

# Facing Surgery for Urinary Tract Conditions?

Learn why **da Vinci**<sup>®</sup> Surgery may  
be your best treatment option



**da Vinci**  **Surgery**

## The Condition:

### Urinary Tract Obstruction

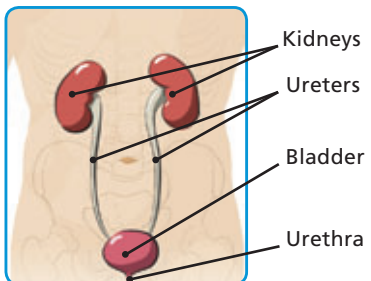
The urinary system is the group of organs that produces, stores, and eliminates urine. It includes two kidneys, two ureters and the bladder. The urinary system removes toxic by-products and excess fluids from the body, helping to maintain a critical balance of salt, potassium and acid.

A common condition affecting the urinary system is blockage (obstruction) of the ureters, the narrow tubes that carry urine from the kidneys to the bladder. Ureteral blockages are more common in children than adults.

Urinary tract obstruction is most frequently present at birth. It can also result from illness or injury. Blockages can cause acute pain and serious side effects. If left untreated, they can cause chronic pain and damage the kidney over time.

Two commonly diagnosed urinary conditions involving blockage are ureteropelvic junction (UPJ) obstruction and vesicoureteral reflux (VUR). Approximately one in 10 children are estimated to have VUR, though many do not have symptoms.<sup>1</sup>

UPJ obstruction is estimated to occur in 1 in 1,000-2,000 newborns.<sup>2</sup>



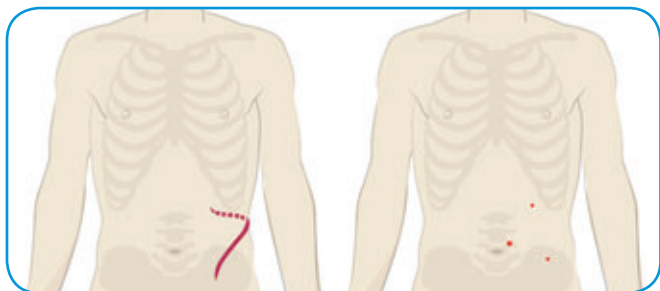
## The Treatment: Urinary Tract Surgery

In serious cases, patients need immediate treatment. Depending on the location of the obstruction, short-term options may include a catheter (small tube) inserted through the urethra into the bladder to drain urine; a stent (hollow tube) to keep the ureter open; or a tube inserted through the lower back to drain urine directly from the kidney.<sup>3</sup>

Depending on the type of urinary condition, procedures including pyeloplasty, ureteral reimplantation and ureteroureterostomy are used to correct urinary obstruction in both adults and children. The goal of surgery is to clear the obstruction and restore normal flow of urine through the urinary tract.



Urinary tract surgery can be performed using an open approach, meaning doctors must make a large abdominal incision. With open surgery there is potentially a painful recovery.<sup>4</sup> Another approach is conventional laparoscopic surgery. Laparoscopy is less invasive but limits the surgeon's dexterity, vision and control due to the instruments used during surgery.



Open Surgery  
Incision

da Vinci Surgery  
Incisions



## *da Vinci* Surgery for Urinary Obstruction: A Less Invasive Surgical Procedure

If your doctor recommends surgery to treat a urinary obstruction, you may be a candidate for minimally invasive *da Vinci* Surgery. Using the most advanced technology available, *da Vinci* enables your surgeon to perform delicate and complex operations through a few tiny incisions with breakthrough vision, precision, dexterity and control. *da Vinci* Surgery for Urinary Obstruction also allows for improved access inside the pelvis.

State-of-the-art *da Vinci* Surgery offers several potential benefits over traditional open and laparoscopic surgery, including:

- › Shorter operation vs. laparoscopy<sup>5</sup>
- › Less blood loss<sup>5,6</sup>
- › Less pain<sup>5</sup>
- › Shorter hospital stay<sup>5,6</sup>
- › Reduced use of narcotics<sup>6</sup>

As with any surgery, these benefits cannot be guaranteed, as surgery is specific to each patient and procedure.



## The Enabling Technology: *da Vinci* Surgical System

The *da Vinci* Surgical System is designed to provide surgeons with enhanced capabilities, including high-definition 3D vision and a magnified view. Your doctor controls the *da Vinci* System, which translates his or her hand movements into smaller, more precise movements of tiny instruments inside your body.



Though it is often called a “robot,” *da Vinci* cannot act on its own. The surgery is performed entirely by your doctor. Together, *da Vinci* technology allows your doctor to perform complex procedures through a few tiny openings. As a result, you may be able to get back to your life faster without the usual recovery following major surgery.

The *da Vinci* System has been used successfully worldwide in hundreds of thousands of procedures to date.

<sup>1</sup>Pohl HG, Joyce GF, Wise M, Cilento BG. Chapter 11. In: Litwin MS, Saigal CS, editors. Urologic Diseases in America. US Department of Health and Human Services, Public Health Service, National Institutes of Health, National Institute of Diabetes and Digestive and Kidney Diseases. Washington, DC: US Government Printing Office, 2007; NIH Publication No. 07-5512. p 384  
<sup>2</sup>Lee H, Han SW. Ureteropelvic Junction Obstruction: What We Know and What We Don't Know Korean J Urol. 2009 May;50(5):423-431. <sup>3</sup>Mayo Clinic. Urinary Obstructions. [www.mayoclinic.org/urinary-obstructions/treatment.html](http://www.mayoclinic.org/urinary-obstructions/treatment.html). <sup>4</sup>Bansal P, Gupta A, Mongha R, Narayan S, Kundu AK, Chakraborty SC, Das RK, Bera MK. Laparoscopic versus open pyeloplasty: Comparison of two surgical approaches- a single centre experience of three years. J Minim Access Surg. 2008 Jul;4(3):76-79. <sup>5</sup>Hemal AK, Mukherjee S, Singh K. Laparoscopic pyeloplasty versus robotic pyeloplasty for ureteropelvic junction obstruction: a series of 60 cases performed by a single surgeon. Can J Urol. 2010 Feb;17(1):5012-6. <sup>6</sup>Lee RS, Retik AB, Borer JG, Peters CA. Pediatric robot assisted laparoscopic dismembered pyeloplasty: comparison with a cohort of open surgery. J Urol. 2006 Feb;175(2):683-7; discussion 687.

All surgeries, including *da Vinci* Surgery, involve risk of major complications. Before you decide on surgery, discuss treatment options with your doctor. Understanding the risks of each treatment can help you make the best decision for your individual situation.

**Your doctor is one of a growing number of surgeons offering *da Vinci* Surgery for Urinary Tract Conditions.**

For more information about *da Vinci* Surgery and to find a surgeon near you, visit:

[www.daVinciSurgery.com](http://www.daVinciSurgery.com)

