DAVID S. FELDMAN, MD

ORTHOPEDIC SURGERY

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PERIACETABULAR OSTEOTOMY (PAO) for ADULT and ADOLESCENT HIP DYSPLASIA



Normal Pelvis Dysplastic Pelvis After PAO

Hip dysplasia is often not diagnosed until the teenage years or adulthood and presents as a shallow hip socket (acetabulum) and/or a rotated femur (excessive anteversion or retroversion). Depending on the severity, hip dysplasia can put pressure on the side of the acetabulum causing a tear to the labrum, the shock absorber of the hip. Patients often complain of pain with increased activity such as hiking. Once the labrum actually tears, pain occurs even with sitting.

The best way to surgically correct hip dysplasia in adolescents and adults is with a periacetabular osteotomy, or PAO, to repair the mechanical problem of the hip. If this is performed before arthritis has set in, the patient can be pain free for many years and in many cases never need a hip replacement. The PAO is a complex surgical procedure that few surgeons in the country perform. Having performed over 1000 PAOs, we are able to perform the surgery safely and most often successfully in relieving pain (>95%) and allowing the patient to return to all the activities they love.

How To Prepare For Periacetabular Osteotomy Surgery

In preparation for surgery, you will be scheduled to have Pre-Admission Testing (PAT) completed prior to surgery in the Kimmel building. At this appointment a nurse will perform a blood test and basic vital signs, unless you have already done so with your primary care provider within thirty days of the surgical date. Specific instructions such as when to discontinue eating and drinking the night before surgery will be discussed. A cleansing soap, Hibicleanse, will be provided and must be used while showering the night before and morning of surgery.

You will meet with anesthesia at this appointment to discuss the process of 'going under' and postoperative pain control options. It is recommended that you consider receiving a Duramorph injection which is a single dose injection to the spine which significantly helps to reduce the immediate postoperative pain. Alternatively, we can utilize local injections of the area which can give relief for up to 72 hours.

After your appointment in the Kimmel building, you will then go up to the Paley Institute clinic to meet with one of the physician assistants and Dr. Feldman. They may take another set of x-rays. You will then go over your surgical plan. Please voice any questions or concerns to Dr. Feldman at that time.

It is important that you discontinue all anti-inflammatory medications (NSAIDS), both prescription and over the counter, for two weeks prior to surgery and can not resume such medications for three months after surgery (unless otherwise instructed). These include: Advil, Aleve, Motrin, Ibuprofen, Naprosyn or Naproxen, Celebrex, Celecoxib, Voltaren, Diclofenac, Toradol, Ketorolac, Mobic, Meloxicam, etc. In addition to NSAIDS, you should also discontinue all blood thinning medications such as aspirin (unless otherwise instructed by your medical doctor or cardiologist), multi-vitamins and any over the counter supplements at least seven days prior to your surgery date. You will be instructed when to resume such medications upon discharge from the hospital. If you take antidepressant medications, these are recommended to be discontinued prior to your surgery and you should reach out to your prescribing provider with how to discontinue such medications as these typically need to be discontinued in a tapering fashion. This can be discussed on a case by case basis. If you are on a prescription anticoagulant (Coumadin, Xarelto, Plavix, Eliquis, Pradaxa, Heparin, etc.) you must receive specific instructions from your clearing physician as to when these should be discontinued and when these can be resumed after surgery.

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

You cannot be exposed to first hand or second hand smoke of any kind (cigarettes, cigars, vape, marijuana etc.) for one month prior to surgery and for at least six months following surgery.

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

If you cannot receive blood products due to a religious reason or have an objection to receiving blood products for any other reason, you must also notify us of this before surgery. At least one month prior to surgery, all women should have a blood count. If you are anemic secondary to menstruation and as a result have low iron, we may recommend and arrange intravenous iron infusion(s) prior to surgery.

