



A *Step* IN THE
RIGHT DIRECTION

LEARNING TO MANAGE YOUR GOUT EFFECTIVELY.

If you or someone you know suffers from gout, you know that stopping the pain is priority one. However, that's only half the battle. It's important that you receive proper diagnosis so that your doctor can recommend treatment options that are right for you.



Gout...The Disease of Kings

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Historical Perspective

Gout can be one of the most painful and most destructive of all the 100+ different arthritic diseases. It often was considered a disease that affected the wealthy because of its association with a rich diet – hence, its name, “The Disease of Kings”. It has thus changed history, and is richly represented in art over the last few hundred years.

The first written description of gout dates from 2,600 B.C. The understanding of the clinical course and natural history of gout has evolved over more than two millennia. It is the most common form of inflammatory arthritis in men over 40 and affects approximately three times as many men as women. The incidence has been increasing over the past 40 years.

Despite the above facts, I have found gout one of the most gratifying conditions to treat. The great majority of affected persons can, with proper follow-up and treatment, keep their gout well controlled, and if treatment is started before damage to the joints has occurred, they can return to normal lives. The key word here is control, not cure. If the affected person stops his or her medications, the condition will recur.

What Causes Gout?

Gout is caused by the buildup of uric acid in the body. This tendency is often inherited, resulting in the over-activity of an enzyme in the liver (xanthine oxidase) which causes overproduction of uric acid. Uric acid is a product of purine metabolism. Purines are generated by the body via a breakdown of cells in normal cellular turnover and are also ingested as part of a normal diet. The kidneys are responsible for approximately two-thirds of uric acid excretion, with the liver responsible for the rest. Conditions that cause the kidneys to under-excrete uric acid can also result in the buildup of too much uric acid. Thus, patients with gout can be divided into “overproducers”, or primary gout, and “under-excreters”, or secondary gout. It is important to determine which condition is present to select proper treatment. Giving a medication such as probenecid, which increases excretion of uric acid, to an “over-excreter” could cause another serious complication of gout—uric acid kidney stones. All patients being started on gout therapy should have a 24-hour urine collection, in addition to the serum uric acid level, to determine which type of medication they should receive to decrease the level of uric acid buildup.

Types of Gout

We divide gout into three stages. **Stage one** disease, or classical gout, consists of intermittent, sudden onset episodes causing excruciating pain, redness, warmth and swelling of the affected joint, usually a single joint, and most commonly the big toe. Even slight touch, such as a sheet rubbing the affected joint, causes marked pain. The symptoms, with or without treatment, will usually resolve in five to ten days.

Stage two gout manifests as slower onset and less severe symptoms, often affecting more than a single joint, and it can often be mistaken for one of the other types of arthritis at this point. The attacks persist for a long period of time and occur more frequently.

Stage three gout is synonymous with chronic gout, where large deposits of uric acid have resulted in persistent joint damage, often resulting in severe deformity and loss of function. These uric acid deposits can also occur in the soft tissues, causing nodules referred to as tophi. These nodules and joint deformity not uncommonly masquerade as rheumatoid arthritis and misdiagnosis can lead to improper treatment, often resulting in tragic, continued joint destruction.

The correct diagnosis of gout is imperative. Usually the first attack affects a single joint, especially the great toe (75% of first attacks) and presenting with the red, swollen, exquisitely tender joint described above. The uric acid is usually, but not always, elevated. In fact, it can drop during an acute attack, often resulting in confusion diagnostically. If fluid can be aspirated from an affected joint, uric acid crystals can be seen under the microscope, but the only “diagnostic” proof of an acute attack is to see these crystals “engulfed” by white blood cells. If a nodule is present (stage three), a needle can be inserted into the nodule and a uric acid “core” removed, which has the appearance of chalk. Xrays in stage three gout may also be suggestive or even diagnostic and help differentiate it from rheumatoid arthritis, arthritis associated with psoriasis and others.

Outcome

The outcome of gout should be very favorable when early diagnosis and proper therapy are initiated. In contrast, delay or improper diagnosis resulting in no or improper treatment can result in marked and permanent joint destruction and deformity. Newer therapies will be helpful for the small but significant group that for reasons of ineffectiveness (rare), or intolerance to present treatments result in sub-optimal control of this common disease.



