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Gout

WHAT IS GOUT?

Gout is a form of arthritis that causes sudden, severe episodes of pain, tenderness, redness, warmth and swelling of joints. It usually affects one joint at a time. The most common joint that is affected by gout is the large joint of the big toe.

Gout pain and swelling are caused by:

- increased levels of uric acid in the blood; and
- the formation of uric acid crystals in joints.

These uric acid crystals cause painful inflammation of the joint. Uric acid is a substance that normally forms when the body breaks down waste products called purines. Uric acid usually dissolves in the blood and passes through the kidneys into the urine. In people with gout, the uric acid level in the blood becomes elevated.

Gout usually occurs in three phases:

1. Sudden joint pain and swelling that usually goes away after five to 10 days.
2. A period of no symptoms at all, followed by new, sudden attacks of gout.
3. After a number of years, if left untreated, persistent swelling, stiffness and mild to moderate pain in one or more joints can occur. In addition, crystals of uric acid can form large deposits under the skin called tophi.

Gout can affect people differently. Some people have one episode and never have any other joint problems. Other people have frequent, painful episodes along with lasting joint stiffness and damage.

Gout can be controlled and even prevented if it is diagnosed correctly and appropriate medication and lifestyle changes are followed. Proper treatment can help you avoid episodes and long-term joint damage. It is important to see a rheumatologist, a doctor who specializes in arthritis and related conditions, such as gout.

Acute Episodes

Gout episodes usually develop very quickly. The first gout attack often occurs at night. You may go to bed feeling fine, but then wake up in the middle of the night with extreme joint pain.

During an episode you may notice:

- sudden, severe joint pain and swelling;
- shiny red or purple skin around the joint; and
- extreme tenderness in the joint area.

Gout episodes may last a week or less and disappear completely. If the disease is not controlled by medication, episodes may occur more often and may last longer. Repeated episodes can damage the affected joint(s) leading to stiffness and limited motion of the joint.

An episode of gout can be triggered by:

- joint trauma;
- drinking too much alcohol;
- surgery or sudden, severe illness;
- taking certain diuretic medicines for high blood pressure, leg swelling (edema) or heart failure;
- taking the drug cyclosporine;
- the start of a uric acid-lowering treatment;
- crash diets;
- chemotherapy; and
- eating food high in purines.

Development of Tophi

After several years, the uric acid crystals can build up in the joint(s) and surrounding tissues. These deposits of uric acid are called tophi (TOE-fie). Tophi are often found around joints affected by previous attacks of gout, over the fingers and toes, and under the skin.

Other Problems

Uric acid crystals also can form deposits (or stones) in the kidneys, in the ureters (tubes that connect the kidneys and bladder), or in the bladder itself. Several factors may cause these deposits to form. The deposits may occur when you don't drink enough liquids. This prevents the urine from dissolving all the uric acid. A kidney stone can produce severe pain in the flank and groin area. The stone is passed down the ureter and into the bladder. In addition, kidney stones can be associated with fever and blood in the urine.

Gout may be associated with high blood pressure or kidney diseases. These problems can cause kidneys to function poorly, so your doctor will check for problems and treat them if they occur.

WHAT CAUSES GOUT?

Almost all people who have gout have high levels of uric acid in their blood. This is called hyperuricemia (HY-per-yer-ih-SEE-mee-uh). However, there are many people who have hyperuricemia but not gout.

Hyperuricemia is caused by the following conditions:

- The kidneys can't get rid of uric acid fast enough.
- The body makes too much uric acid.

Using certain diuretic medications or "water pills" can cause hyperuricemia. Diuretics are used to get rid of extra body fluid and to lower high blood pressure. But some diuretics, as well as other medicines, can decrease the kidneys' ability to remove uric acid, which raises uric acid levels in the blood.

Inherited traits and factors such as diet, weight and alcohol use also can play important roles in hyperuricemia and gout.

WHO GETS GOUT?

Gout affects about 2.1 million Americans. It can occur at any age, but it usually affects men between ages 30 and 50.

Gout once was thought to be a disease of the wealthy because it seemed to be caused by eating rich foods and drinking too much alcohol. Although diet and excessive drinking do play a role in gout episodes, they are not the main cause.

DIAGNOSIS

To diagnose gout, your doctor will examine you and ask you to describe your symptoms. Your doctor will take a blood test to measure the level of uric acid in your blood. A high level of uric acid in your blood doesn't necessarily mean you have gout, just as a normal level does not mean you do not have it.

