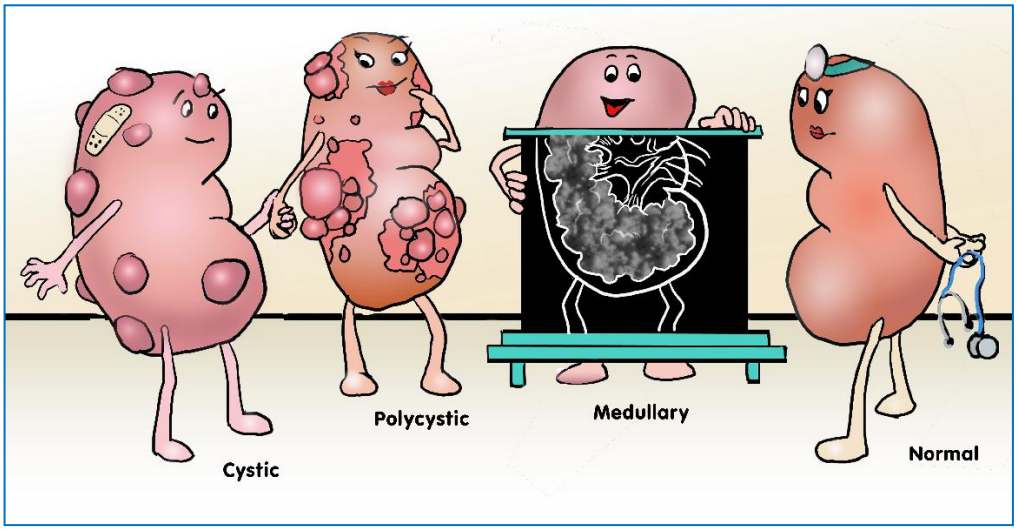
Kidney Health Information

Cystic Kidney Diseases

Many conditions share kidney cysts as a feature and some of them are very rare.
Simple cysts (see below) are cysts that form for unknown reasons and usually cause no trouble at all. However in Polycystic Kidney Disease (PKD), many cysts are formed, and this is a serious condition that can cause kidney failure. There are also rarer diseases that can cause kidney cysts, for example Medullary Sponge Kidney – the cysts form on the inside.

The most common inherited causes



- Autosomal Dominant Polycystic Kidney Disease (ADPKD, PKD)

Most patients with true PKD have this condition. It is inherited as an 'autosomal dominant' gene, so that if you have it, there is a 1 in 2 chance of passing it on if you have a child. Inheriting it doesn't necessarily mean you will get kidney failure though. Click on the link above or see 'Finding out more' for more about ADPKD.

Simple Renal Cysts

This means just one or a few cysts without any serious disease to explain them.

- Simple cysts become more common with age. More than 10% over those over 50 and 20% of people over 70 have simple cysts
- The cysts can be single or multiple and often found in the renal cortex (outer part of the kidney)
- Often causing no symptoms, cysts are often found when the abdomen is being scanned or x-rayed for something else
- Occasionally cysts can cause pain in the flanks (either side of the mid back) and blood in the urine which can be obvious (macrohaematuria – but this is unusual) or invisible (microhaematuria).
- Microhaematuria will show in a dip stick urine test at surgery or clinic.
- If you have haematuria it will usually be necessary to exclude other causes of blood in urine, such as kidney stones and tumours. Further tests may be ordered.
- Simple renal cysts don't usually require treatment.

Rare Causes – Inherited cystic conditions

- Autosomal *Recessive* Polycystic Kidney Disease (ARPKD) – is also known as Infantile Polycystic Kidney Disease because it causes disease in infancy or early childhood. Please follow the web link for more on ARPKD
- Von Hippel-Lindau Disease
- Orofacial Digital Syndrome
- Juvenile Nephronophthisis (NPH) – also known as Medullary Cystic Disease Complex
- Autosomal Dominant Medullary Cystic Kidney Disease
- Tuberous Sclerosis Complex (TSC)

Rare Causes – Other cystic conditions

- Medullary Sponge Kidney (MSK)
- Renal Angiomyolipomas
- Renal Cystic Disease
- Solitary Multilocular Cyst
- Renal Lymphangiomatosis Glomerulocystic Kidney Disease
- Hypokalemic Cystic Disease
- Calyceal Cysts
- Hilar Cysts
- Perinephric Pseudocysts
- Acquired Cystic Disease

Finding out more

For more about symptoms and conditions associated with cystic kidney diseases, see our own pages on Kidney Stones, High Blood Pressure, Blood in urine and Kidney Cancer

Case study featuring Medullary Sponge Kidney

Other Sources

Medullary Sponge Kidneys From the website of the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK)

Research we have supported

2008 Dr. Paul Winyard, Institute of Child Health
Galectin-3, a novel therapy for autosomal recessive polycystic kidney disease

Abnormal fluid filled cysts can destroy normal kidney structure, leading to kidney failure in both children and adults. A molecule called Galectin-3 can reduce cyst formation – this may be useful for the future treatment of childhood PKD

2000 Dr Dick Sandford, Addenbrooks, Cambridge
How changes in polycystine-1 can lead to ADPKD

ADPKD is mainly caused by changes in the PKD1 gene which generates a protein called Polycystin-1. This study has shown how polycystin-1 functions in the normal kidney and how changes in its function lead to ADPKD.

Kidney Research UK, Kings Chambers, Priestgate, Peterborough PE1 1FG
Kidney health Information telephone number: 0845 300 1499
Or email: kidneyhealth@kidneyreseachuk.org
If you would like to make a donation please call free on 0800 783 2973

Registered Charity Numbers: 252892 and SCO39245 SM12/08