

13. Urinalysis (Urine Analysis)

13.1. What is Urinalysis?

A urinalysis is an examination of a sample of urine that can help detect medical problems like kidney, heart and liver diseases, diabetes, and urinary tract infections years before any symptoms occur.

13.2. Who should have a Urinalysis?

Everyone should have a urinalysis as a child, and then every six months as an adult. Those with an increased risk for kidney disease must be tested for protein in their urine, which is one of the components of a urinalysis.

Persistent protein in the urine (two positive protein tests over several weeks) is one of the earliest signs of CKD. You may increase your risk of contracting kidney disease if you:

- have diabetes
- have high blood pressure
- have a family history of kidney disease, diabetes or high blood pressure
- are obese
- are over 50 years old
- have kidney stone

If any of the above risk factors apply to you, have your doctor carry out urinalysis.

13.3. How is Urinalysis done?

Urinalysis is performed in three stages.

In stage 1:

Visual examination of the urine sample may detect blood, which would make the urine color darker than normal. An infection may make urine look cloudy.

In stage 2, a dipstick examination can reveal the following:

- Abnormal acid levels may indicate kidney stones, urinary infections, chronic kidney disease or certain disorders that affect development in children;
- Continuous presence of protein in the urine (two positive protein tests over several weeks) indicates that the kidney's filtering system is damaged by chronic kidney disease;
- Glucose (sugar) is usually a sign of diabetes. In children, sugar in the urine may sometimes be related to a disorder that affects growth and development;
- Bacteria and white blood cells (pus cells) indicate some form of infection. Bacteria without white blood cells can suggest vaginal or bladder disease;
- Bilirubin, a waste product produced by the breakdown of old red blood cells is normally removed from the blood by the liver and becomes part of bile. Its presence in the urine may indicate liver disease;

In stage 3, urinalysis includes examining a small amount of urine under a microscope. Some of the things that may be seen are:

- Red blood cells, which may indicate damage to the filtering units of the kidneys, the effect of which causes red blood cells to leak into the urine;
- Blood in the urine could also indicate kidney stones, infections, bladder cancer or blood disorders such as sickle cell disease;
- White blood cells, which are signs of infection or inflammation in the kidneys, bladder or other area;
- Bacteria, or germs, usually indicating an infection in the body;
- Casts, which are tube-shaped forms made of protein. They may have red or white blood cells or other cells inside. Casts form in certain kidney diseases because the kidneys release a sticky type of protein that traps blood cells and other types of cells.

13.4. Can taking drugs or vitamins affect the result of Urinalysis?

Yes, taking drugs, including medications and vitamins can affect urinalysis. Vitamin C pills, antibiotics and certain drugs used to treat Parkinson's disease could cause you to have a "false" positive result, and you may need to have other tests done.

13.5. How long does it take to get my results?

Urinalysis is a simple and cheap test. Urinalysis can be done in your doctor's clinic. The test takes about 5 to 10 minutes to complete the results can be discussed with your doctor right away. A laboratory can also conduct urinalysis.