

# ganz periacetabular osteotomy

## what is a periacetabular osteotomy?

The Periacetabular Osteotomy, or PAO, is a surgical treatment for acetabular (hip) dysplasia that preserves your own hip joint rather than replacing it artificially. The hip joint consists of two parts: the femoral head (the ball), and the acetabulum (the socket).

Acetabular dysplasia occurs when the hip socket is too shallow and does not completely cover the ball. This can cause abnormally high stress on the outer edge of the acetabulum causing pain and can ultimately lead to arthritis. The goal of this procedure is to decrease the pain in your hip and to delay or decrease the chance of hip arthritis which may eventually lead to a hip replacement. This is accomplished by enhancing the femoral head coverage.

## how is this procedure done?

“Periacetabular” means around the acetabulum (hip socket); “osteotomy” means to cut bone. In other words, a PAO procedure means that the surgeon cuts the bones carefully around the hip socket. The hip socket is detached from the pelvis and rotated to a position in which the hip socket and cartilage will hold the femoral head in a better and more normal position. The new position of the hip socket is then secured with 3-4 screws to ensure correct positioning while the bone is healing. The healing is enhanced by bone grafting the area.

The surgery usually takes 3 to 4 hours. Due to the cuts in the bone that are made during this procedure blood loss is a possibility. We use a system that allows using the blood lost during surgery to be transfused back to the patient to decrease the need for blood transfusion; however a transfusion may still be necessary.

**Remember: Your child may not take any medications containing aspirin or ibuprofen (Motrin, Advil, or Aleve) two weeks prior to surgery. These medications can increase the risk for bleeding during surgery.**

## what happens after surgery?

Once your child is fully awake in the recovery room he/she will be transferred to a room on the inpatient unit. The incision will be covered with dressing to collect any bleeding that occurs after surgery.

Your child will have a Foley catheter in their bladder. This is placed while they are asleep in the operating room. This catheter will drain urine into a bag so he/she will not have to get out of bed to use the bathroom. This catheter will stay in place until they are able to get in and out of bed, usually a day or two after surgery.



### **how long will my child be in the hospital?**

Most patients are in the hospital about 4-5 nights. Once pain is controlled with oral pain medication and they are eating and drinking, and once physical therapy determines they are safe for ambulation you may go home.

### **how will my child's pain be managed?**

In the first 24-48 hours after surgery, your child will most likely be given a pain control pump (PCA) that allows him/her to control the pain they are in. While the PCA is in place your nurses will be monitoring your child closely to make sure that they are breathing properly and have good pain control. The PCA will be used for the first two days. We also supplement the pain medication with Valium when spasms occur. Then, your child will be switched to oral pain medication. However, please understand that there will be some discomfort; your child just had major surgery.

### **what are my child's activity restrictions?**

Once your child is able to get out of bed, physical therapy will help aid with learning how to sit in bed, transfer to a chair and how to use crutches to walk. Physical therapy will supply the crutches. Your child may touch their toe to the ground for balance and place partial weight on their leg of the side that was operated on. Placing full weight on the operated side prior to bone healing can cause the screws to bend or break and the acetabulum to lose correct positioning. When you see your doctor at your 6 week follow-up appointment he will let you know when you are able to begin walking.

When you go home you will be given the physical therapy package with exercises your child needs to continue doing to help them recuperate more quickly.

### **what are the possible complications?**

The benefits of the proposed surgery outweigh the risks of it by far. But, we want to make sure you are aware of the possible complications. They include profuse bleeding, infection, pneumonia, other breathing problems, anesthetic risks, transfusion or medication reactions, temporary or permanent nerve injury, failure or breakage of instrumentation, failure of the bone not to heal that may later require surgery, urinary retention, temporary constipation, and even death. Any of these complications could lead to more surgery or permanent impairment. Fortunately, these complications are uncommon and the vast majority of patients go through surgery without any unexpected problems. We tell you about these risks so that you will know that we have considered the risks of surgery before recommending this procedure. Furthermore, many patients will still require future hip surgery, such as hip replacement, at some point in their lives.

