

# PRENATAL ULTRASOUND FINDINGS

## Dilated Renal Pelvis?

Ultrasounds are routinely done during pregnancy to help monitor the health of your baby. However, sometimes the ultrasound finds something a little different in the baby. This fact sheet will give you information about a finding known as **Dilated Renal Pelvis**.

### What is a dilated renal pelvis?

During a second trimester prenatal ultrasound the baby's kidneys are routinely evaluated. The sonographer looks at the overall size and shape of the kidneys and measures the amount of urine in the renal pelvis. The renal pelvis is considered mildly dilated when the measurement is about 5-9 mm. The renal pelvis is where urine collects in the kidney before being passed down the ureter and into the bladder. The ureter is a narrow tube which drains the urine from the kidneys to the bladder. In about 2-3% of pregnancies, there is a slight increase in the amount of urine found in the renal pelvis in one or both kidneys. There are several terms used to talk about this particular ultrasound finding, including dilated renal pelvis, renal pelvis dilatation, mild pyelectasis, pelviectasis, and mild hydronephrosis. Hydronephrosis is the term used when the amount of urine in the renal pelvis measures 10 mm or more, and is much less common. Most babies found to have a mildly dilated renal pelvis during pregnancy are healthy when they are born and have normal working kidneys.

### What causes a dilated renal pelvis?

There are several things that can cause the renal pelvis to be dilated. In many cases the mild dilation is just part of the normal variation seen in babies. In some babies, however, the dilation may be due to obstruction (blockage) of the ureter, or reflux of urine. Both of these conditions are treatable. In cases with obstruction, the most common type of blockage is called ureteropelvic junction (UPJ) obstruction. In this situation the connection between the renal pelvis and the ureter is narrowed or partially blocked and causes a small build-up of urine in the renal pelvis. When babies have reflux, the valves located at the connection of the ureter and the bladder may not be working properly. In this case, urine is able to flow backwards toward the kidneys and can collect in the renal pelvis.

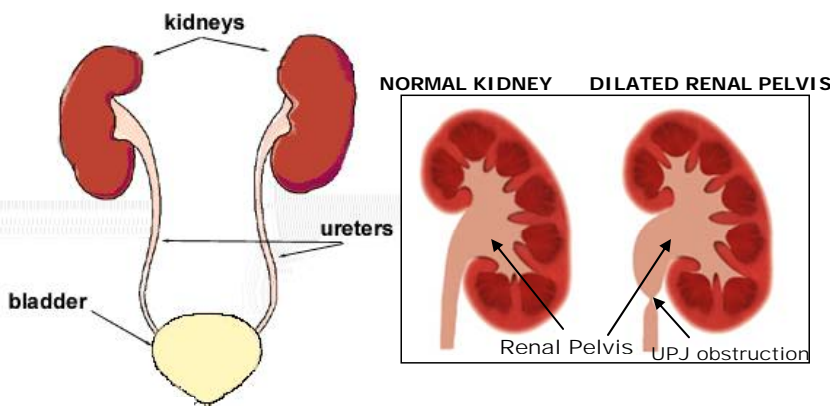
### Who is at greatest risk for a dilated renal pelvis?

A dilated renal pelvis is much more frequently seen in male babies, but can be seen in females as well. Risk may also be higher if there have been others in the family with a related kidney problem.

### Can a dilated renal pelvis cause problems for the baby?

In most cases this ultrasound finding is considered an incidental finding that will not cause problems for the baby. As long as the baby is making a normal amount of amniotic fluid, there is generally no need for special intervention during pregnancy. Although most babies do not have major problems, there are some possible concerns raised when dilated renal pelvis is seen during pregnancy.

### Front View of Urinary Tract



<http://genetics.kaiser.org>

**Urinary tract problems:** A mildly dilated renal pelvis is sometimes the sign of a minor urinary tract problem, such as UPJ obstruction or reflux that may need treatment after delivery. Less often, it is an early symptom of a more severe problem with the urinary tract.

**Down syndrome:** Some studies have also suggested that there may be an increase in the risk for Down syndrome when mild renal dilation is seen in both kidneys during pregnancy. However, not all studies agree about this possible risk. To get the best estimate of Down syndrome in any individual pregnancy, it is important to consider many different things about the pregnancy, including results from prenatal testing, the mother's age, and the presence of any additional ultrasound findings.

- To learn more about prenatal testing for Down syndrome go to the genetics website listed at the end of the page.

### Are any additional tests needed?

When dilated renal pelvis is seen on a routine second trimester ultrasound, a high resolution (level II) ultrasound may be offered to confirm the finding and to look for any other ultrasound findings. Further testing, such as amniocentesis, may be discussed, especially if there are additional ultrasound findings.

Depending on the initial ultrasound findings, a follow-up ultrasound in the third trimester (at about 32 weeks) may be considered to monitor changes in the fetal kidney. The specific ultrasound findings are used to help decide whether any follow-up is needed after delivery.

Many babies with a mildly dilated renal pelvis do not need any additional testing after birth. However, in some cases, follow-up studies are recommended for the newborn. The most common follow-up studies include a renal ultrasound and urine testing. There are changes that happen in the baby's kidneys the first few days after birth, so any necessary follow-up is usually arranged a few days to a few weeks after delivery.

### Will my baby need surgery?

Renal pelvis dilation that improves or remains stable rarely needs surgery, even if there is a minor problem in the urinary tract, such as reflux or UPJ obstruction. Reflux usually resolves on its own as the baby gets older and the valve mechanism between the bladder and ureter matures. With some babies who have reflux, low dose antibiotic treatment may be needed and, less often, surgery is required to correct this problem. In the vast majority of babies with UPJ obstruction, the blockage is mild and surgery is not needed.

### Where can I get more information?

You can speak with your OB provider or a genetic counselor if you have additional questions about this ultrasound finding.

There are also many resources available on the internet.

### Kaiser Genetics Departments

Website: <http://genetics.kaiser.org/>

Fresno	(559) 324-5330
Oakland	(510) 752-6298
Sacramento	(916) 614-4075
San Francisco	(415) 833-2998
San Jose	(408) 972-3300