You do have the option of donating blood before surgery. It is not advised to donate blood on behalf of yourself, however you can opt to do so for religious purposes. If you would like to donate blood prior to your surgery, please let us know and you will be provided with a prescription to One Blood donation bank. You also have the option of having a trusted family member donate for you. Blood needs to be donated by a family member at least 7 days before surgery. If you wish to donate for yourself, this will need to be done at least 15 days before surgery but not more than 30 days before surgery. Please contact your local One Blood facility and they will provide additional instructions with regards to timing of donation of blood. We typically order iron infusions post operatively in an effort to restore your red blood cell count and in over 98% of cases prevent the need for transfusion.

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

Prior to surgery, you may be sent for additional imaging over at St. Mary's Hospital main building. If you need assistance scheduling an MRI, CT Scan or additional x-rays, please contact Andrew Mower. Her email is **amower@paleyinstitute.org** and you can reach her by phone **(561)** 844-5255 ext. 245.

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

The Paley Institute

Attention: Shamika Occeus / (Dr. Feldman or Dr. Huser)

901 45th Street West Palm Beach, Florida 33407

Should you have further questions regarding imaging studies or how to mail in a copy of the disc, you can reach out to **Heather MacDonald** at **hmacdonald@paleyinstitute.org**.

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

Please keep in mind the following:

- The site is not supported by IE (internet explorer) MUST use Google Chrome or Safari.
- You will need a CD drive/reader to upload the images.
- There is NO need to create an account to use the one time free upload
- However if you choose to create an account, the cost is approximately \$30/year. You may use referral code ORTHOMD for \$10 off for the first year.
- If you have any trouble uploading the images please reach out to My Medical Images support line at (855) 800-2851.
- Once you have completed the process, please once again notify Africa Tyrell who
 will transfer all imaging from the MMI site to our Paley PACS System and notify
 Dr. Feldman's team that they are available for review. You can expect a call or
 email once these images have been reviewed after a few days.

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

- David Feldman, MD: dfeldman@paleyinstitute.org
- Aaron Huser, MD: ahuser@paleyinstitute.org
- Tiffany Kochheiser, PA-C: feldmanpa@paleyinstitute.org
- Alyssa Clarke, PA-C: feldmanpa@paleyinstitute.org
- Katie Totten, PA-C: feldmanpa@paleyinstitute.org

Kristen DeAndrade is Director of Patient Advocacy for Dr. Feldman and Dr. Huser. As a former patient, she is familiar with the surgical and rehabilitative process, and the highs and lows that patients and their families face before, during and after treatment. She has undergone extended limb lengthening, deformity correction, and spinal fusion surgery. Kristen is a direct connection to Dr. Feldman, Dr. Huser and the team and is available to help make the journey as

manageable for patients and their families as possible. From a patient standpoint, she can be a valuable resource, please do not hesitate to reach out to her.

Kristen DeAndrade
 Patient Advocate for Dr. Feldman and Dr. Huser
 kdeandrade@davidsfeldmanmd.com

Mia Johnson is the Family Liaison for Dr. Feldman and Dr. Huser. Mia and her husband adopted 4 children internationally with orthopedic needs, who are patients of Dr. Feldman and Dr. Huser. She has thorough experience with limb length discrepancy, cerebral palsy and skeletal dysplasia as well as various orthopedic care procedures, pre-surgical planning and rehabilitation. Mia is available to provide patients and families with resources and advice in regards to lodging, clinic visits, hospitalization and support services.

Mia Johnson
 Family Liaison for Dr. Feldman and Dr. Huser
 mjohnson@davidsfeldmanmd.com

**Find Mia and Kristen on Facebook, in the group 'Patients and Families of Dr. David Feldman at The Paley Institute (https://www.facebook.com/groups/patientsofdrdavidfeldman) where they can help answer questions and you can connect with other patients and families.

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

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

A day or two prior to surgery you will be given your arrival time. Please arrive at the Kimmel Outpatient building at the designated time you were provided. Surgery will take place in the Kimmel Building and you will then be admitted and transferred to Waters 3 Medical/Surgical floor or Palm Beach Children's Hospital if you are 18 and under. Surgery time can be anywhere from two to three hours including anesthesia and prep time. Your hospital stay ranges from two to four days, depending upon your individual progress.

