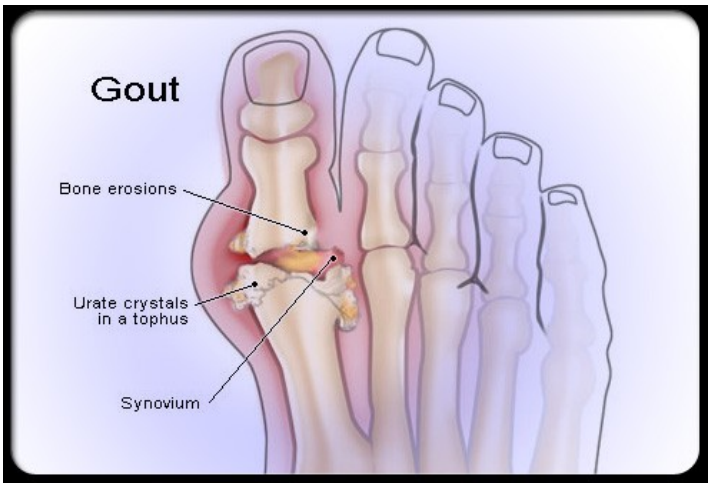
Gout – Watch and Learn About Gout



What is gout?

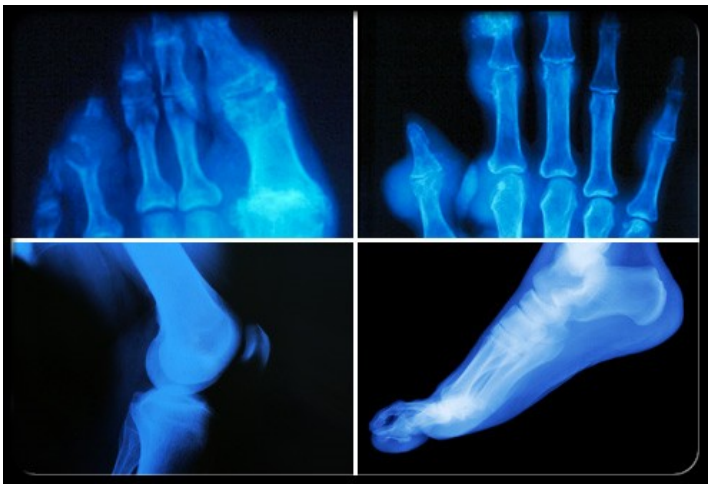
Gout is condition that results from crystals of uric acid depositing in tissues of the body. Gout is characterized by an overload of uric acid in the body and recurring **attacks of joint inflammation (arthritis)**. Uric acid is a breakdown product of purines that are part of many foods we eat. An abnormality in handling uric acid can cause **attacks of painful arthritis (gout attack)**, kidney stones, and blockage of the kidney filtering tubules with uric acid crystals, leading to kidney failure. Gout has the unique distinction of being one of the most frequently recorded medical illnesses throughout history.

Who is affected by gout?

Gout is nine times more common in men than in women. It predominantly attacks males after puberty, with a peak age of 75. In women, gout attacks usually occur after menopause. Among the male population in the United States, approximately 10% have elevated blood uric acid levels, a condition known as hyperuricemia. However, only a small portion of those with hyperuricemia will actually develop gout. If your parents have gout, then you have a 20% chance of developing it.

What are the risk factors of gout?

Risk factors for developing gout include obesity, excessive weight gain, especially in youth, moderate to heavy alcohol intake, high blood pressure, and abnormal kidney function. Certain drugs and diseases can also cause elevated levels of uric acid. Interestingly, a recent study demonstrated an increased prevalence of abnormally low thyroid hormone levels (hypothyroidism) in patients with gout.



What are symptoms of gout?

The small joint at the base of the big toe is the most common site for a gout attack. Other joints that can be affected include the ankles, knees, wrists, fingers, and elbows. **Acute gout attacks are characterized by a rapid onset of pain in the affected joint followed by warmth, swelling, reddish discoloration, and marked tenderness.** In some people, the acute pain is so intense that even a bed sheet on the toe causes severe pain. These painful attacks usually subside in hours to days, with or without medication. In rare instances, an attack can last for weeks. Most patients with gout will experience repeated attacks of gouty arthritis over the years.

