get out of bed, sit in a chair for all meals, walk in the hall several times a day. Sometimes, your child will have special leg wraps called sequential compression devices (SCDs) so that the blood in their legs is pumped while they lay in bed.

Goals to go home after spinal fusion include:

- Able to drink and eat enough to stay hydrated
- Take all pain medications by mouth without needing IV medication
- Able to get in and out of bed, walk, use stairs safely with help from family members
- Pass gas regularly and urinate



Spinal Fusion Post-Op Instructions:

Once it has been decided that your child can go home there are a few key things to remember to optimize healing as quickly and safely as possible.

4 Care of Your Incision:

- Keeping the incision clean and dry is an important step in preventing an infection.
- Clean your hands before changing the dressing or touching and cleaning the incision site.
- You will have a dressing over your incision. Your orthopaedic team will teach you how and when to change it. You will have to change the bandage if it has a large amount of drainage.
- Stitches are usually on the inside and dissolve. This means your doctor does not need to remove them. Occasionally, a stitch may be visible and may look like a piece of fishing line. Do not do anything about these, they will fall off or dissolve on their own.
- If your doctor used skin glue, it may cause your child's skin to look a purplish color and be crusty.
- Do not apply any lotions, ointments, or creams to the incision.
- Have your child change into clean clothes or change bed linens if they get soiled or wet from bodily fluids until the incision fully heals.

Sponge Bath:

- Sponge Bath until your doctor tells you that you can shower. Keep your incision clean and dry while you sponge bathe. Keep water away from your incision. You can usually start to shower after your first post-operative appointment.
- Your child can wash their hair as often as they like. There are several ways to do this until they can shower.
 - If the bathroom sink is short enough, place a chair in front. Have them sit facing away from the sink and tilt their head back (like you do when you have your hair washed in a salon)
 - Place a chair with the back facing the kitchen sink. Have them kneel on their knees (with the front of their thighs pressed against the back of the chair). Tilt their head forward and use the sprayer hose. Make sure that they keep their back straight to maintain spinal precautions.

Showers:

- Once your child can shower, remove the dressing, and use a mild soap around the incision, not a bar of soap. Pat the incision dry, with a clean towel.
- At first, they may feel dizzy or faint when they shower. To help with this:
 - o Have someone nearby for the first few times they shower
 - o Place a waterproof chair in the shower. Have them sit on it during the shower
 - Use lukewarm, not hot water
- No submerging the incision in a bathtub, swimming or going into a pool, hot tub or ocean until your surgeon tells you that is okay.

Spinal Precautions:

- No Bending- Do not bend hips past 90 degrees. Bend at the knees if you must lift something off the floor and keep your back straight.
- No Lifting- Do not lift anything greater than 10 pounds



- No Twisting- Do not twist the back, keep your shoulders and hips in a line.

Exercise/Physical Activity:

- Follow your doctor's recommendations on exercise.
- Do not swim in pools, lakes, oceans, streams, or hot tubs until your doctor tells you. This is usually okay after the incision has fully healed.
- Walk, walk, and walk! This will help you get better faster. You can go up and down stairs but use a railing to help you feel more secure.
- It is often easier to sit in a higher, firm chair rather than a low, soft chair.
- Let your doctor know what sports you want to return to (see the attached chart for Return to Activities guide)
- You can drive once you are off narcotic pain medications and you have regained normal strength and motion in your legs and neck, usually around 6 weeks after surgery. Speak to your provider if you think you are ready to return to driving. Make sure you always wear a seatbelt!

4 Pain control:

- Your child will need pain medicine possibly for the first month after surgery. Most children stop taking medication within the first 3 weeks following surgery.
- Alternate opioid (oxycodone) with Tylenol so that your child gets a pain medication around the clock. This helps with the anxiety of pain, as your child feels they are getting something frequently.
- Wean opioid first during the day, when your child can be distracted, and to ensure as good sleep as possible. Once off during the day, you can wean the opioid at night.
- Opioid should be stopped before returning to school or work.
- Change your child's position often, so they do not get sore from staying still too long.
- Walking often will help their soreness go away over time. Even 3-4 weeks after surgery, they may still feel tired.
- Think about and do things they enjoy like TV, music, a good book or a game with their friends. This helps to take their mind off the discomfort.

Sleep and rest:

- Your child can sleep in their own bed at home. Use pillows for support like you did in the hospital.
- Children should take rest breaks often during the day.
- They should increase their activity and walk more each day.
- You do not need a special mattress or hospital bed after spine surgery.