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

Post-operative pain control varies depending on the individual patient. It is recommended to consider the Duramorph injection which is given at the time of surgery and greatly reduces the initial postoperative discomfort. Alternatively, we can utilize local injections of the area which can give relief for up to 72 hours.

You will receive pain medication intravenously as well as orally, and will be discharged home with oral pain medication. As you progress in your post-operative recovery, pain medication should be weaned in a tapering fashion. The ONLY over the counter medication that is acceptable to take for pain relief after surgery is Tylenol (unless otherwise instructed) and you must refrain from all anti-inflammatories for approximately the first three months after surgery.

On post-op day one, a physical therapist will come to your room to mobilize you. You will continue to receive physical therapy daily during your hospital admission. The therapist will review proper body mechanics and positioning with you as well how to use any assistive devices such as crutches or a walker. Your weight bearing restriction following PAO surgery is thirty pounds to the surgical limb. You will be required to use a walker and/or crutches and can expect to be on this restriction for approximately two to three months after surgery until your bones are completely healed. Unless otherwise specified by Dr. Feldman, you will not be in a brace following surgery.

All durable medical equipment (DME) such as a walker, crutches, shower chair, wheelchair etc. will be provided to you before you are discharged from the hospital. **Emily Ward** can assist with any DME you will require. Her email is **eward@paleyinstitute.org**.

You will have a urinary catheter placed during surgery and this will be removed on postoperative day one or two.

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

What to Expect Once You Leave the Hospital

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

Your incision will be linear and easily concealed under a bathing suit or undergarment. The sutures are absorbable which will dissolve in two to three weeks. You will have steri-strips applied to the incision, which is then covered with a waterproof island Tegaderm dressing. This island dressing will remain in place for one week. You may remove this Tegaderm and shower on postoperative day five. You may notice the clear suture coming from each end of the incision,

these strings will be removed for you at your first postoperative appointment. You should recover the incision with steri-strips, sterile gauze and paper tape after each shower. Do this dressing change daily until seen in follow up. The steri-strips will begin to fall off on their own. Please, do not actively remove them. Avoid submerging yourself in a bathtub or swimming pool for four weeks until the incision(s) are completely healed.

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

Your second postoperative appointment will be scheduled approximately six to twelve weeks from surgery. Another set of x-rays may be performed at this visit, and based upon the x-ray findings, some of your restrictions and exercises may be lifted or advanced. You may begin driving six to twelve weeks after surgery depending upon how your bone is healing and so long as you are off all narcotics. You may engage in sexual intercourse after six weeks.

Your third postoperative appointment will be scheduled approximately twelve to fourteen weeks from surgery. Again, based on your x-rays and individual progress, the progression is to enroll in formal physical therapy to essentially get you sport ready while doing so in an incremental fashion. This is typically the timeframe when the intense rehabilitation begins. It is important to be mindful of the number of physical therapy sessions your insurance company will allow. Please contact your insurance company to determine what the coverage is for physical therapy as you may want to reserve your benefits for the more intense rehabilitation required at that time.

You can return to school after your first postoperative appointment. If you have a sedentary desk type job you can typically return to work after your first postoperative appointment so long as you are no longer taking narcotic medications. If you have a physically demanding job, we advise that you do not return to work for six to twelve weeks. We will be happy to provide any documentation or forms required by your school or work. Please contact my administrative assistant **Andrea Mower** who can be reached at **amower@paleyinstitute.org** or **(561) 844-5255 ext. 245** for assistance.

You will not be administered a TSA card for flying, however it is advisable that you notify the TSA agent that you have stainless steel hardware in your hip. You will not need antibiotics for routine teeth cleanings unless otherwise directed by your dentist to have antibiotics.

Most oftentimes, you will be advised to have the screws removed. This is an outpatient procedure and is typically performed sometime between six to twelve months after surgery. (Yes, you can keep your screws). If you are not local, because this is an outpatient procedure, please plan on staying in the area for a day or two following surgery. Your primary care

physician can remove the sutures for you two weeks after surgery. Following the removal of the hardware, you will not have any physical restrictions.

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