

Kidney Health Information

Blood in the Urine (Haematuria)

What is blood in the urine?

Sometimes blood in the urine can be seen, but at other times it is present in such small quantities that it is not visible to the naked eye. A simple test can detect even tiny amounts of blood; it is a routine test, carried out at many medical examinations.

Blood in the urine has various possible causes:

1. Urinary infection (cystitis)

This is much the most common cause, particularly in young women. If the red urine coincides with symptoms of cystitis and disappears in a few days when the infection is treated, it is usually attributed to infection and no further tests are carried out. The other symptoms of cystitis are:

- a burning feeling on passing water
- feeling the need to pass urine more often
- feeling that the bladder has not been emptied
- sometimes a fever and feeling unwell.

Infrequent attacks of cystitis are usually treated as a one-off by your GP, without further investigation. Further tests may be needed if attacks recur frequently or in

the presence of high blood pressure, other abnormalities in the urine or during pregnancy.

2. Kidney stones

Bleeding may occur when a stone is being passed; there is usually an attack of severe pain from the loin across the abdomen and into the groin at the same time. Large stones in the kidney may cause very slight bleeding which is detected only by the dipstick test.

3. Tumours in the bladder or kidney

These become more common with increasing age, so haematuria in anyone over 40 requires further investigation which usually includes additional tests on the urine (cytology) and a visit to a urologist who may carry out a cystoscopy.

4. Glomerulonephritis (Nephritis)

This is an inclusive term for several conditions involving inflammation of the kidney. Nephritis is the most common cause of blood in the urine of children and young adults but it can occur at any age. If your GP suspects nephritis he will usually refer you to a nephrologist (kidney doctor). Sometimes the diagnosis can be confirmed by blood and urine testes but in many cases the precise diagnosis of which type of nephritis is present can only be made with a kidney biopsy.

What will happen if I have a nephritis? It depends, as there are many different types of nephritis. It may go away on its own or stay for many years without causing any

trouble, but occasionally it may lead to kidney failure or high blood pressure. There is still no cure for many types of nephritis.

A kidney biopsy is sometimes necessary to gauge how serious the nephritis is. The recommendation of a kidney biopsy depends on each individual case because there is a small risk of bleeding. This will be discussed with you. If a biopsy is not recommended or you do not wish to have one, you may be treated with regular blood pressure checks and measurement of kidney function as though you had one of the more serious types of nephritis.

Can normal life be continued with nephritis? Most people with nephritis have no symptoms and it rarely causes pain. Nephritis is not generally inherited and its presence in a minor form should not restrict your employment, social or family life.

A medical report may be required for life assurance or mortgage applications but unless kidney failure or other serious problems are likely, applications should be straightforward.

5. Polycystic Kidney Disease

This is an inherited disorder which is present from birth but seldom causes symptoms before adult life. There is usually a history of the illness in one or other parent. Blood in the urine, sometimes accompanied by pain in the loin, is often the first symptom of the illness.

6. Bleeding Disorders

Abnormalities of blood clotting, usually inherited (e.g. haemophilia), can cause blood in the urine which is usually painless. Only a few patients with blood in the urine will have bleeding disorders but identifying them is important since bleeding can occur elsewhere and is usually preventable by treatment. Patients taking medicines that prevent clotting (e.g. Warfarin) can also develop haematuria which is a sign that the dose should be reviewed at once.

7. Sickle cell disease

This is an inherited condition. In Britain it is found mainly in the African and African Caribbean population. It causes attacks of pain and anaemia which usually start in childhood so the diagnosis has often been made before kidney complications occur. Haematuria in a sickle cell patient should be investigated since there are several causes but it is best to avoid imaging with contrast media since these can precipitate a crisis.

8. Benign familial haematuria

This harmless inherited condition causes haematuria, often only detected by the dipstick test. It can be difficult to distinguish from some forms of nephritis so if there is no family history the diagnosis may be made only after renal biopsy. There are many more rare causes of haematuria, and it is important that all patients with blood in the urine – which is not associated with cystitis – should be fully investigated to find the cause.

What are the other causes of red urine?

a) Haemoglobinuria

Urine may turn red or reddish-brown because the pigment of blood (haemoglobin) is passed in the urine, which happens if red blood cells are broken down in the blood stream (intravascular haemolysis). This can be the result of inherited disorders (e.g. paroxysmal nocturnal haemoglobinuria) or can complicate artificial heart valves. Runners who pound the roads can develop haemoglobinuria known as “march haemoglobinuria”. Haemoglobinuria is distinguished from haematuria by microscopic examination of the urine – since in this condition there are no red blood cells visible.

b) Beeturia

In some individuals, the urine turns red after eating a large portion of beetroot. It causes no other symptoms and is entirely harmless. Certain red dyes may also cause red urine.

c) Menstruation in younger women

Frequently occurring on a regular basis in this age group!

All material on this fact sheet is held under copyright. Reproduction is only permitted for personal use.

**THIS IS AN INFORMATION LEAFLET ONLY, AND AS WITH ALL MEDICAL CONDITIONS,
YOU MUST CONSULT YOUR OWN DOCTOR**

Kidney Research UK, Kings Chambers, Priestgate, Peterborough PE1 1FG

Kidney Health Information telephone number: 0845 300 1499

Or text keyword KIDNEY with message to 0778 620 0505

Or email: kidneyhealth@kidneyresearchuk.org

If you would like to make a donation please call free on 0800 783 2973