Your doctor may remove fluid from a joint suspected to be caused by gout and examine the fluid under the microscope for uric acid crystals. The finding of uric acid crystals in the joint fluid is the surest way to make the diagnosis of gout.

TREATMENT

Your treatment for gout will include taking medication(s) and watching your diet. The goals are to:

- relieve pain;
- shorten the duration of inflammation during an acute episode;
- prevent future episodes; and
- prevent joint damage.

Medication

Treatment must be tailored for each person and may have to be changed from time to time. People who have hyperuricemia but no other problems usually do not require medications.

Medications are used to:

- relieve the pain and swelling of an acute episode;
- prevent future episodes;
- prevent or treat tophi; and
- prevent uric acid kidney stones.

You should understand why you are taking the drug, what side effects may occur and what to do if you have any problems.

MEDICATIONS FOR ACUTE EPISODES

Colchicine has been used to treat gout for centuries. This drug works best if you start taking it during the first few hours of an episode. It relieves the pain and swelling of acute episodes. It usually is taken in pill form every hour until symptoms improve, side effects occur or a maximum total dose is reached (usually 10 tablets).

Colchicine can cause diarrhea, nausea and abdominal cramps. If side effects occur, stop taking the drug and call your doctor. To prevent future episodes, you may have to continue taking a small dose of colchicine after the episode has cleared.

Nonsteroidal anti-inflammatory drugs (NSAIDs) are sometimes used to relieve the pain and swelling of an acute gout episode. Examples of NSAIDs include indomethacin, ibuprofen and naproxen sodium. Indomethacin is the most commonly used NSAID for gout.

NSAIDs usually begin working within 24 hours after you start taking them. They are as effective as colchicine but may have less frequent side effects. However, side effects from NSAIDs may include stomach upset, headache, skin rashes, fluid retention or kidney problems, and sometimes stomach ulcers. Aspirin and products that contain aspirin should be avoided.

Newer drugs called **COX-2 inhibitors**, such as celecoxib (*Celebrex*) and valdecoxib (*Bextra*), are a subcategory of NSAIDs that may be safer for the stomach.

Glucocorticoids (such as prednisone) are similar to cortisol, a hormone that occurs naturally in the body. These drugs may be injected directly into an inflamed joint to relieve the pain and swelling of an acute episode of gout. They may be given by mouth or injected into the muscle if the attack of gout doesn't respond to other drugs or if many joints are affected.

Glucocorticoids usually start working within 24 hours after you take them.

MEDICATIONS THAT CONTROL URIC ACID LEVELS

The medications discussed in the following paragraphs are used to prevent future gout episodes and to treat and prevent the formation of tophi. These medications do not relieve the pain and inflammation of an acute episode. They are usually started after the acute attack of gout has been treated. These medicines start working slowly, and they may cause you to have more gout episodes when you first start taking them. You may have to take colchicine or an NSAID at the same time for the first several months to prevent such episodes. Many people with gout do not require these medicines. However, if you must take them, you may have to do so for the rest of your life in order to prevent future problems.

Allopurinol (*Lopurin, Zyloprim*) reduces the amount of uric acid in your blood and urine. It does this by slowing the rate at which the body makes uric acid. It is the best medicine for most people who have gout and need to have uric acid controlled by medicine.

Occasional side effects include skin rash and stomach upset. Stomach problems usually go away as your body adjusts to the drug. In rare cases, allopurinol can cause a severe allergic reaction. If you have a skin rash along with hives, itching, fever, nausea or muscle pain, call your doctor right away. This drug also may make some people sleepy. Be sure you know how you react to this medicine before you drive a car or operate machinery.

Probenecid (*Benemid*) and **sulfinpyrazone** (*Anturane*) are used to lower uric acid levels in your blood by increasing the amount of uric acid passed into your urine. They are not as effective as allopurinol in helping to dissolve tophi, but they may prevent uric acid from being deposited into joints. Both of these drugs are less effective in people with kidney disease. The drugs usually are taken orally (by mouth) on a daily basis. You should take these drugs with water, which helps flush the uric acid through your kidneys.

Your doctor will adjust the amount of medication you take based on your blood uric acid level. Once your body has a normal level of uric acid, your chance of developing a future attack of gout is greatly reduced.

Common side effects of probnecid and sulfinpyrazone include nausea, skin rash, stomach upset and headaches. While the skin rash can sometimes be serious, other side effects usually are not serious and may go away as your body gets used to the medicine. If any side effects continue, contact your doctor.

