

What to Know About a Urine pH Test

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The pH scale is used to measure the acid and alkaline present in various fluids. The pH scale ranges from 0 to 14.

A pH of 7 is neutral, whereas a pH result below 7 is acidic and above 7 is alkaline.

Urine has the highest range of pH compared to other bodily fluids. The American Association for Clinical Chemistry says the normal urine pH range is between 4.5 and 8. Any pH higher than 8 is basic or alkaline, and any under 6 is acidic.

A [urine pH test](#) is carried out as a part of a urinalysis. After performing a urine pH test, doctors can use the results to diagnose various [diseases](#).

What Causes Abnormal pH Levels?

Several factors can affect the pH of urine.

- **Diet.** What you consume on a daily basis can affect the results of your urine pH test. Examples of more acidic foods are grains, sodas, fish, sugary foods, and foods that are high in protein. Foods with high alkaline levels include vegetables, nuts, and most fruits.
- **Medical conditions.** The existence of various medical conditions, whether known or unknown, can affect your urine pH test.

The following conditions can cause your urine to measure at an acidic pH level:

- [Kidney stones](#)
- [Diabetic ketoacidosis](#)
- [Dehydration](#)
- Acidosis
- Starvation
- [Diarrhea](#)

Similarly, a pH level higher than the normal range could indicate that you are experiencing one of the following conditions:

- [Kidney failure](#)
- Gastric suctioning
- Respiratory alkalosis happens when you breathe too deep or too fast
- [Kidney tubular acidosis](#) occurs when the kidneys are unable to remove acid
- [Pyloric obstruction](#)
- Urinary tract infection

Why Take a Urine pH Test?

Some medications can alter your urine pH levels. A doctor may use a pH test to evaluate whether your medication is causing your urine to be too acidic.

The presence of [kidney stones](#) in your body can affect your pH levels, causing a highly acidic or alkaline environment. Kidney stones can be very painful, as they prevent the passing of urine from the kidney to the urinary system. By using a urine pH test, your doctor can determine the chances of the formation of kidney stones. A urine test can also help determine whether [kidney stone](#) treatments are effective.

How to Prepare for a Urine pH Test

Before performing the test, your doctor may advise you to avoid taking medications that can affect your urine pH. These include:

- Ammonium chloride, present in some cough medicines.
- Acetazolamide, used in the treatment of epilepsy, glaucoma, and other disorders.
- Potassium citrate, used in the treatment of kidney stones and gout.
- Methenamine mandelate, used to treat urinary tract infections.
- Thiazide diuretics, used to treat high blood pressure.
- Sodium bicarbonate, used to reduce acid digestion and heartburn.

Unless directed by your doctor, stick to your routine diet. As your diet directly affects your urine's pH levels, adhering to your normal diet will help achieve accurate predictions for your typical urine pH.

How is the Urine pH Test Performed?

Your doctor will ask you to obtain a [clean-catch](#) urine sample for the test. The clean-catch method reduces the chances of bacteria affecting your urine sample. Once you give your sample to the medical staff, it's sent to the laboratory immediately for the most accurate results.

A urine pH test involves three major components:

- **Visual exam.** Your doctor examines the sample by considering its color, the presence of foreign materials such as [blood](#), and whether the urine looks foamy.
- **Dipstick test.** Your doctor dips litmus paper into the sample, watching as the [dipstick](#) changes color to show acidity or alkaline levels.
- **Microscopic exam.** Your doctor uses a microscope to check for foreign particles such as crystals, red blood cells, and white blood cells, indicating an underlying medical problem.

There are several factors that can cause variation in urine pH, and often your doctor cannot make a conclusive diagnosis based on your urine pH test alone. Before making a diagnosis, your doctor may need to consider other symptoms as well.

<https://www.webmd.com/a-to-z-guides/what-to-know-about-a-urine-ph-test#091e9c5e821d0f95-1-4>