

Urinary Reflux (Vesico-Ureteral Reflux)

What is urinary reflux?

The kidneys are the organs that make urine. They are a pair of fist-sized organs in the middle back, up underneath the ribs. The urine flows from the kidneys, through little tubes called ureters, to the bladder in your lower belly. The bladder stores the urine until you get to the bathroom. When you sit on the toilet, the urine flows out of the bladder through a tube called the urethra, then out of the body.

Normally, urine only flows downward: from the kidneys, through the ureters, to the bladder, through the urethra, and out of the body. The ureters have a valve, which is a special flap of tissue, to keep urine from flowing backward. Sometimes this valve does not work well. Urine can then flow backwards from the bladder up to the kidneys. This is called urinary reflux. (This is the same word as the reflux that causes heartburn, but is a totally different thing!) When reflux happens, the kidneys can get infected.

Most children have two kidneys. Reflux can happen on one side or on both sides. Reflux is measured on a scale of 1 to 5. Grade 1 is the mildest, and grade 5 is the most severe.

What causes urinary reflux?

No one knows what causes reflux. Reflux is a natural condition. Nothing that the child or parent does causes it. Doctors think that about 1% of all children have reflux. Reflux sometimes runs in families.

Does reflux ever get better?

Reflux goes away in many children as they grow up. Reflux is more likely to go away if:

- The child is very young when diagnosed
- The child has a low grade of reflux (grade 1, 2 or 3)
- It takes **years** for reflux to go away. No one can tell for sure if your child will get better over time. Your child's doctor will probably do another x-ray test in the future, to see if the reflux is better.
- VUR almost **never** gets **worse** over time. It usually stays the same, or gets better.

Why is it important to treat reflux?

Children with reflux are much more likely to get urine infections. These infections can spread to the kidneys, causing damage in the form of scars. These scars replace normal kidney function. Treating reflux helps prevent these infections, which helps prevent kidney damage.

How is reflux treated?

Some doctors recommend that children with reflux should take an antibiotic each day. This helps prevent urine infections. Children with reflux should also see a doctor to check their urine for infection any time they have a fever. The fever may be from a urine infection.

Is it bad to use antibiotics? Will that make my child immune to antibiotics? Will it weaken her/his immune system?

Some germs can become resistant to antibiotics. Your child, however, does not ever become immune to antibiotics. Antibiotics do not weaken the immune system. Doctors

want to use antibiotics carefully, so the germs don't become immune. Children with reflux have a high risk of getting urine infections. These infections can damage the kidneys. That's why doctors feel it is okay to use antibiotics in these children--the benefits are higher than the risks.

Will my child need surgery?

Most children with reflux do not need surgery. Some children with more severe reflux may need surgery. Surgery helps tighten the "valve" where the urine enters the bladder. Surgery may be helpful for:

- Children with severe reflux (usually, grades 3-5)
- Older children
- Children with reflux for several years, with no improvement
- Children who have many urinary infections

Your doctor will talk to you about the treatment options for your child.