

Ureteropelvic Junction (UPJ) Obstruction

This handout describes the condition called Ureteropelvic (yuh-ree-tuh-roe-PEL-vik) Junction (UPJ) Obstruction, what causes it, symptoms, diagnosis, and treatment options.

What do kidneys do?

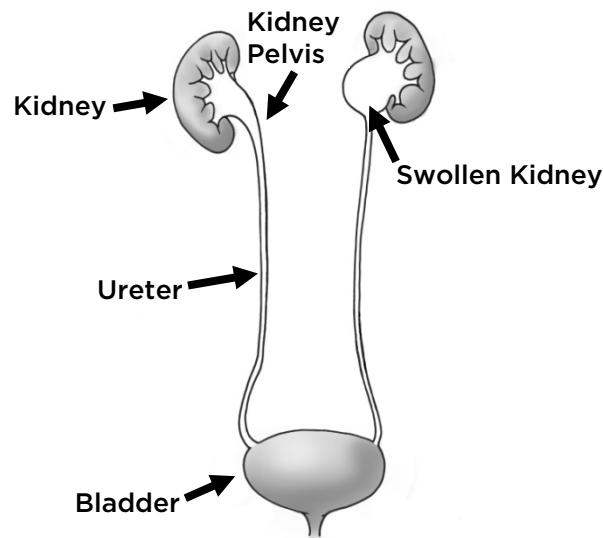
Kidneys filter blood and make pee (urine). Urine drains from the kidney to a funnel called the kidney pelvis, down tubes called ureters and into the bladder where the urine is stored until your child pees.

What is Ureteropelvic Junction (UPJ) Obstruction?

Ureteropelvic junction (UPJ) obstruction is a blockage or narrowing between the kidney pelvis and the ureter. UPJ obstruction causes urine to back up in the kidney. When urine backs up in the kidney, the kidneys can't filter blood, remove waste products or make urine. UPJ obstructions can happen on either or both kidneys.

What causes UPJ obstruction?

The exact cause of UPJ obstruction is unclear, but babies are born with it (meaning it's congenital). It is not due to anything parents did during pregnancy. Sometimes a UPJ obstruction is caused by a blood vessel that crosses over the ureter too tightly.



The Urinary System

How common is UPJ obstruction?

UPJ is rare - 1 in 1,500 children have it when they are born.

To Learn More

- Urology
206-987-2509
- Ask your child's healthcare provider
- seattlechildrens.org

Free Interpreter Services

- In the hospital, ask your nurse.
- From outside the hospital, call the toll-free Family Interpreting Line, 1-866-583-1527. Tell the interpreter the name or extension you need.

What are the symptoms of UPJ obstruction?

Sometimes there aren't any outward symptoms of UPJ obstruction, and it is only found when an ultrasound shows that the kidneys are swollen. UPJ obstruction is 1 of the conditions that can cause the kidneys to swell (called hydronephrosis). For more information, see our handout "[Hydronephrosis.](https://seattlechildrens.org/pdf/PE1320.pdf)" seattlechildrens.org/pdf/PE1320.pdf

Some children may experience back or side (flank) pain, blood in the urine (hematuria) or a urinary tract infection (UTI). Some children experience pain that comes and goes. This can be worse if they drink more than usual, because the kidney cannot drain out the extra fluid that builds up.

How do we diagnose UPJ obstruction?

After an ultrasound shows there is hydronephrosis, we do a study called Lasix Renogram. This shows how well the kidneys are working and if there is blockage. For more information, see our handout "[Lasix Renal Scan.](https://seattlechildrens.org/pdf/PE677.pdf)" seattlechildrens.org/pdf/PE677.pdf

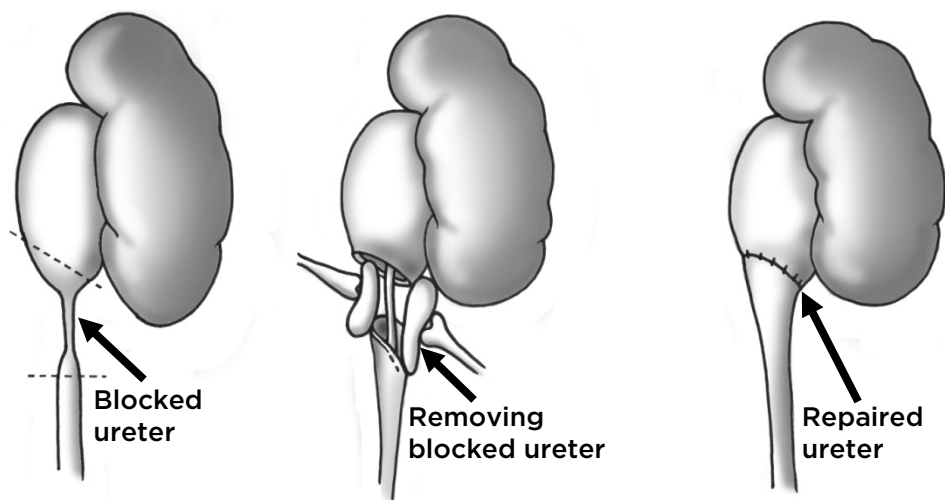
We may do other studies to look for urinary reflux. For more information, see our handout "[Urinary Reflux.](https://seattlechildrens.org/pdf/PE181.pdf)" seattlechildrens.org/pdf/PE181.pdf

How is UPJ obstruction treated?

The treatment depends on how much the ureter is blocked. When blockages are mild, stable or improving over time, we monitor your child with ultrasounds.

Blockages that are more serious or worsening can cause permanent kidney damage. These obstructions require surgery (called a pyeloplasty) to remove the portion of the blocked ureter. Your surgeon will discuss if a single cut or incision (open procedure) or surgery with small incisions (laparoscopic) is recommended for your child. For more information, see our handout "[Laparoscopic and Robotic Surgery.](https://seattlechildrens.org/pdf/PE673.pdf)"

seattlechildrens.org/pdf/PE673.pdf



Before Surgery

During Surgery

After Surgery

Surgery called a pyeloplasty to remove UPJ obstruction

What can I expect after surgery?

Your child will need to stay in the hospital between 1 and 3 days after surgery. We may place a tube (called a stent) in the ureter to keep it open and draining while it heals. If your child has a stent, it is common to see blood in your child's pee (urine). Stents are temporary. We remove them 4 to 6 weeks after surgery.

We will remove the stent either in clinic or under a brief procedure where your child receives medicine, so they are fully asleep (anesthesia). Talk with your surgeon about what will work best for your child. For more information, see our handout "Ureteral Stent."

seattlechildrens.org/pdf/PE1949.pdf

Your child's urologist will give you a follow-up plan. For the first several months, your child will need frequent ultrasounds. After that, your child will need an ultrasound once a year to watch kidney growth throughout their school-age years. If your child has kidney damage, we may refer them to the Nephrology Clinic.