

## What is Gouty Arthritis?

Gouty arthritis, commonly called gout, refers to swelling of one or more joints due to deposits of uric acid a by-product of a substance called purine, which is found in certain foods (see list below under "Between Attacks"). A normal level of uric acid in the blood stream is usually maintained by the kidneys. In some people, however, the kidneys fail in this function, and the extra amount of uric acid is deposited in the form of sharp, needle-shaped crystals in the joints (most commonly the great toe) and other places in the body such as the outer ears.

## Who gets gout, and how common is it?

In the US, gout occurs in 2 to 2.6 per 1000 persons, with most cases occurring in men older than 30 years. Approximately 10% of gout cases occur in women, the majority of whom are post-menopausal. Gout occurs commonly among persons from the islands in the Pacific such as the Philippines and Samoa.

## What are the symptoms of gout?

Gout occurs in four phases:

1. Asymptomatic hyperuricemia: the blood has high levels of uric acid with no symptoms.
2. Gout causes pain, stiffness, and swelling in the affected joint, and redness on the surrounding skin.
3. Intercritical gout is the phase between attacks. In most cases, uric acid crystals continue to deposit.
4. Chronic tophaceous gout happens approximately 10 years after the first arthritic attack. In this phase, tophi (an accumulation of hard crystals of uric acid) are deposited in various areas of the body including the great toe, elbows, forearms, outer ear, and Achilles' tendon.

## Can I have a high level of uric acid in my blood without having gout?

Yes, approximately 5% of Americans have high levels of uric acid in their blood (called hyperuricemia), but the uric acid does not deposit in their joints as it does with gout. High uric acid without arthritis (asymptomatic hyperuricemia) does not require any treatment.

## How is gout diagnosed?

Your health care provider will diagnose gout based on a physical examination of the affected areas and by ordering blood tests and x-rays.

## How is gout treated?

Gout is treated by (1) using medication to treat an acute (severe) attack, and (2) using medication and lifestyle strategies (such as diet changes) to prevent future attacks.

For **acute attacks**, your provider may prescribe a group of medications called nonsteroidal anti-inflammatory drugs (NSAIDs), of which indomethacin is the most commonly recommended. You should not take NSAIDs if you are allergic to them or if you have an ulcer or kidney disease.

Another effective medication is called colchicine. Approximately 80% of users will have gastrointestinal (GI) adverse effects such as abdominal cramping, diarrhea, nausea, and vomiting with this drug. A drug called paregoric may help GI symptoms. Oral colchicine should not be taken if you have inflammatory bowel disease (Crohn's or Irritable Bowel Syndrome). This medication also can be given intravenously, but with additional risks.

Some persons with gout are prescribed corticosteroids and adrenocorticotropic hormones. These drugs include triamcinolone and prednisone. Other drugs used to reduce pain during an attack include narcotics such as codeine and meperidine.

## How is gout treated?

In addition to drugs, an acute gout attack is treated with bedrest, hot or cold compresses, and elevation of the affected joint. Choose your footwear carefully: wear a rigid, open type shoe with a broad heel, strong counter, soft sole and upper, and a wide and deep toe box.

**Between attacks**, to prevent future attacks, you should follow a low purine diet: Avoid anchovies, organ and red meats (also meat gravies and broth), shellfish, herring, mackerel, sardines, and brewer's/ baker's yeast. Also avoid refined carbohydrates, fried foods, and alcohol. If you are taking diuretics (water pills) and low dose aspirin, talk to your health care provider about switching to a different class of medication.

You should increase your fluid intake to more than 3 liters per day to yield 2 liters or more per daily of urine. Some patients are prescribed sodium bicarbonate or trisodium citrate (5grams 3 times a day) to reduce the acid in their urine.

If you are overweight, you should lose weight, but avoid rapid weight loss and gain because they can aggravate gout. Future attacks may be prevented by increasing your intake of flavonoids (a substance found in cherries, blackberries, blueberries, and raspberries) to equal the amount in a 1/2 pound of fresh cherries per day. Additional strategies include taking high potency vitamins and minerals including folic acid.

In addition to lifestyle measures, the following medications can be taken to prevent future attacks: colchicine, indomethacin, probenecid, sulfinpyrazone, and allopurinol. Long term care for your gout should be managed by your family doctor or internist.