For more information on gout, visit the following websites:

Arthritis Foundation
www.arthritis.org

John Hopkins Arthritis Center
www.hopkins-arthritis.org

Gout & Uric Acid Education Society
www.gouteducation.org

WebMD
www.webmd.com

HealthCentral.com
www.healthcentral.com

Treatment and Prevention of Gout

Controlling gout includes medication and changes in diet.

Treatment goals for gout include terminating acute gout attacks, rapid and safe relief of pain and inflammation, preventing future attacks, and avoiding complications (formation of tophi, kidney stones, and joint destruction).

Medications

NSAIDs, or non-steroidal anti-inflammatory drugs, are typically the first medication prescribed to treat acute gout. Also known as Cox-2 inhibitors, NSAIDs are initially prescribed at maximum dosage and reduced as symptoms subside. The medication should be continued until pain and inflammation are non-existent for at least 48 hours. The most commonly prescribed NSAID is indomethacin.

Colchicine is used to treat acute flares of gouty arthritis and to prevent recurrent acute attacks. Colchicine does not cure gout or take the place of other medicines that lower the amount of uric acid in the body. It prevents or relieves gout attacks by reducing inflammation.

Corticosteroids can be used for patients who cannot take NSAIDs or colchicine. Patients with acute gout typically receive daily doses of prednisone or its equivalent for three to four days, then it is tapered gradually over one to two weeks. Corticosteroids are administered as an intramuscular injection (an initial dose and subsequent doses over several days as needed).

Allopurinol is prescribed for chronic gout or gouty arthritis and works by affecting the system that manufactures uric acid in the body. It is used to prevent gout attacks, not to treat them once they occur. Brand names include Alloprim and Zyloprim.

Probenecid is prescribed for chronic gout and gouty arthritis. It is used to prevent attacks related to gout, not treat them once they occur. It acts on the kidneys to help the body eliminate uric acid. Brand names include Benemid and Probalan.

ColBenemid is a gout medication that contains Probenecid, which is a uricosuric agent, and colchicine, which has anti-gout properties. Other brand names include Col-Probenecid and Proben-C.

Losartan is not specifically a gout medication but is an angiotensin II receptor antagonist, antihypertensive drug that may help control uric acid levels. Brand names are Cozaar and Hyzaar. **Fenofibrate** is not a specific gout medication but it is a lipid-lowering drug that may help uric acid levels. Brand name is Tricor.

Sulfinpyrazone is also known as a uricosuric agent and is used to treat gouty arthritis. It works by lowering the amount of uric acid in your blood, preventing gout attacks. The drug helps prevent attacks but it is not used to treat an attack once it has started. Brand name is Anturane.

Febuxostat is an inhibitor of xanthine oxidase.

It works by stopping the body from turning

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Treatment and Prevention *(continued from page 3)*

purines into uric acid. As a result, uric acid levels stay low in most patients over time. Research shows that keeping your uric acid levels low can help control your gout symptoms over time. Brand name is Uloric.

Diet

Dietary alterations are recommended to help people manage their gout, such as avoiding a purine-rich diet. High-purine foods include anchovies, asparagus, dried beans and peas, game meats, gravy, herring, liver, mackerel, mushrooms, sardines, scallops and sweetbreads.

In addition, gout sufferers are also advised to:

- Maintain adequate fluid intake, especially water. Nonalcoholic fluids help remove uric acid from the body.
- Reduce alcohol consumption. Alcohol can raise the levels of uric acid in blood
- Maintain a healthy body weight, as obesity has been linked to gout.

Sources:

Carol & Richard Eustice. Treat Gout with Diet and Medication. (Online) Available. <http://arthritis.about.com/od/gout/ht/treatgout.htm>. November 18, 2009.

National Institute of Arthritis and Musculoskeletal and Skin Diseases, National Institutes of Health, Department of Health and Human Services. (Online) Available. http://www.niams.nih.gov/Health_Info/Gout/default.asp

According to the American Medical Association, a balanced diet for people with gout include foods:

- High in complex carbohydrates (whole grains, fruits and vegetables)
- Low in protein (15% of calories and sources should be soy, lean meats, poultry)
- No more than 30% of calories from fat (10% animal fat).

New research is suggesting that certain foods may also prevent gout. In a study published in the New England Journal of Medicine, scientists found that a high intake of low-fat dairy products reduces the risk of gout in men by half. The reason for this protective effect is not yet known. Another study examining the effects of Vitamin C on uric acid suggests that it may be beneficial in the prevention and management of gout and other diseases that are associated with uric acid production.

