

Information for women after ultrasound detection of fetal renal pelvic dilatation (RPD)

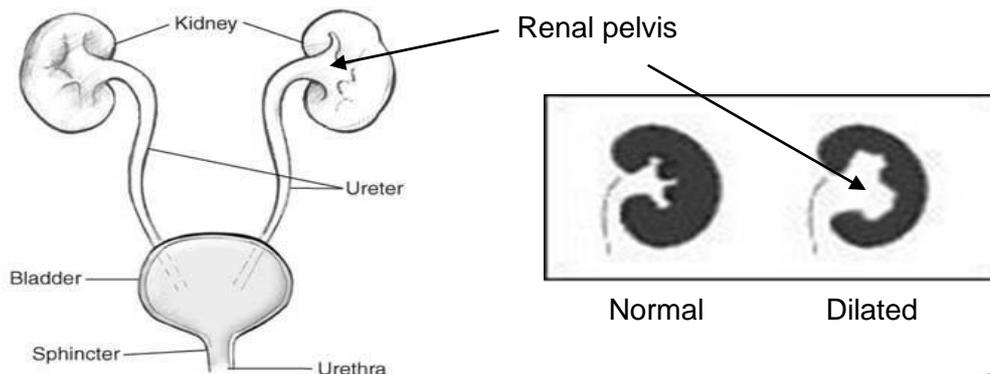
The aim of this leaflet is to help explain what renal pelvis dilatation (RPD) means and to answer some of the questions you may have about this ultrasound scan finding.

Your antenatal 18+0 to 20+6 fetal anomaly ultrasound scan has shown that the area within one or both of your baby's kidneys where urine collects, known as the renal pelvis, is a little wider (dilated) than usual. This finding is known as RPD.

It is one of the most common findings that we can see in unborn babies having antenatal ultrasound scans. It can occur in one or both kidneys and the dilatation can vary in size during the pregnancy. Most cases are a mild temporary finding and usually the result of prematurity, in the urinary system, at this stage in your baby's development in the womb. A very small number of cases can be an early sign of a problem affecting the urinary system, so we monitor this finding at two further ultrasound scans later in the pregnancy.

What is renal pelvic dilatation?

The kidneys are part of the urinary system (see the picture below) and are formed early in your baby's development in the womb. They are usually found on the right and left sides of your baby's body. They basically consist of two parts: an outer part for filtering the baby's blood and producing urine and an inner, central part called the renal pelvis, which acts as a collecting area for the urine before it drains out of the kidney and down a tube called the ureter to the bladder. The urine is then stored in the bladder until the baby urinates. It is the renal pelvis area that dilates (widens) in renal pelvic dilatation.



How is RPD diagnosed?

Your baby's kidneys are checked during the anomaly ultrasound scan. If we see that one or both renal pelvis area appears wider (dilated) in diameter, we measure the size of each renal pelvis (from 'front to back'), in a section of the baby's abdomen, to check how dilated they are.

The usual measurement of the renal pelvis is between 0 to 7 mm before 24 weeks and less than 10 mm after 28 weeks. If the measurement is more than this at either of these stages in the pregnancy, the widening or enlargement of the renal pelvis is called **RPD**.

Why does it happen?

The exact cause of this appearance is not always clear during a pregnancy but it may indicate one of the following possibilities:-

NORMAL VARIANT

This is the most likely cause of RPD, a variation in the normal development process in the urinary system and the ultrasound finding is the result of prematurity during the antenatal period. The kidneys and urinary system just need time to develop and grow during the pregnancy. There is usually **no** underlying problem and the kidneys will eventually have a normal appearance towards the end of the pregnancy or when the baby has been born.

VESICO-URETERIC REFLUX

In a few cases, RPD can be due to the backward flow of urine from the bladder into the ureters and kidneys. It occurs when the small valves in the lower part of the ureter near the bladder, which control the direction of urine flow, are not working properly. The urine is then able to flow backwards up the ureter and sometimes into the kidney which causes the renal pelvis area to dilate.

OBSTRUCTION / BLOCKAGE

In a very small number of cases, RPD at this stage in the pregnancy can be an early sign for either a temporary or permanent obstruction somewhere in the urinary system. Most of these cases can be linked to prematurity but some are due to a kink or narrowing in the ureter or a problem in the urethra. In either case, an obstruction will affect the flow of urine out of the kidney or bladder which then causes the renal pelvis to dilate. In these cases the RPD can progress to a more advanced dilatation known as **hydronephrosis** which may affect how the kidney/s continue to develop and function properly during the rest of the pregnancy and after birth. The amount of amniotic fluid/liquor (water) surrounding the baby in the womb can also be affected if the dilatation becomes very large in both kidneys.

