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High & Low Uric Acid Symptoms: How to Stay in a Safe Range

High and low uric acid levels both have risks. Learn what to look for and how uric acid may affect your body.

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By Linda Rath | Dec. 12, 2022

Uric acid is produced when the body breaks down purines — natural substances found in every cell and in most foods. It's mainly flushed out through the kidneys, but uric acid is much more than a waste product. It is a double-edged sword, increasing the risk of some health problems and helping prevent others.

High and Low Uric Acid: Risks and Benefits

Uric acid is usually considered high when it's over 7 milligrams per deciliter (mg/dL) for men (and those who were male at birth) and over 6 mg/dL for women (and those who were female at birth). Low uric acid is defined as less than 2 mg/dL.

You've probably heard about high uric acid, or hyperuricemia, because it's the biggest risk factor for **gout** — a particularly painful form of arthritis. It's important to note that the vast majority of people with hyperuricemia never develop gout.

High uric acid is also linked to uric acid kidney stones and chronic kidney disease. In some studies, it's associated with high blood pressure and heart failure as well as metabolic syndrome — a group of symptoms that increase your chances of diabetes, stroke and heart disease.

Low uric acid, or hypouricemia, gets less attention because it affects far fewer people — only about 0.5% of the population. Yet it's associated with serious neurologic disorders, including Alzheimer's disease, Parkinson's disease and amyotrophic lateral sclerosis (ALS), reduced kidney function and a painful nerve condition called trigeminal neuralgia. Higher uric acid is known to help protect against these disorders. Low uric acid is also associated with kidney damage after vigorous exercise (called exercise-induced kidney injury) and uric acid kidney stones.

Causes

Most mammals have an enzyme that breaks down uric acid so it can be easily flushed out of the system. Only humans and certain apes lack this enzyme, making low — and especially high — uric acid more likely.

Higher-than-normal uric acid can result from:

- Not excreting enough uric acid from the body, sometimes from dehydration but more often kidney disease.
- Drinking alcohol, which increases the risk of gout and **gout flares**.
- Eating a high-purine diet that includes a lot of red meat, shellfish, sweets, sugary sodas and

high-fructose corn syrup. (Fructose from fruit can also contribute to high uric acid.)

- Obesity.
- Diabetes.
- Certain medications, including some used for arthritis, such as [cyclosporine \(Neoral\)](#) and [tacrolimus \(Prograf\)](#).

Low uric acid can be due to:

- Rare inherited disorders that decrease uric acid production.
- Fanconi syndrome, which causes the filtering tubes in your kidneys to excrete too much uric acid and other substances.
- Diabetes.
- Anti-gout drugs such as [allopurinol \(Zyloprim\)](#).
- Pregnancy.
- Malnutrition.
- A family history of hypouricemia.

Symptoms

High and low uric acid in themselves don't cause symptoms. They're often discovered when you have a blood [test for something else](#) or you have symptoms that suggest them. For example, inflammation and intense pain at the base of your big toe are often signs of gout. Uric acid kidney stones, common in both high and low uric acid, can cause severe pain in your side and low back. And Fanconi syndrome, one cause of low uric acid, can lead to muscle weakness, fatigue and peeing more than normal.

Safe Uric Acid Levels

If you're taking anti-gout drugs — usually because you have several gout flares a year, joint damage or skin nodules called tophi — your doctor may try to keep your uric acid level below 6 mg/dL. For people with long-standing or aggressive disease, the target may be even lower. If you have high uric acid but no symptoms, treatment isn't needed, though your doctor may want to keep an eye on it. Low uric acid that doesn't cause symptoms usually isn't a concern, either. But because low levels are associated with neurological problems, you may want to add more purine-rich foods to your diet, with a focus on healthier options like fish, fruit and full-fat dairy.

Purine-Rich Foods

Known to increase uric acid, many of these foods also cause inflammation, affect your heart health and may set the stage for diabetes.

- Red meat, especially organ meats like liver and kidney
- Alcohol, especially beer
- Sugary drinks, candy and desserts
- Saturated fats in red meat, butter, cream, ice cream and coconut oil
- Sweetened or unsweetened fruit juice, except cherry juice
- Some types of seafood, such as shellfish, anchovies and tuna, used to be off-limits for people with gout. Now the health benefits of moderate amounts of fish are thought to outweigh potential harm.