

THE EVERETT FOOT CLINIC

GENERAL INFORMATION ON GOUT



Gout

Gout (hyperuricemia or elevated uric acid) is a systematic disorder that affects the big toe joint. Gout is the end result of a build-up of uric acid in the blood. The uric acid crystallizes and settles in the joints in the body, most often in the big-toe joint. When it does so, it produces an excruciating pain. The onset of an attack of gout can be sudden and vicious. It is not uncommon for the victim to be awakened by this excruciating pain in the middle of the night. (Gout is often confused with Osteoarthritis, a condition that is characterized by a much slower onset of pain, and seems worse after a person has been walking or running.)



Gout is generally thought to be a hereditary disease, but there are many causes: increased purine intake (*see [diet](#)), sudden weight loss due to dieting, and/or diuretics can cause elevated uric acid and mimic the symptoms of gout. In rare cases, leukemia's and/or blood dyscrasias can cause elevated uric acid. Gout can be a serious disease and needs medical intervention, generally by an Internist.

If gout is not treated properly, it will eventually cause permanent changes in the big-toe joint. It is important to seek medical attention if you suspect the existence of gout. It is encouraging to note that drugs can be prescribed that will control the uric-acid level in the blood. You need not suffer from gout in this day and age.

Diet:

Common foods that cause gout, such as alcohol, red meat, lobster, shell fish, etc., should be eliminated from the diet. Cranberry juice has been used as a uricosuric (a substance which helps to eliminate uric acid through the urine).



Gout

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What Is It?

Gout is a metabolic disorder characterized by abnormally high levels of the byproduct, uric acid, in the blood and tissues. In gout, crystals of uric acid are deposited in the joints, where they cause gouty arthritis. They also may be deposited in the kidneys, where they can cause [kidney stones](#). In some patients, the high levels of uric acid are triggered by a diet rich in chemicals called purines, which are found in anchovies, nuts and organ foods such as liver, kidney and sweetbreads. In other patients, the body's own production of uric acid is simply too high regardless of their diet. This also may occur in certain inherited genetic metabolic disorders, [leukemia](#) and cytotoxic treatment for cancer. Lastly, gout also can happen when the kidney's excretion of uric acid is too low. This occurs in some forms of kidney disease, in starvation and with alcohol intake. For some patients, it is a combination of these factors that leads to excess uric acid in the body and subsequent gout.

Some of the major risk factors for gout include [obesity](#) or sudden weight gain; a purine-rich diet; alcohol use, especially binge drinking; high blood pressure, especially if treated with diuretic drugs such as hydrochlorothiazide; a family history of gout; trauma or major surgery; and certain types of cancer or cancer treatments. About 90 percent of patients with gout are men older than 40. Gout is quite rare in younger women and typically occurs in women many years after menopause.

Symptoms

The first attack of gouty arthritis usually involves only one joint, most commonly the big toe. However, a knee, ankle, wrist, foot or finger sometimes is affected. In gouty arthritis, the affected joint can become red, swollen and extremely tender to the touch. Typically, even a bed sheet cannot brush against it without triggering intense pain. After the first attack of gout, subsequent episodes are more likely to involve several joints. Sometimes, if gout persists for many years, uric acid crystals may collect in the joints or tendons, under the skin or on the outside of the ears, forming a whitish deposit called a tophus (or if multiple, tophi).

Diagnosis

Your doctor will ask you about your medications and diet (including alcohol use) and about any family history of gout. Your doctor will perform a physical examination with special attention to your painful joints and the presence of any tophi.

Your doctor may use a sterile needle to remove a sample of fluid from your inflamed joint. In a laboratory, this joint fluid will be examined for the presence of microscopic uric acid crystals, confirming the diagnosis of gouty arthritis. Your doctor also may order blood tests to measure the level of uric acid in your blood. Depending on your history and symptoms, you may need additional blood tests and urine tests to check kidney function.

Expected Duration

Without treatment, the pain of gouty arthritis usually lasts for several days, but it is most intense within the first 24 to 36 hours. After several gout attacks, a joint may take longer to improve or even become chronically inflamed and painful.

Prevention

You can help prevent gout by following a healthy diet, avoiding alcohol use (especially binge drinking), avoiding dehydration, losing weight if you are obese, and avoiding diuretics (water pills) if possible. For most patients, dietary restrictions seem to have little benefit, but you should avoid any foods that seem to trigger gout attacks.

