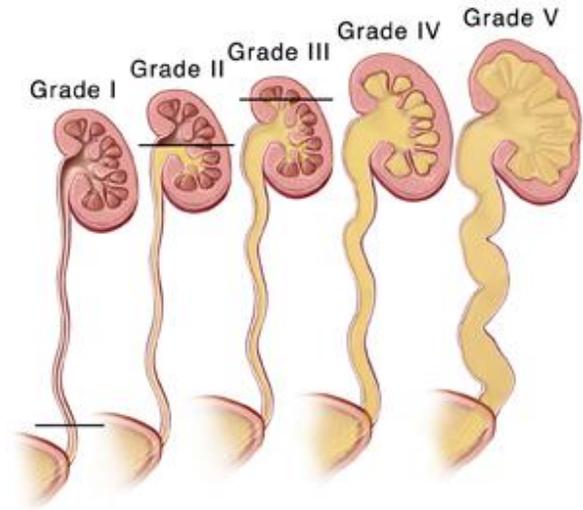


Vesicoureteral Reflux

What is reflux?

- The ureters are two tubes that carry urine from the kidneys to the bladder. The tubes go through the wall of bladder. A part of the ureter, called the valve-flap, lets urine flow into the bladder where it is stored. The flap keeps urine from flowing backwards into the ureters and kidneys. When a child has vesicoureteral reflux, urine flows backward into the ureter and/or kidney. Urine that backs up all the way into the kidney may cause kidney damage.
- The doctor will give the reflux a rating from Grade 1 to Grade 5. The lowest, Grade 1, is the least severe. The most severe is Grade 5 (V). The rating is based on:
 - How far it backs up into the ureters and kidneys.
 - How stretched out the ureter is
- If both ureters reflux, each side may have a different grade.



What causes it?

- The ureters don't have a long enough path through the bladder wall.
- The ureters are too wide.
- The ureters connect to the bladder at the wrong place or angle.
- Urinary tract infections.
- Nerve damage that causes abnormal pressure in the bladder. This is called neurogenic bladder.

If the urine is not infected, reflux may not hurt the kidneys. If the urine is infected and gets into the kidneys, it may cause scarring and permanent damage.

How is it treated?

Over half of the children with less severe grades of reflux will grow out of it with no treatment as they get older. Some children may be treated with low dose antibiotics if they get a lot of infections. This will lessen urinary tract infections. Some children may need surgery.

Treatment (continued)

Low dose antibiotics (no surgery)

Low dose antibiotics work to keep the urine free of infection and may need to be taken every day for a period of time. Your child's provider will talk to you about how long to take the antibiotics. There are very few problems or risks from this kind of treatment.

If low dose antibiotics are being used:

- It is important for your child to take the medicine every day.
- Have your child drink a lot of water.
- Know the signs of a urinary tract infection. The handout titled "Urinary Tract Infections" can help you learn the signs. The clinic may want to test a sample of your child's urine to see if there is an infection.
- Call the provider if you think your child:
 - Has a urinary tract infection.
 - Has a fever.
 - Is ill and you don't know why.

Surgery

Surgery may be needed if your child:

- Keeps getting urinary tract infections while on antibiotics.
- Does not outgrow the reflux.
- Has a more severe grade of reflux.
- Has kidney damage.

The type of surgery will depend on the kind of reflux your child has and will be discussed by your child's provider. Surgery will keep the infected urine from reaching the kidneys and causing damage.

- After surgery, your child may still have to take antibiotics. Your child should take antibiotics until the provider says it is okay to stop.
- It is important to keep all follow-up appointments. Follow up tests may be needed.
- Surgery may decrease, but might not stop, urinary tract infections.

ALERT: Call your child's doctor, nurse, or clinic if you have any questions or concerns or if your child has special health care needs that were not covered by this information.

This teaching sheet is meant to help you care for your child. It does not take the place of medical care. Talk with your healthcare provider for diagnosis, treatment, and follow-up.