What will happen next?

In a few cases the dilatation (widening) that we have seen, in one or both of your baby's kidneys, can increase and worsen during the pregnancy. We will need to monitor the size of each renal pelvis and check the rest of the urinary system at **two** further antenatal ultrasound scans later in the pregnancy. These are done at about **28 weeks** and **36 weeks**.

If the 36 weeks ultrasound scan shows the RPD to be less than 10 mm and there is no other problem affecting the kidneys and rest of the urinary system, further ultrasound scans **after** your baby has been born will **not** be required.

If the RPD continues, what will happen?

DURING PREGNANCY:

In most of these cases RPD will be mild so we just monitor the size of both kidneys renal pelvis and check the rest of the urinary system with ultrasound scans.

If the renal pelvis dilatation becomes significantly large, causes a significant dilatation in the ureters, a very large bladder or affects the amount of amniotic fluid / liquor (water) surrounding your baby in the womb, you will need to see -

- An Obstetrician who will discuss further management of this finding
- A Paediatrician who will explain how we may need to manage this finding after your baby has been born.

We may also need to refer you to a fetal medicine unit for a second opinion and further assessment.

AFTER YOUR BABY IS BORN:

- If the **36 week** scan shows continued RPD of **10mm** or more, your baby will need **two** further follow-up ultrasound scans after birth. These are usually done at about **one to two weeks of age** and again at about **eight weeks of age**. These scans will be done in the ultrasound area within the Radiology (X-ray) department in the main hospital building at Hillingdon Hospital.
- Babies with a RPD of 10 mm or more have an increased chance of developing urinary tract infections (UTI's) **after** birth. If this is the case, your baby will need to be prescribed a small **daily** dose of **antibiotic syrup** (liquid).
- You will be shown how to give the antibiotic to your baby and the first dose should be given soon after birth. The antibiotic needs to be continued until there is no significant RPD present.

- If these postnatal ultrasound scans are normal, the Radiologist (doctor) doing the scan should tell you to stop the antibiotic and further investigations will not be required.
- If the postnatal ultrasound scan shows a continuing or increasing dilatation, your baby will need to be monitored for a longer period of time with further ultrasound scans. The antibiotic treatment will need to be continued and you will need to be seen in the **Tinkerbelle unit (children's out-patient clinic)** by a Paediatrician, to discuss further management. Your baby may need to have other imaging investigations to help check how the kidneys and the rest of the urinary system is working.

If you need to contact us:

If you have any questions or concerns about this scan finding or about your 18+0 to 20+6 fetal anomaly scan, you can speak to a member of the maternity ultrasound team on 01895 279052 (Monday to Friday, 9am to 4pm).

Please try not to worry about this ultrasound scan finding during your pregnancy. In most babies this finding is a normal development process and usually resolves spontaneously towards the end of the pregnancy or in the early weeks after your baby has been born.

Where can I get further information about this ultrasound scan finding?

If you have any further questions you can speak to your Midwife, GP, Obstetrician or a member of the clinical team providing your antenatal care.

SUPPORT GROUP - ANTENATAL RESULTS AND CHOICES (ARC)

ARC is a charity organisation which provides impartial information and individual support to parents while they are going through antenatal screening tests (which includes the ultrasound scans) or when their unborn baby has been diagnosed with an abnormality.

Helpline: 0845 077 2290, E-Mail: info@arc-uk.org, Website: www.arc-uk.org



The Hillingdon Hospitals



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Languages/ Alternative Formats

Please ask if you require this information in other languages, large print or audio format. Please contact: 01895 279973

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Jeżeli chciałbyś uzyskać te informacje w innym języku, w dużej czcionce lub w formie audio, poproś pracownika oddziału o kontakt z biurem informacji pacjenta (patient information) pod numerem telefonu: 01895 279973.

如果你需要這些資料的其他語言版本、大字体、或音頻格式，請致電01895 279 973 查詢。

إذا كنت تود الحصول على هذه المعلومات بلغة أخرى، بالأحرف الكبيرة أو بشكل شريط صوتي، يرجى الاتصال بالرقم التالي 01895279973 .