

Surgery Options: Urinary Tract Surgery (Pyeloplasty)

Ureteropelvic junction (UPJ) obstruction is a blockage at the point where the kidney attaches to one of the ureters (tubes that connect the kidneys to the bladder). This blocks the flow of urine out of the kidney.

UPJ is more common in young children,¹ and may be found at or prior to birth.¹ In older children and adults, UPJ may be caused by scar tissue, infection, an earlier blockage, or kidney stones.¹

To remove the blockage, your doctor may suggest a surgery such as pyeloplasty. It can be done with open surgery or minimally invasive surgery.

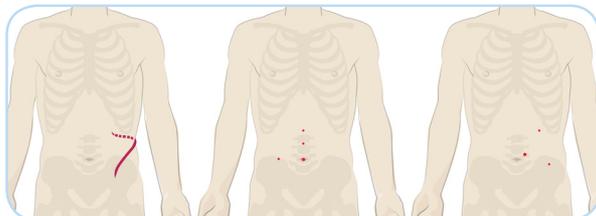
Open Surgery: Surgery is done through one large incision (cut) in the abdomen and allows doctors to touch your organs as they operate.

Minimally Invasive Surgery: During minimally invasive surgery (robotic-assisted or traditional laparoscopic), surgeons operate through a few small incisions using long instruments and a tiny camera to guide doctors.

Robotic-assisted **da Vinci Surgery** also features fully wristed instruments – meaning they bend and rotate far greater than the human hand.

Other key features:

- 3D HD vision system that gives surgeons a magnified view inside the body
- Enhanced vision, precision and control during the entire operation



Open Surgery
Incision

Laparoscopy
Incisions

da Vinci Surgery
Incisions

Your doctor is one of a growing number of surgeons worldwide offering *da Vinci*® Surgery.

For more information and to find a *da Vinci* surgeon near you, visit:
www.daVinciSurgery.com

1. U.S. National Library of Medicine; Medline Plus. "UPJ Obstruction". June 29, 2015. Available from: <https://medlineplus.gov/ency/article/001267.htm>
2. D. Bansal, et al. Infant robotic pyeloplasty: Comparison with an open cohort. *Journal of Pediatric Urology* (2014) 10, 380e385.
3. Cundy T, et al. Meta-analysis of robotic-assisted vs conventional laparoscopic and open pyeloplasty in children. *BJU International*, 2014; doi:10.1111/bju.12683
4. Hemal AK, et al. Laparoscopic pyeloplasty versus robotic pyeloplasty ureteropelvic junction obstruction: a series of 60 cases performed by a single surgeon. www.ncbi.nlm.nih.gov/pubmed/20156381
5. Wang F, et al. Robot-assisted versus laparoscopic pyeloplasty for patients with ureteropelvic junction obstruction: An updated systematic review and meta-analysis. *Scandinavian Journal of Urology*, doi:10.3109/21681805.2013.780184.

Considering Surgery for a Urinary Tract Condition?

Learn about minimally invasive
da Vinci® Surgery



da Vinci® Surgery

da Vinci Surgery:

A Minimally Invasive Surgical Option

The use of *da Vinci* Pyeloplasty offers the following potential benefits compared to open surgery for pediatric patients:

- › Shorter length of stay^{2,3}
- › Less need for narcotic pain medicine^{2,3}
- › Minimal Scarring

da Vinci Pyeloplasty offers the following potential benefits compared to traditional laparoscopy for adult patients:

- › Shorter hospital stay^{4,5}

da Vinci Pyeloplasty offers the following potential benefits compared to traditional laparoscopy for pediatric patients:

- › Shorter hospital stay^{3,5}

Your doctor controls the *da Vinci System*, which translates his/her hand movements into smaller, precise movements of tiny instruments inside your body.

The *da Vinci System* has brought minimally invasive surgery to more than 3 million patients worldwide.

Risks & Considerations Related to Pyeloplasty (surgery for a urinary blockage):

Infection of the kidney, leaking of urine, narrowing of the urethra, bowel injury, kidney stones, narrowing or movement of the stent, blood in the urine, prolonged leaking of urine.

Important Information for Patients

Serious complications may occur in any surgery, including *da Vinci*® Surgery, up to and including death. Risks include, but are not limited to, injury to tissues and organs and conversion to other surgical techniques. If your doctor needs to convert the surgery to another surgical technique, this could result in a longer operative time, additional time under anesthesia, additional or larger incisions and/or increased complications.

Individual surgical results may vary. Patients who are not candidates for non-robotic minimally invasive surgery are also not candidates for *da Vinci Surgery*. Patients should talk to their

doctor to decide if *da Vinci Surgery* is right for them. Patients and doctors should review all available information on non-surgical and surgical options in order to make an informed decision. Please also refer to www.daVinciSurgery.com/Safety for important safety information.

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