

# THE UROLOGY GROUP

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## **HYPOSPADIAS**

Hypospadias is a birth defect found in boys in which the penile meatus is not at the tip of the penis. The meatus is the term for the opening of the penis through which urine normally exits the bladder. The incidence is reported to be one in 300 live male births. There is some family risk of hypospadias, as familial tendencies have been noted. Up to 14% of male siblings are affected.

Hypospadias is usually classified according to the location of the opening. As the defect increases in severity, the opening to the penis will be found further back on the penis. The most severe types can have openings at the region of the scrotum and even in the perineum (the region between the anus and the scrotum).

Hypospadias can be associated with another defect called chordee. Chordee is a downward curvature of the penis. Both hypospadias and chordee must be repaired so that a child can have normal urinary and reproductive health.

**Embryology:** A boy is developing in utero, the penis begins to form in the sixth week of fetal life. Two folds of tissue joint each other in the middle and a hollow tube is formed in the middle of the future penis. This tube is the urethra and its opening is called the penile meatus. As the skin folds develop to form the penis, any interruption in this process leads to the meatus being located in a location further from the end of the penis. The exact etiology for this premature cessation of urethral formation is poorly understood. In addition, the etiology of the often-associated abnormal downward curvature (chordee) is also poorly understood.

**Reasons to treat:** Hypospadias is repaired through a surgical procedure. When the repair is performed, the urethra is extended to the tip of the penis to its normal location. In addition, any bend is straightened. This is important for many reasons. When the opening is too ventral (underside), a male is unable to stand and urinate like other boys. It is harmful to a boy's normal social development to have to sit while he urinates. Additionally, a straight phallus is essential for normal reproductive health and sexual function.

**Treatment:** The treatment of hypospadias is always surgical. Initially, when the child is born and hypospadias is identified, it is important to delay any thoughts of circumcision until seen by a urologist. This is because the foreskin can provide essential additional skin needed to reconstruct the urethra.

We often repair hypospadias about the time a child is one year of age. This way, the boy is in diapers and management of dressings are made easier. However, the exact age of repair can vary according to the size of the penis and severity of defect. We have been able to repair most of the children with a single operation, but on occasion, a second operation may be needed. The operation is performed under general anesthesia with the child completely asleep. Most of the boys will have a small tube exiting the tip of their new meatus. This "stent" will protect the new urethra and allow for adequate healing. Most patients leave the hospital the same day or the following day. However, more complex repairs for the more severe

types of hypospadias can require long hospital stays due to the need for bed rest and immobilization in the immediate postoperative setting.

The exact type of operation employed varies according to the severity of the defect. For the more distal defects that have openings closer to the normal position at the end of the penis, a new tube can be created from the surrounding skin.

**Potential Complications:** The usual risks of surgery are present when we perform hypospadias repairs. Risk of infection is controlled with use of antibiotics with the surgery and in the postoperative setting. Bleeding is well controlled by using a penile tourniquet during the operation. This limits the blood loss to a very minimal amount, while allowing for good visualization of the tissues for the surgeon.

By using good surgical technique, we are able to minimize the longer-term complications of the surgery. The most common problems that present are fistula and stricture. A fistula occurs if a hole develops along the pathway of the repair proximal to the tip of the penis. In other words, a hole can develop along the underside of the penis allowing for leakage of urine. Additionally, a stricture is a scar that can form causing a narrowing in the urethra. If either of these complications occur, an additional repair will be needed usually six months later.

*Below, we have included our typical postoperative instructions for parents after their son has undergone surgery.*

#### DISCHARGE INSTRUCTIONS FOR PATIENTS AFTER HYPOSPADIAS REPAIR

**Activity:** Once your son is at home, he does not have to stay in bed, but he needs to be watched closely. He may walk and play QUIETLY. Your son may not use straddle toys, walkers, or bicycles until it is okayed by his doctor. His doctor will also tell you when he can return to daycare or school.

**Nutrition:** For the first day after surgery, your son may have fruit juice, soups, and crackers to help prevent stomach upset. It is important that your son drink plenty of fluids. Give him foods high in fiber, such as cereal or fruit to prevent constipation.

**Pain:** Children recovering from hypospadias repair usually experience some soreness. Your son's doctor will prescribe medication to help relieve the pain. Give your son the pain medication on a regular schedule, as prescribed by his doctor, to keep him comfortable.

**Medications:** In addition to pain medication, your son's doctor may prescribe anticholinergics to help decrease bladder spasms. Bacitracin is an antibiotic ointment used to help prevent infection and soothe the penile area. You can buy Bacitracin in any drug store without a prescription.

#### **BANDAGE/DRESSING CARE**

Your son will go home with a clean bandage or dressing around his penis. Leave the bandage in place. You do not need to change it. Keep the bandage as dry as possible and change your son's diaper often. After bowel movements, wash your son's bottom with warm water and gently pat dry. Do not use diaper wipes that have alcohol because they can sting. If your son's penis or bandage gets soiled with stool, rinse him gently with warm soapy water.

Your son's penis will look red and swollen for a while. Applying Bacitracin ointment gently on the tip of the penis 4 to 6 times a day will soothe the area and help prevent infection and crusting. The bandage may fall off by itself. If it does, apply Bacitracin on the entire area until it is completely healed.

Give your son a sponge bath for the first seven (7) days. As long as your son does not have a tube or stent, he may take a bath in the bathtub **after** seven (7) days. It is okay if the bandage falls off in the tube. Use only warm water for the first bath (NO SOAP). Use double diapers to protect and pad your son's penis for one week. Dress your son in loose fitting clothing, such as sweat pants or loose pajamas to keep him comfortable.

**SEEK IMMEDIATE ATTENTION FROM YOUR DOCTOR IF:**

- You notice bleeding from the stitches or blood in the urine (red diaper). It is okay if the urine is pink-tinged for a few days.
- Fever of 102°F or higher for more than 24 hours.
- Your son has continued nausea and vomiting after the first day.
- The bandage seems too tight or the penis tip is gray or blue.
- You notice your son is straining or unable to urinate.
- You cannot see the tube or if it falls out (do not replace it)
- Your son has severe pain that doesn't get better with pain medication