Tip: Take these medications with plenty of liquids. Do not take aspirin with probnecid or sulfinpyrazone because it blocks the effects of these drugs on the kidneys. Read the labels of any prescription or over-the-counter medicines you take to be sure they don't contain aspirin.

Other tips for taking these medications include the following:

- Take your medicine exactly as your doctor instructs.
- Do not take double doses of your medicine.
- Talk with your doctor about all the drugs you're taking. This includes prescription drugs, over-the-counter drugs, vitamins and dietary supplements.

The amount of medications you take will depend on your symptoms and laboratory test results. You may only need to take one drug.

On the other hand, it may be necessary to take a combination of the drugs listed here. Not all people with gout need these drugs. Whether you take these drugs depends on your doctor's judgment and your willingness to make a lifelong commitment to taking daily medications. For more information on medications, request copies of the following publications: *Arthritis Today's Drug Guide* and *Medications: Using Them Wisely*.

Diet

There are many myths about diet and gout. Here are the facts:

1. Obesity can be linked to high uric acid levels in the blood. If you are overweight, your doctor can help you start a weight-loss program. It is best to lose weight slowly. Fasting or "crash" diets actually can raise your uric acid level and make the gout worse. If you are not overweight, watch your diet carefully to avoid gaining weight.
2. You can usually eat what you like in moderation. If you have kidney stones due to uric acid, you may need to avoid or limit foods that raise your uric acid level, such as those listed on page 11. Talk to your doctor about what foods to avoid.
3. You can drink coffee and tea, but you may need to limit the amount of alcohol you drink. Too much alcohol, especially beer, may raise your uric acid level and cause a gout episode. Talk to your doctor if you drink alcohol.
4. Drink at least 10 to 12 eight-ounce glasses of non-alcoholic fluid daily if you have had kidney stones. This will help flush the uric acid crystals out of your kidneys.

For more information on diet, request a copy of the booklet Diet and Your Arthritis.

Foods to Avoid

Certain foods can raise your uric acid level. You may need to reduce the amount you eat of the following foods:

- sardines and anchovies
- broths and gravies
- organ meats (kidneys, liver); and
- legumes (dried beans, soybeans, peas).

RESEARCH

Since 1948, the Arthritis Foundation has invested nearly $320 million on research to help prevent, control and cure arthritis and related diseases, such as gout. For instance, currently funded Arthritis Foundation researchers are trying to gain an increased understanding of what triggers acute attacks. This type of information could lay the basis for prevention education programs to help people with gout keep their condition under better control.

FOR MORE INFORMATION

Contact your local Arthritis Foundation chapter for a list of free brochures about types of arthritis and related conditions, treatment options, and self-management techniques. The services listed below also may be available in your area.

Services

- **Arthritis Self-Help Course** – Learn how to take control of your own care in this six-week (15-hour) class for people with arthritis.

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- **Warm-water exercise program** – Join in the fun of an ongoing exercise program in a heated pool.
- **Land exercise programs** – Move easier in several levels of exercise classes, or exercise at home by purchasing an Arthritis Foundation exercise videotape.

THE ARTHRITIS FOUNDATION

The mission of the Arthritis Foundation is to improve lives through leadership in the prevention, control and cure of arthritis and related diseases.

The Arthritis Foundation supports research with the greatest potential for advances and has invested more than $320 million in these efforts since its inception in 1948. Additionally, the Arthritis Foundation supports key public policy and advocacy efforts at a local and national level in order to make a difference on behalf of 70 million people living with arthritis.

As your partner in taking greater control of arthritis, the Arthritis Foundation also offers a large number of programs and services nationwide to make life with arthritis easier and less painful and to help you become an active partner in your own health care.

Contact us at (800) 283-7800 or visit us on the Web at www.arthritis.org to become an Arthritis Advocate or to find out how you can become involved.

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For more information: The Arthritis Foundation offers a wide variety of books, brochures and videos about different forms of arthritis, treatment and self-management techniques to help you take control of your arthritis. To order any of these products, become an Arthritis Foundation member or to subscribe to the Arthritis Foundation's award-winning consumer health magazine, *Arthritis Today*, call (800) 283-7800. Call or visit our Web site (www.arthritis.org) to find out how you can take control of your arthritis and start living better today!

This brochure has been reviewed by the AMERICAN COLLEGE OF RHEUMATOLOGY.

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MISSION STATEMENT:
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