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Medical Encyclopedia: Uric acid

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Definition

This is a test to measure the amount of uric acid in the blood.

How the test is performed

Blood is drawn from a vein or a capillary. The laboratory centrifuges the blood to separate the serum from the cells and the uric acid test is done on the serum.

How to prepare for the test

Fast for 4 hours before the test. Your medical provider may also advise you to discontinue drugs that may affect the test.

Drugs that can increase uric acid measurements include alcohol, ascorbic acid, aspirin, caffeine, cisplatin, diazoxide, diuretics, epinephrine, ethambutol, levodopa, methyldopa, nicotinic acid, phenothiazines, and theophylline.

Drugs that can decrease uric acid measurements include allopurinol, high-dose aspirin, azathioprine, clofibrate, corticosteroids, estrogens, glucose infusion, guaifenesin, mannitol, probenecid, and warfarin.

Why the test is performed

This test is performed to detect elevated uric acid levels. Increased levels of uric acid can cause gout.

Uric acid is the end product of purine metabolism (purines are building blocks of RNA and DNA). Most uric acid produced in the body is excreted by the kidneys. An overproduction of uric acid occurs when there is excessive breakdown of cells, which contain purines, or an inability of the kidneys to excrete uric acid.

Normal Values

Normal values fall between 3.0 and 7.0 mg/dL.

Note: Normal values may vary slightly from laboratory to laboratory.

What abnormal results mean

Greater-than-normal levels of uric acid (hyperuricemia) may indicate:

- Acidosis
- Alcoholism

- Diabetes
- Gout
- Hypoparathyroidism
- Lead poisoning
- Leukemia
- Nephrolithiasis
- Polycythemia vera
- Renal failure
- Toxemia of pregnancy
- Purine-rich diet
- Severe exercise

Lower-than-normal levels of uric acid may indicate:

- Fanconi's syndrome
- Wilson's disease
- SIADH
- Low purine diet

Additional conditions under which the test may be performed:

- Chronic gouty arthritis
- Injury of the kidney and ureter

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