

Renal dysplasia

Overview

This infoKID topic is for parents and carers about children's kidney conditions.

This leaflet has the overview only.

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Renal dysplasia (or kidney dysplasia) means that a kidney does not fully develop in the womb. The affected kidney does not have normal function – which means that it does not work as well as a normal kidney. It is usually smaller than usual, and may have some cysts, which are like sacs filled with liquid.

Renal dysplasia may be picked up before birth on the 20 week antenatal ultrasound scan, or soon after birth. It may also be picked up in an older child who has some symptoms.

An affected kidney is called a dysplastic kidney. Renal dysplasia rarely causes any problems during the pregnancy or in childbirth.

- If it happens in one kidney, it is called unilateral renal dysplasia. Although one of their kidneys will not work properly, many children have no serious problems, but will need monitoring for possible long-term effects.
- If it happens in both kidneys, it is called bilateral renal dysplasia. This is more serious, and will need follow-up during the pregnancy to find out how the baby is affected.



About the urinary system and urine

The **urinary system** gets rid of things that the body no longer needs, so that we can grow and stay healthy.

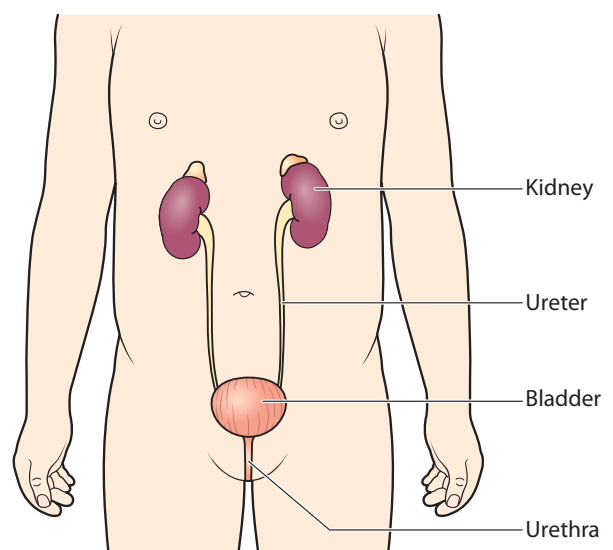
The **kidneys** are bean-shaped organs. They filter blood to remove extra water and waste in urine (wee). Most of us have two kidneys. They are on either side of our spine (backbone), near the bottom edge of our ribs at the back.

The two **ureters** are long tubes that carry urine from the kidneys to the bladder.

The **bladder** is a bag that stores urine until we are ready to urinate. It sits low down in the pelvis.

The urethra is a tube that carries urine from the bladder to the **outside** of the body.

» **More about the urinary system and kidneys**



Causes

Renal dysplasia happens when part of the kidney does not develop properly in the womb. It is relatively common

It is not always possible to know why renal dysplasia happens. In the majority of cases, it is not caused by anything that the mother does during her pregnancy, and it is unlikely that a future pregnancy will result in renal dysplasia or other problems with the kidneys.

Occasionally a specific cause is found.

Test and diagnosis

Antenatal ultrasound scan

The 20 week **antenatal ultrasound scan** looks at your baby growing in the womb. Renal dysplasia may be suspected if one or both of the kidneys look smaller than usual or otherwise look abnormal.

The scan *cannot* always **diagnose** (identify) the problem. Although your doctor will not always know how your baby will be affected at birth, he or she is less likely to have significant problems if:

- he or she is growing well in the womb
- no other problems have been found, and
- there is a normal amount of **amniotic fluid** (or liquor).

You may need to go back to the hospital for more ultrasound scans during pregnancy.

Diagnosis later in childhood

Sometimes, renal dysplasia is only picked up after birth or when a child is older. It is usually found during a scan that a child is having for another reason, such as after a urinary tract infection (UTI) or after an accident.

Other conditions that look like renal dysplasia

Sometimes, renal dysplasia is thought to be another type of problem with the kidney(s).

- **Renal hypoplasia** – part of the kidney does not develop properly, and the kidney is smaller than normal.
- **Multicystic dysplastic kidney (MCDK)** – a more severe form of renal dysplasia. The whole of the affected kidney is a bundle of many cysts and does not work.
- **Reflux nephropathy** – scars on the kidney.

Other conditions associated with renal dysplasia

Sometimes, renal dysplasia can be seen with other conditions that happen in the womb.

- **Antenatal hydronephrosis** – one or both kidneys do not drain urine properly. In renal dysplasia, this is because the urine drainage system is

'baggy' and does not empty properly. The affected kidney becomes stretched and swollen. Antenatal hydronephrosis may get better at a later stage in the pregnancy, but your doctor will check how your baby is affected.

- **Vesicoureteral reflux (VUR)** – when babies with VUR pass urine in the womb, some urine refluxes (goes back up) towards, and sometimes into, the kidneys. This can affect the fully working kidney and/or the dysplastic kidney.
- **Posterior urethral valves (PUV)** – a blockage in the back part of the urethra near the bladder in some boys.

Tests after birth

After your baby is born, he or she may need some **imaging tests** (scans). These use special equipment to get images (pictures) of the inside of the body. They are used to confirm that your child has renal dysplasia and look for any complications.

Unilateral renal dysplasia

In **unilateral renal dysplasia**, one kidney does not develop properly in the womb. ('Unilateral' means one side.) Most children born with one dysplastic kidney have no complications and do not need special treatment. Sometimes the other kidney grows larger than normal to make up for the dysplastic kidney. However, they may be at risk of or **urinary tract infections (UTIs)** and/or **hypertension** (high blood pressure) later in life.

Bilateral renal dysplasia

In **bilateral renal dysplasia**, both kidneys do not develop normally. ('Bilateral' means two sides.) Some babies born with two dysplastic kidneys have no immediate complications. Others need more support at birth, including ventilation to help them breathe.

All children with bilateral renal dysplasia need monitoring, as some may go on to develop **kidney failure**. This occasionally happens while a baby or child is young, but is more likely to occur later in life, especially during puberty when children's bodies grow quickly. Children need to go back to the hospital or clinic throughout childhood to check how well their kidneys are working. Treatment can be started as soon as it is needed, to help your child grow and remain healthy. Eventually the kidneys may stop working and **dialysis** may be needed.

» **More about renal dysplasia on www.infoKID.org.uk**

Your notes and contact information

www.infoKID.org.uk



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