

Dilated Renal Pelvis

A baby's kidneys are routinely checked during a second trimester prenatal ultrasound. The sonographer looks at the size and shape of the kidneys and measures the amount of urine. The renal pelvis is where urine collects inside the kidney before passing through a narrow tube called the ureter and into the bladder. The renal pelvis is considered dilated (larger than usual) when it measures 4 mm (about 1/6 inch) or more before 24 weeks in pregnancy. About 1 out of every 40 babies has a renal pelvis that measures slightly large during pregnancy. This can affect one or both kidneys. Most babies with a dilated renal pelvis are healthy when they are born and have normal working kidneys.

There are several terms used to describe this ultrasound finding, including:

- dilated renal pelvis
- renal pelvis dilatation
- mild pyelectasis
- pelviectasis
- mild hydronephrosis

The term hydronephrosis is used when the renal pelvis measures 10 mm or more, which is much less common.

What causes a dilated renal pelvis?

There is wide range in the size of the renal pelvis. For many babies, the larger size is just part of the normal range. However, sometimes a dilated renal pelvis is due to a block (**obstruction**) in the ureter, or urine moving back into the kidney (**reflux**). Both of these conditions are treatable.

UPJ Obstruction: The most common type of block in the ureter is called ureteropelvic junction (UPJ) obstruction. This is when the connection between the renal pelvis and the ureter is narrowed or partially blocked. This causes urine build up in the renal pelvis.

Reflux (VUR): Reflux happens when urine moves backwards from the bladder into the ureter and kidney. The medical term is for this vesicoureteral reflux (VUR). Normally, urine only flows one direction - from the kidneys down to the bladder. With VUR, some urine moves back up the ureters and collects in the renal pelvis.

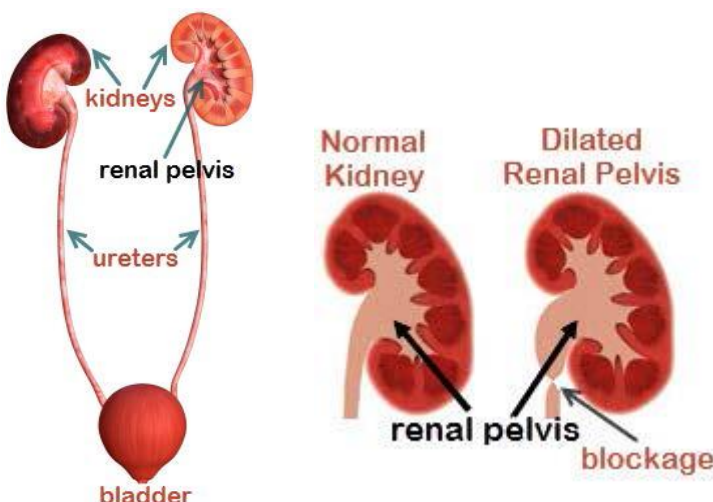
What are the risk factors for a dilated renal pelvis?

This finding can happen in any pregnancy, but it is more likely to be seen when:

- The baby is male
- Similar kidney problems have been found in other family members

Can a dilated renal pelvis cause problems for the baby?

A dilated renal pelvis is common and does not usually cause problems for the baby. However, this can be a sign of a medical condition that could affect the baby's health. Knowing about this during pregnancy lets your doctor or nurse practitioner monitor the health of the baby.



Urinary tract problems: A dilated renal pelvis can be the sign of a minor urinary tract problem, such as UPJ obstruction or VUR. Less often, a dilated renal pelvis is an early sign of a more serious problem with the bladder, kidney, or ureter.

Down syndrome: Some studies raised concerns about a small risk for Down syndrome with this ultrasound finding. However, most studies do not find a higher risk for Down syndrome when dilated renal pelvis is the only ultrasound finding. Blood tests or amniocentesis are a better way to look for Down syndrome during pregnancy.

Are any additional tests needed?

A dilated renal pelvis is usually seen during a routine ultrasound. When this is seen, your doctor or nurse practitioner may recommend another ultrasound in the third trimester (at about 32 weeks) to check for changes in the fetal kidney. The third trimester ultrasound can help determine whether or not follow-up is needed after delivery. Most babies with a mildly dilated renal pelvis do not need any follow-up after birth. When babies have a dilated renal pelvis measuring 10 mm or larger, a kidney ultrasound is usually recommended about 2 weeks after birth.

Rarely, when the dilated renal pelvis is very large (15 mm or larger) in your second trimester, a targeted (level II) ultrasound may be offered to look closer at the fetal kidneys and organs.

Will my baby need surgery?

Surgery is rarely needed, especially when the size of the renal pelvis stays the same or gets smaller. Even when there is a minor problem in the urinary tract, such as UPJ obstruction or reflux, only a small number of babies ever need surgery.

UPJ obstruction - The blockage is mild in most babies with UPJ obstruction and surgery is rarely needed.

Reflux (VUR) - Reflux usually goes away on its own. As a baby gets older, the bladder and ureter begins to work better. Some babies with VUR are given medication to help prevent urinary tract infections. Less often, surgery is needed to correct this problem.

Where can I get more information?

You can speak with your doctor or nurse practitioner if you have more questions about this ultrasound finding.