Hydronephrosis

Definition
Hydronephrosis is when there is “stretching” or dilation in the kidney where urine collects. It may occur in one or both kidneys. This dilation may be caused by a blockage (obstruction), vesicoureteral reflux (VUR) or for no obvious reason. This blockage occurs somewhere along the urinary system. This causes the urine to become trapped and the kidney to dilate. Vesicoureteral reflux is when the urine travels backwards into the kidney causing the dilation. Many times, children who have hydronephrosis are born with it. Sometimes it is unknown why babies develop hydronephrosis.

Grading of Hydronephrosis:
**Grade 1:** mild “stretching” or dilation of the renal pelvis (where urine collects and drains to the bladder) only
**Grade 2:** moderate “stretching” or dilatation of renal pelvis including a few calyces
**Grade 3:** “stretching” or dilatation of the renal pelvis, seeing all the calyces, which are uniformly “stretched” or dilated, and normal kidney tissue
**Grade 4:** “stretching” or dilatation of the renal pelvis, seeing all of the calyces, and thinning of the kidney tissue
Diagnosis
Hydronephrosis is diagnosed by ultrasound. It may also be found with other image testing during an evaluation for other symptoms. Often children may have no symptoms. Some patients with severe hydronephrosis and have a blockage may have kidney pain, vomiting and urinary tract infections.

Treatment
Hydronephrosis is carefully monitored with periodic ultrasound imaging of your child’s kidneys. How often your child has ultrasounds will depend on several factors and will be determined by your provider. Your provider may order further tests. This may include a voiding cystourethrogram (VCUG) or kidney scans. If your child’s hydronephrosis is caused by a blockage, your child may need surgery. This will be discussed with you by your provider.

Pediatric Urology Clinic: (608) 263-6420
After hours, the clinic number will be answered by the paging operator. Ask for the Pediatric Urology Resident on call. Leave your name and phone number with the area code. The doctor will call you back. If you live out of the area, call 1-800-323-8942.