Eating:

- The doctor does not want your child to lose more than 10% of their body weight. Eating a wellbalanced diet and drinking enough fluids can help them to:
 - o Heal quicker
 - Maintain their weight
 - \circ $\,$ Regain their strength
- A balanced diet means your child eats meals that contain protein, whole grains, vitamins, minerals, and fiber.



- Choose foods high in protein, iron, and calcium such as peanut butter, eggs, meat, cheese, milk, yogurt, and green, leafy vegetables.
- Have your child consume extra calories and protein by drinking a nutritional supplement like Ensure or Boost, as directed by the doctor or nutritionist.
- Have your child eat high fiber foods to reduce constipation such as whole-grain cereals, whole-grain bread, fruits, and raw vegetables.
- Children should drink six 8-ounce glasses of water a day to help constipation.
- To keep from feeling too full, your child should eat 5 to 6 small meals a day. This also can help to get all the calories and nutrients their body needs.
- If your child received tube feedings before surgery, continue them at home. If the doctor or nutritionist changed the feedings in the hospital, keep your child on the same feedings at home as directed. This allows for increased calories and protein for healing. Talk with your child's doctor before making any changes to your child's tube feedings.

School:

- Your doctor will let you know when your child can return to school. This is usually 3-6 weeks after surgery. The doctor can give you "Home Instruction" paperwork that allows your child to do their schoolwork at home.
- When your child returns to school, you may want to begin with half-day sessions for the first week.
- Remember to ask for a physical education (PE) excuse from your doctor.
- School books are heavy to carry. A couple tips include:
 - Ask a friend to carry your child's books from class to class
 - Keep a set of books at home and at school so your child does not have to carry them back and forth
 - Have your child use a rolling backpack

Prominent Implants:

- You may be able to feel some of the spine implants under the surface of the skin, however, they should
 not be poking out of the skin or causing severe pain. On rare occasion, we may need to remove
 implants if they are prominent.
- If you notice any changes in the skin around the incision such as redness, drainage or opening of the incision, please call the office immediately.

Long-term Incision Care:

- Once your surgeon has told you that the incision is well healed, you can start applying over-thecounter scar reduction medication like vitamin E or Mederma or silicone scar sheet if you would like.
- After the incision has healed, we recommend applying sunscreen greater than 30 SPF to the scar to help protect it from discoloration during sun exposure.

Follow Up Appointments:

 Your first follow up appointment will be booked at the time of surgery or before you are discharged from the hospital, usually around 7-14 days after surgery. If you have concerns before this time, do not hesitate to call.



- You will have routine follow ups that will start to become less frequent as healing occurs. We will continue to monitor your child into adulthood with routine x-rays to check the hardware and spine.

When to Call the Orthopaedic Surgeon:

- A temperature of 101.5 degrees and without other signs of illness or cold such as runny nose, chills, sore throat, cough, etc.
- Increased redness, swelling, tenderness, pain, or warmth at the incision site
- Drainage or bad smell at the incision site
- Open areas along the incision line
- Pain that does not get better with pain medicine
- Numbness or tingling in their arms, legs, or feet
- Change in bowel or bladder control
- Vomiting
- Any questions or concerns about how you feel

Contact Numbers:

If you have a question or concern about your child, please call us:

- Weekdays from 8:00 am-4:30 pm: Ask to speak to your surgeon's nurse
 - Oakland: (510)-428-3238
 - San Francisco: (415)-353-2967
- After 4:30pm or Weekend/Holiday: Call the main hospital line and ask to speak to the orthopedic resident on-call
 - o Oakland: (510)-428-3000
 - San Francisco: (415)-353-3000



Immediately After Surgery:

- Walk
- Sit

Two Weeks After Surgery:

- Shower

One Month After Surgery:

- School
- Your surgeon may allow gentle swimming and stationary bike.

Three to Six Months After Surgery:

- Lifting 10-20 lbs.
- Light Jogging
- Routine Gym Class
- Yoga
- Non-contact sports
- Skating
- Horse riding (no jumping)
- Bowling
- Roller Coasters
- Skateboarding
- Cheer (no stunts)
- Dance
- Surfing

One Year After Surgery:

- All activities, including:
 - Skiing (water and snow)
 - Snowboarding
 - Contact Sports
 - o Stunt Cheer
 - o Gymnastics