

Gout is a type of arthritis that results in sore joints. With this type of arthritis, crystals form in the joint. This causes irritation that is sometimes also present in the tendons near the joint. Joints can become swollen, painful, and red (Figure 1). This condition can affect any joint in the body. The first gout attack often occurs in the big toe. The elbow, wrist, and finger joints are also common sites. Painful swelling can come and go in the same joint or in different joints.



Figure 1: Acute gout episode with a swollen, red and painful finger

Causes

Crystals form when your body makes too much, or does not get rid of, uric acid. Genetics is the main factor in determining uric acid levels. These levels can also be affected by:

- Certain medications including medicine for high blood pressure, diuretics (water pills), some blood thinners, and a medicine called cyclosporine, which is used for patients who have had a transplanted organ
- Consuming meat, seafood, and alcohol (this can raise uric acid levels)

Obesity, insulin resistance, high cholesterol, heart disease, hypothyroidism, and kidney disease can be associated with this type of arthritis. Episodes of this condition have been noted after injury or surgery, sometimes involving infection or the use of contrast for x-rays. Physical fitness seems to help with prevention.

Signs and Symptoms

Gout leads to attacks, or flares, that appear suddenly with hot, red, or swollen joints. The joints can be so painful that they hurt to move. Sometimes the joints look like they are infected, even though they are not.

Gout crystals can form white bumps called “tophi,” which are often visible under the skin (Figure 2). These bumps are not painful.

Diagnosing Gout

The diagnosis for the disease is made based on a physical examination by your doctor, x-rays, and lab tests. You will be asked about your symptoms and how the disease has

changed your activities. Because medications and other diseases can cause this condition, you will be asked to provide a medical history and a medication list.

Uric acid does not show up on x-rays, but some bone changes can be visible with gout (Figure 3). If needed, fluid from the joint can be removed with a needle to confirm the diagnosis. Blood tests may be ordered to check for infection as well as to check your uric acid levels.

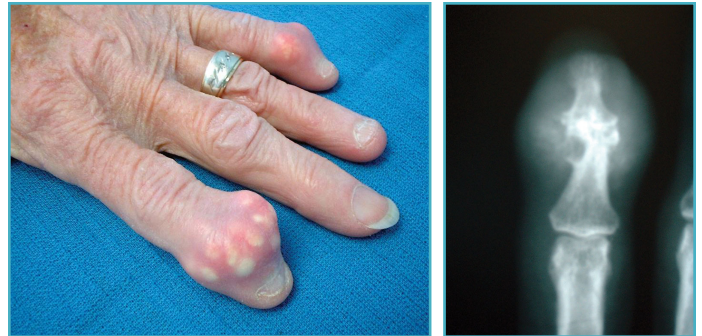


Figure 2 (left): Gout with tophus formation in the index and little fingers; **Figure 3 (right):** X-ray of finger with longstanding gout - Erosions are present in the bone at the end joint as well as swelling of the soft tissue

Treatment

When a painful episode of this condition begins, the goal is to decrease swelling, redness, and pain. New episodes are often treated with non-steroidal anti-inflammatory (NSAID) medication or a medicine called colchicine. Steroid pills and shots may be used as well.

Episodes often come and go. When the episodes are infrequent, an NSAID or colchicine can be used as needed. For more frequent episodes, other medications can be given that are managed by your primary care doctor or a rheumatologist.

This condition is usually treated without surgery. There are medicines, splints, and compression modalities to help swelling and lessen pain. If the disease has worn out the joints, or if tendons have been hurt, surgery may be needed.

If gout is not treated, the inflammation can cause damage to joints and tendons. Crystal deposits on tendons can cause the skin to wear down, which can lead to infection. In addition, tendons can tear, which can lead to loss of function. Talk to your doctor about the best treatment plan for you.