Treatment

To treat an attack of gouty arthritis, your doctor usually will begin by prescribing a nonsteroidal anti-inflammatory drug (NSAID), such as indomethacin (Indocin), ibuprofen (Advil, Motrin) or naproxen (Aleve, Anaprox). Aspirin should be avoided as it may raise uric acid. If you cannot tolerate an NSAID, or if these drugs are ineffective, your doctor may suggest a corticosteroid. Corticosteroids can be given orally or injected directly into the affected joint. Another option is an injection of adrenocorticotrophic hormone, a compound that directs your adrenal gland to make more cortisone. Although oral colchicine may sometimes be used, it tends to cause unpleasant side effects (nausea, vomiting, cramps, diarrhea) and is tolerated poorly in about 80 percent of patients.

Your doctor may prescribe allopurinol (Aloprim, Zyloprim) to lower your body's production of uric acid. If attacks are rare and readily respond to treatment, this approach is not necessary, but is generally recommended when:

- There are frequent attacks of gout.
- There are attacks of gout that do not promptly respond to treatment.
- There are attacks of gout that affect more than one joint at a time.
- There is a history of kidney stones and previous gout.
- A tophus has developed.

Within 24 hours after the first allopurinol dose, uric acid levels usually begin to drop, with a peak decrease achieved after two weeks of daily treatment. Another treatment approach is to increase uric acid excretion through your kidneys by taking probenecid (Benemid, Probalan) or sulfinpyrazone (Anturane). These drugs are effective in 70 percent to 80 percent of patients but are not recommended if there is any significant kidney disease or prior history of a kidney stone.

When medications to reduce uric acid are prescribed, a second medication to prevent a gout attack also should be prescribed because any change in uric acid, whether increased or decreased, can trigger an attack. Low-dose colchicine (for example, 0.6 milligrams once or twice a day or sometimes every other day) or a low-dose NSAID work well as preventive therapy during uric acid-lowering therapy. Once the uric acid is lowered enough, the preventive NSAID or colchicine can be discontinued. However, the agent taken to reduce uric acid (allopurinol, probenecid or sulfinpyrazone) typically is required chronically.

When To Call A Professional

Call your doctor whenever you have pain and swelling in a joint. If you have had gout in the past and have a typical attack, your doctor may suggest an NSAID to have available to be taken at the earliest sign of an attack.

Prognosis

During the first few attacks of gouty arthritis, early drug treatment usually will relieve symptoms within 48 hours or less. Without drug treatment, gout symptoms may resolve on their own, but this typically takes several days.

Medications that decrease uric acid production or increase uric acid excretion are very effective in lowering blood levels of uric acid. Without long-term medication to control blood uric acid level, more than 50 percent of patients who have had one attack of gouty arthritis will have a second, usually within six months to two years. If your disease is severe enough to warrant preventive medication, such treatment is highly effective at preventing attacks and, over months to years, resolution of tophi.

Additional Info

Arthritis Foundation

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Atlanta, GA 30357-0669


Phone: (404) 872-7100

Toll-free: (800) 283-7800

<http://www.arthritis.org/>



What Lifestyle Measures Can Help Prevent Gout?

 [more information](#)

Avoiding Excessive Energy Demands

Any activities that increase energy demands also increase metabolism or purines that produce uric acid. Avoiding stress and staying healthy are important for preventing attacks.

Dietary Recommendations

Avoid Foods Containing Purines. Because uric acid levels are only minimally affected by diet, dietary therapy does not play a large role in the prevention of gout. Still, people who have suffered an attack of gout may benefit from reducing their intake of purine-rich foods if they habitually eat unusually large quantities of such foods. They include beer and other alcoholic beverages, anchovies, sardines (in oil), fish roes, herring, yeast, organ meats (e.g., liver, kidneys, sweetbreads), legumes (e.g., dried beans, peas, and soybeans), meat extracts, consommé, gravies, mushrooms, spinach, asparagus, and cauliflower. Any meat, fish or poultry has moderate amounts of purines.

Protein Restriction. Diets high in protein, particularly animal protein, increase uric acid. Although few studies have been conducted and none have determined the value of reducing protein, one study of gout patients suggested that eating tofu, which is made from soy and is a source of complete protein, may be a better choice than meats.

Possibly Helpful Foods and Supplements. Dark berries and cherries may contain chemicals that lower uric acid and reduce inflammation. Vitamin C and folic acid supplements may also have some benefits. Vitamin A may increase the risk for gout attacks.