Gout (big toe)

The joint at the base of the big toe is the most common site of an acute gout attack.

Gout (fingers)

People may experience gout with deposits of uric acid crystals in their finger joints.

These deposits are called tophi.

Gout (elbow)

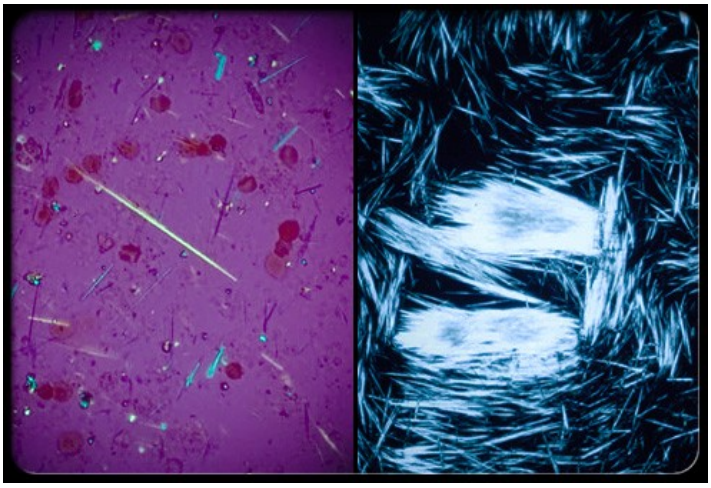
Gout can also attack joints such as the knees and the elbows (as shown here).

What procedure is used to diagnose gouty arthritis?

Gout is considered when a patient reports a history of repeated attacks of painful arthritis, especially at the base of the toes. Ankles and knees are the next most commonly involved joints in gout. The most reliable test for gout is detecting uric acid crystals in the joint fluid obtained by joint aspiration (arthrocentesis). Arthrocentesis is a common office procedure performed with topical local anesthesia. **Using sterile technique, fluid is withdrawn (aspirated) from the inflamed joint with a syringe and needle and then analyzed for uric acid crystals.**

How is gout diagnosed?

Fluid obtained from deposits in a patient with gout. The joint fluid is analyzed for uric acid crystals and for infection.



What do uric acid crystals look like?

Bright, needle-like uric acid crystals are best viewed with a polarizing microscope.

Needle-shaped urate crystals diagnostic of gout from an acutely inflamed joint (left) as seen under polarized microscopy and unpolarized microscopy (right).

How are gout attacks prevented?

Maintaining adequate fluid intake helps prevent acute gout attacks. Adequate fluid intake also decreases the risk of kidney stone formation in patients with gout. Alcohol is known to have diuretic effects that can contribute to dehydration and precipitate acute gout attacks. Alcohol can also affect uric acid metabolism and cause hyperuricemia. It causes gout by impeding (slowing down) the excretion of uric acid from the kidneys as well as by causing dehydration, which precipitates the crystals in the joints.

Additional prevention techniques.

Dietary changes can help reduce uric acid levels in the blood. Since purine chemicals are converted by the body into uric acid, purine-rich foods are avoided. Examples of foods rich in purines include shellfish and organ meats, such as liver, brains, kidneys, and sweetbreads. Researchers have reported that meat or seafood consumption increases the risk of gout attacks, while dairy consumption seemed to reduce this risk. **Weight reduction can be helpful in lowering the risk of recurrent attacks of gout.** This is best accomplished by reducing dietary fat and caloric intake, combined with a regular aerobic exercise program.

What are the medical treatments for gout?

There are three aspects to the medication treatment of gout. First, pain relievers such as acetaminophen (Tylenol) or other more potent analgesics are used to manage pain. Secondly, antiinflammatory agents such as nonsteroidal antiinflammatory drugs (NSAIDS), colchicine, and corticosteroids are used to decrease joint inflammation. Finally, medications are considered for managing the underlying metabolic derangement that causes hyperuricemia and gout. These medicines decrease the elevated levels of uric acid in the blood.

What does the future hold for gout?

Active research is ongoing in a variety of fields related to gout and hyperuricemia. Scientists recently reported that high animal protein slightly increased the risk for gout. New drugs are being developed that may be more versatile and safe in treating the elevated uric acid levels in patients with chronic gout.

Source: http://www.medicinenet.com/gout_pictures_slideshow/article.htm