



Vesicoureteral Reflux

Vesicoureteral reflux (VUR) occurs when urine in the bladder flows back into the ureters, and often back into the kidneys. When a child has VUR, the mechanism that prevents the back-flow of urine does not work, allowing urine to flow in both directions. A child with VUR is at risk for developing recurrent kidney infections, which, over time, can cause damage and scarring to the kidneys.

What causes vesicoureteral reflux?

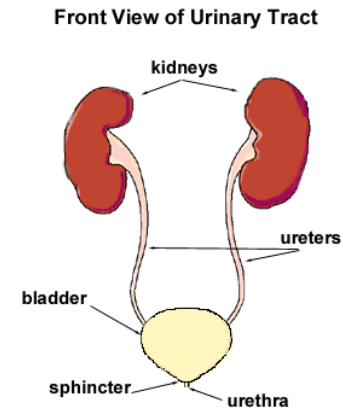
Child may develop VUR for many different reasons, including:

- a family history of the irregularity
- neural tube defects such as spina bifida
- other urinary tract abnormalities

What are the symptoms of vesicoureteral reflux?

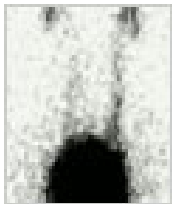
The most common symptoms of VUR include:

- urinary tract infection
- urgency when urinating
- dribbling
- wetting pants



How is vesicoureteral reflux diagnosed?

VUR can be diagnosed by ultrasound, family history, or diagnostic procedure, such as:



- **voiding cystourethrogram (VCUG)** - the bladder is filled with a liquid dye and X-ray images are taken as the bladder fills and empties to show if there is reverse flow of urine into the ureters and kidneys.
- **radionuclide cystogram (RNC)** - similar to a VCUG but a different fluid is used.
- **renal ultrasound** - a non-invasive test used to determine the size and shape of the kidney, and to detect a mass, kidney stone, cyst, or other abnormalities
- **blood tests** - used to measure function of the kidneys

What treatments are available for vesicoureteral reflux?

Most mild reflux will resolve on its own. However, some children will require endoscopic treatment, where a small amount of FDA approved material is injected to allow reflux to operate normally. The success rate of this procedure is 70 to 80 percent with minimal complications. Children with more severe reflux, however, may require surgical intervention.

Specific treatment is determined by:

- age, overall health and medical history
- extent of the condition
- tolerance for specific medications, procedures or therapies
- expectations for the course of the condition
- opinion or preference