Maintain Healthy Weight

A supervised weight-loss program may be a very effective way to reduce uric acid levels if the patient is overweight. Crash dieting, on the other hand, is counterproductive because it can increase uric acid levels and can cause an acute attack.

Low Purine Diet
(approximately 125mg purine)

General directions:

During acute stages use only list 1.

After acute stage subsides and for chronic conditions, use the following schedule:

Two days a week, not consecutive, use list 1 entirely.

The remaining days add foods from list 2 and 3, as indicated.

Avoid list 4 entirely.

Keep diet moderately low in fat.

Typical meal pattern

Breakfast:

Fruit , Refined cereal and/or egg , White toast , Butter 1tsp. , Sugar , Coffee , Milk.

Lunch:

Egg or cheese dish , Vegetables as allowed cooked or salad , Potato or substitute , White bread , Butter 1tsp. , Fruit or simple dessert , Milk.

Dinner:

Egg or cheese dish , Cream of vegetable soup, if desired , Starch (potato or substitute) Colored vegetable, as allowed , White bread , Butter 1tsp. , Salad , as allowed , Fruit or simple dessert , Milk.

Food List 1

(may be used as desired; foods that contain an insignificant amount of purine bodies)

Beverages: Carbonated, Chocolate, Cocoa, Coffee, Fruit juices, Tea

Butter

Bread: White, crackers, cornbread

Cereal and cereal products: Corn, Rice, Tapioca, refined wheat, Macaroni, Noodles

Cheese of all kinds

Eggs

Fats of all kinds (moderation)

Fruits of all kinds

Gelatin, Jello

Milk: buttermilk, evaporated, malted, sweet

Nuts of all kinds, peanut butter

Pies (except mincemeat)

Sugar and sweets

Maintain Fluids

Drinking plenty of water and other nonalcoholic beverages helps remove MSU crystals from the body. Some researchers are studying the anti-inflammatory properties of green tea, which might have some benefit for gout. It should be noted, a Japanese study reported a higher association between gout and tea drinking (although the study did not describe the type of tea).

Avoid Alcohol

Alcohol should be avoided, since it promotes purine metabolism and uric acid production; it also may reduce excretion of uric acid. Heavy drinking, especially binge drinking of beer or distilled spirits, should especially be avoided.

Avoid Joint Injury

People with gout should also attempt to identify and avoid activities that cause repetitive joint trauma, such as wearing tight shoes.

Prevention During Travel

Travel is an example of an activity that increases the risk for gout; it not only places increased demands on the patient, but eating and drinking patterns may change. Before traveling, patients should discuss preventive measures with their physicians. The doctor may prescribe a prednisone tablet to be taken immediately at the first sign of a gout attack. In most cases this stops the episode.

Vegetables: Artichokes, Beets, Beet greens, Broccoli, Brussel sprouts, Cabbage, Carrots, Celery, Corn, Cucumber, Eggplant, Endive, Kohlrabi, Lettuce, Okra, Parsnips, Potatoe (white and sweet), Pumpkin, Rutabagas, Sauerkraut, String beans, summer squash, Swiss chard, Tomato, Turnips

Food List 2

(one item four times a week; foods that contain a moderate amount (up to 75mg) of purine bodies in 100g serving)

Asparagus, Bluefish, Bouillon, Cauliflower, Chicken, Crab, Finnan haddie, Ham, Herring, Kidney beans, Lima beans, Lobster, Mushrooms, Mutton, Navy beans, Oatmeal, Oysters, Peas, Salmon, Shad, Spinach, Tripe, Tuna fish, Whitefish

Food List 3

(one item once a week; foods that contain a large amount (75mg-150mg) of purine bodies in 100g serving)

Bacon, Beef, Calf tongue, Carp, Chicken soup, Codfish, Duck, Goose, Halibut, Lentils, Liver sausage, Meat soups, Partridge, Perch, Pheasant, Pigeon, Pike, Pork, Quail, Rabbit, Sheep, Shellfish, Squab, Trout, Turkey, Veal, Venison

Food List 4

(avoid entirely; foods that contain very large amounts (150-1000 mg) of purine bodies in 100g serving)

Sweetbreads 825mg, Anchovies 363mg, Sardines (in oil) 295mg, Liver (calf, beef) 233mg, Kidneys (beef) 200mg, Brains 195mg, Meat extracts 160-400mg, Gravies variable.