

# Understanding Hematuria

A PATIENT'S GUIDE



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## WHAT IS HEMATURIA?

Hematuria is the medical term for the presence of blood in the urine. Hematuria may be visible to the eye (called gross hematuria) or seen only under a microscope (microscopic hematuria). Either way, this may signify an abnormality that requires further investigation.

Blood in the urine may come from anywhere along the urinary tract, including:

- The kidneys, which make the urine
- The ureter, the tube that carries urine to the bladder
- The bladder, which stores the urine
- The prostate (men only)
- The urethra, the tube that carries urine out of the body

When blood is found in the urine, your urologist will work to identify the cause to make sure no serious medical condition is involved. While most of the causes of hematuria are not serious health issues, it's important to identify the underlying condition causing the blood in the urine and seek proper treatment.

## WHAT CAUSES HEMATURIA?

Hematuria has a number of potential causes, most of which are benign. It may also, however, be the only sign of a serious underlying medical condition, such as cancer, which is why your physician will want to investigate the cause of the hematuria. Causes include:

- Urinary tract infection (UTI)
- Stones (kidney, ureter or bladder)
- Benign Prostatic Hyperplasia (BPH) - enlarged prostate in men
- Trauma to the urinary tract
- Jogger's hematuria - due to vigorous exercise, or even sex
- Sexually transmitted diseases
- Benign (non-cancerous) or malignant (cancerous) tumors of the kidney, ureter, bladder, prostate or urethra
- Kidney diseases
- Medications (e.g., blood thinners or anti-swelling drugs)
- Viral infection
- Menstruation
- "Idiopathic" or no known cause

Certain rare diseases and genetic disorders that also cause hematuria include:

- Sickle cell anemia (an inherited blood disorder)
- Systemic lupus erythmatosus (chronic inflammatory disorder of connective tissue)



## IS HEMATURIA SOMETHING TO BE WORRIED ABOUT?

When you actually see blood in the urine, it is called “gross hematuria” and may be a symptom or sign of a health issue that requires more immediate medical care such as an advanced urinary tract infection (UTI). Gross hematuria can be linked to certain urinary tract cancers, which is why it’s important to make an appointment with your doctor right away if you see blood in your urine.

Certain foods (e.g. rhubarb, beets, food coloring, as well as some medicines) can make the urine appear pink or dark colored without actual blood being present. Certain liver diseases and even dehydration can make urine appear dark in color and can be mistaken for blood in the urine. None of these conditions are considered true “hematuria,” but it’s always important to seek the advice of your doctor if you think there may be blood in your urine.

## SYMPTOMS OF HEMATURIA

The most obvious symptom of gross hematuria is seeing blood in the urine or urine that is pinkish, red or dark colored. Most people with microscopic hematuria do not have symptoms and urine is not discolored, which is why your doctor will typically perform a urinalysis during routine examinations.

## RISK FACTORS FOR HEMATURIA

Hematuria can occur in adults and even children.

Risk factors for hematuria include:

- A family history of kidney disease
- For men, an enlarged prostate
- Stone disease (kidney, bladder, ureter stones)
- Certain medications (e.g. Aspirin, blood thinners)
- Prolonged, vigorous exercise
- A recent bacterial or viral infection

## DIAGNOSING HEMATURIA

You should notify your doctor immediately if you see blood in your urine, even if you see it only one time. If hematuria is found without other symptoms, your doctor may send you for further evaluation.

In most cases, hematuria is diagnosed through a urine sample. If microscopic hematuria is found in the urine test, also known as a “dipstick” evaluation (using chemical reactions that can show abnormalities), your doctor may order a second analysis of the urine to double check the initial finding. Other diagnostic tests your doctor may order include:

- “Microscopic evaluation” of the urine (directly viewing it under the microscope), which might show stone crystals, bacteria or abnormal cells.
- Other tests of the urine, such as urinary cytology (looking at the shed bladder cells).
- A blood test to assess kidney function, especially if protein is found along with blood in the urine.
- Cystoscopy (looking into the bladder with a videoscope) to check for any bladder abnormalities.
- CT scan, ultrasound, Intravenous Pyelogram (IVP), which are special X-rays of the urinary tract.
- Prostate Specific Antigen (PSA) test in men of appropriate age to check the prostate.
- Do you have a family history of kidney stones, sickle cell anemia or Von Hippel-Lindau disease?
- Have you had any recent injuries and/or infections of the urinary tract?
- Do you have a history of smoking (including prior smoking)?
- Have you had potential exposure to toxic substances dating back 25 years or more?
- Is there a history of recent and/or past drug use?

If you are found to have hematuria, your doctor will talk to you about your medical history, any health issues you may have and possible associated symptoms, as well as perform a physical examination. Questions your doctor may ask include:

- Are you experiencing any pain (burning while urinating, difficulty urinating, pain in the back or sides)?
- Have you had any recent illnesses?
- What are your urinary habits? How frequently do you urinate?
- What are your exercise habits?

## TREATING HEMATURIA

Hematuria is treated by managing its underlying cause. Your urologist will discuss the evaluation and findings with you to develop an appropriate plan of care, if necessary. Hematuria caused by a urinary tract infection, for example, is treated with a course of antibiotics. If no specific cause is found, the hematuria may correct itself, or the hematuria may be “idiopathic” (no specific cause found). Follow-up urine tests may still be necessary based upon risk factors and findings.

***It’s important to note that urologic cancers are rarely the cause of blood in the urine. Only about 2 or 3 of every 100 people with microscopic hematuria are found to have cancer.***

[Source: Urology Care Foundation]