

# Multicystic dysplastic kidney (MCDK)

## Overview

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

This leaflet has the overview only.

Go to [www.infoKID.org.uk](http://www.infoKID.org.uk) to find out more about this topic or other topics

A multicystic dysplastic kidney (MCDK or MDK) is a kidney that has not developed normally in the womb. Instead of a working kidney, there is a bundle of cysts, which are like sacs filled with liquid. The cysts may be very large at first, though over time they get smaller and the kidney gradually shrinks.

MCDK may be picked up before birth on the 20 week antenatal ultrasound scan, or soon after birth. Occasionally, it is not picked up until a child is older.

- MCDK usually affects one kidney only – this is called **unilateral MCDK**. This does not usually cause any problems, and the affected kidney may shrink and disappear by the time a child is five years old. The other kidney does the work of two kidneys, and usually gets larger. Children usually need monitoring throughout their childhood for possible long-term effects.
- Very rarely, MCDK affects both kidneys – this is called **bilateral MCDK**. Or, one kidney may be affected by MCDK and the other kidney may have another problem – this is another form of bilateral kidney disease. If this is suspected, you will need to go back to the hospital for more scans to confirm the problem. Sadly, babies with no working kidneys are unable to survive.



## About the urinary system

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

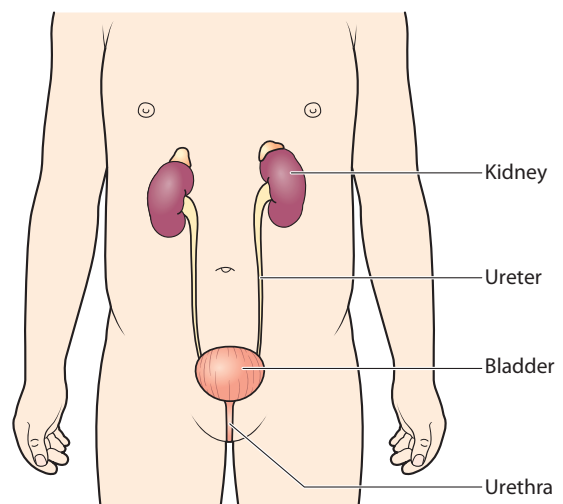
The **kidneys** are bean-shaped organs. They filter blood to remove extra water, salt and waste in urine (wee). Most of us have two kidneys. They are at the back on either side of our spine (backbone), near the bottom edge of our ribs.

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 (have a wee). 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

It is estimated that 1 in 4300 babies is born with unilateral MCDK. Bilateral MCDK is much rarer.

It is not always possible to know why MCDK 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 MCDK or other problems with the kidneys.

Occasionally a specific cause is found.

## Tests and diagnosis

### Tests in pregnancy

The 20 week antenatal **ultrasound scan** looks at your baby growing in the womb. The scan also measures the amount of **amniotic fluid** (or liquor), the fluid that your baby floats in. The baby's kidneys start making urine and pass this out into the amniotic fluid.

MCDK may be suspected if one or both of the kidneys look different from usual. If there is too little amniotic fluid, this may mean that the kidneys are not working properly.

### What the ultrasound can tell us

The antenatal ultrasound scan *cannot* always **diagnose** (identify) the problem. Other problems that look like MCDK on the antenatal ultrasound scan include:

- **renal dysplasia** – the affected kidney has not developed properly; it may have some cysts and is usually smaller than usual
- **renal hypoplasia** – the affected kidney is smaller than usual, but otherwise works normally.

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.

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

### Referral

Your obstetrician may refer you to a paediatrician, a doctor who treats babies, children and young people, or a **paediatric nephrologist**, a doctor who treats babies, children and young people with kidney problems.

## Antenatal hydronephrosis

Sometimes, MCDK can be seen with another condition that happens in the womb, called **antenatal hydronephrosis**. The kidney does not drain urine properly. The affected kidney can become stretched and swollen. Antenatal hydronephrosis often gets better at a later stage in the pregnancy, but your doctor will check how your baby is affected.

### Diagnosis later in childhood

Sometimes, MCDK 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 a **urinary tract infection (UTI)** or after an accident.

## Unilateral MCDK

In unilateral MCDK, one kidney does not develop properly in the womb. ('Unilateral' means one side.) Unilateral MCDK rarely causes any problems during the pregnancy or in childbirth.

Many children with only one working kidney have no complications and do not need special treatment. Sometimes the other kidney grows larger than normal to make up for the missing kidney. However, they may be at risk of **urinary tract infections (UTIs)** and/or **hypertension** (high blood pressure) later in life.

Occasionally, babies have MCDK on one side, and some degree of **renal dysplasia** or **hypoplasia** on the other side – this is another form of bilateral kidney disease. Overall kidney function will depend on how well the kidney with dysplasia or hypoplasia is working. Your doctor will discuss this with you.

## Bilateral MCDK

In **bilateral MCDK**, both kidneys do not develop properly. ('Bilateral' means two sides.) Babies with bilateral MCDK have no working kidneys. This is very rare. Sadly, babies with no working kidneys are unable to survive.

» **More information on MCDK on [www.infoKID.org.uk](http://www.infoKID.org.uk)**

## Your notes and contact information

[www.infoKID.org.uk](http://www.infoKID.org.uk)



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