### **post-operative instructions**

**Medications:** Your child will be given 2-3 prescriptions for medication to take at home. Two are pain medications and one is for constipation.

- Diazepam (Valium) can be taken every 8 hours as needed for muscle spasms.
- Percocet or Lortab can be taken every 4-6 hours as needed for pain.

It is important to remember that these pain medications have acetaminophen in them so please **do not take any additional acetaminophen (Tylenol)** with them.

- Miralax should be taken every 12 hours while constipation symptoms are present. This medication is a stool softener with a laxative. Once your child has had a normal bowel movement they may stop taking this.

Your child can stop taking pain medication whenever they feel they can. A good way to wean off the pain medication is to increase the time between doses. For example if he/she is taking 1 tablet every 4 hours extend that time to every 6 hours, then every 8 hours and so on. Ibuprofen is a great alternative to narcotics for pain control. Take as directed on the bottle. It is recommended that your child is off all narcotic pain medication before returning to school.

### **wound dressing**

The dressing may remain in place for two weeks unless it becomes saturated. If it starts to peel off at home, you may remove it and leave the incision open to the air. **If there is significant drainage, please contact our office.**

### **showering**

Your child may shower 7 days after surgery. You can allow the shower water to run down the incision. Do not scrub the incision. Pat the incision dry with a towel after showering. Do not soak in a tub or pool until cleared by physician. Pool activities are not safe for at least 6 weeks due to the risk of injury to the operated side.

### **weight bearing**

Your child will most likely be on crutches for a total of 6 weeks. At the 6 week post-op appointment your physician will allow your child to begin to walk without crutches if the radiographs show adequate healing.

### **equipment**

The equipment that is suggested for home use after this surgery are an elevated toilet seat and a shower chair. We will consult the social services department in our hospital to help you obtain these.

### **school**

It is recommended that your child take about 2 weeks off from school. Your child should not go to school until they are able to stop taking narcotic pain medication. Please let the nurse know if you need any letters from the doctor for your school. You will not be allowed to participate in physical education until your physician clears you to.

**If your child experiences severe pain that pain medication does not relieve, you should let us know. If your child develops a temperature over 101°F or 38.3°C, redness or swelling in the thigh or calf, or shortness of breath, please contact our nursing line.**

## follow-up

You will need follow up appointments at the following times:

- 2 weeks after surgery: your physician will check the wound and make sure that your child's pain is well-controlled. Your child will have xrays taken and a physical exam.
- 6 weeks after surgery: your physician will check the wound and make sure that your child's pain is well-controlled. Your child will have xrays taken and a physical exam. If the bone is healed your child will be able to start putting all of their weight on the leg. You will also be given some physical therapy exercises to start at home.
- 3 months after surgery: your child will have xrays taken and a physical exam. Your physician will talk to you about getting back to normal activities.
- 6 months and one year after surgery: your child will have xrays taken and a physical exam to make sure everything is going well.

## post-operative exercises

**What can my child do with their hip?** They will learn exercises using the ankle and thigh muscle to do at home. These exercises will help strengthen the leg. It will be difficult for your child to lift the leg upward after surgery as one of the bone cuts is near the tendon that facilitates this movement. Strength will return in about 2-3 months.

### **Ankle Pumps:**

Moving from the ankle, push the front of the foot up and down. Perform 10 times and repeat 3 sets each day.

### **Quad Sets:**

Tighten the muscles on the top of the thigh and press the knee down against the bed. Hold for 10 seconds and repeat 3 sets per day.

### **Straight leg raise:**

Keeping the knee straight, lift the leg as shown. Perform 10 times and repeat 3 sets per day.

**Questions or concerns? Please call the orthopaedics department at 937-641-3010.**

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