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# Gout

**Also called:** Gouty arthritis

## What is gout?

Gout is a common type of inflammatory arthritis [<https://medlineplus.gov/arthritis.html>] . It causes pain, swelling, and redness in one or more joints. It usually happens as a flare, which can last for a week or two and then gets better. The flares often begin in your big toe or a lower limb.

## What causes gout?

Gout happens when too much uric acid (urate) builds up in your body over a long time. Uric acid is a waste product your body makes when it breaks down purines. Purines are substances that are in your body's tissues and in many foods.

When your body breaks down old cells or digests foods that contain purine, most of the uric acid that's made dissolves in your blood. Your kidneys filter the uric acid out of your blood, and it leaves your body in your urine (pee).

However, sometimes your body can make too much uric acid or does not remove enough of it. Then the uric acid levels build up in your body, including in your blood. Having too much uric acid in the blood is called hyperuricemia. It does not cause health problems for everyone. But in some people, uric acid forms needle-like crystals. They can form in your joints, which causes gout. The crystals can also cause kidney stones [<https://medlineplus.gov/kidneystones.html>] .

Calcium pyrophosphate arthritis, sometimes called pseudogout, is a related disease. It causes similar symptoms and is sometimes confused with gout. But it is caused by a buildup of calcium phosphate, not uric acid.

## Who is more likely to develop gout?

Many people develop gout. You are more likely to get it if you:

- Are male.
- Are older; it usually develops in middle age.
- Have obesity [<https://medlineplus.gov/obesity.html>] .
- Have certain health conditions, such as:
  - Heart failure [<https://medlineplus.gov/heartfailure.html>]
  - High blood pressure [<https://medlineplus.gov/highbloodpressure.html>]
  - Metabolic syndrome [<https://medlineplus.gov/metabolicsyndrome.html>]
  - Chronic kidney disease [<https://medlineplus.gov/chronickidneydisease.html>]
  - Conditions that cause your cells to break down more quickly, such as psoriasis [<https://medlineplus.gov/psoriasis.html>] or some cancers
  - Rare genetic conditions that lead to increased uric acid
- Have a family history of gout.
- Have an unhealthy diet and eat foods that are rich in purines, such as red meat, organ meats, certain seafoods.
- Drink alcohol.
- Eat and drink lots of foods and beverages that contain fructose (a type of sugar).

- Take certain medicines, such as diuretics (water pills), low-dose aspirin, and some medicines that weaken your immune system.
- Take high amounts of niacin (vitamin B-3).

## What are the symptoms of gout?

Gout usually happens in only one joint at a time. It is often found in the big toe, but can also affect other joints, including your other toes, ankle, and knee.

Gout flares often start suddenly at night, and the symptoms in the affected joint often include:

- Intense pain, which may be bad enough to wake you up
- Swelling
- Redness
- Warmth

The flares typically get better within a week or two. In between flares, you usually don't have symptoms. Some people may have flares often, while others may not have another flare for years. But over time, if left untreated, your flares may happen more often and last longer.

And if gout is untreated over long periods of time, you can develop tophi. Tophi are hard, uric acid deposits under the skin. They start out as painless, but over time, they can become painful. They can also cause bone and soft tissue damage and misshapen joints.

## How is gout diagnosed?

To find out if you have gout, your health care provider:

- Will take your medical history, which includes asking about your symptoms.
- Will do a physical exam, including examining the affected joint(s).
- May order various tests, such as:
  - A test of a sample of fluid from one of your painful joints. The fluid is examined under a microscope and is checked for uric acid crystals.
  - A uric acid blood or urine test [<https://medlineplus.gov/lab-tests/uric-acid-test/>] .
  - An ultrasound [<https://medlineplus.gov/lab-tests/sonogram/>] or special CT scan [<https://medlineplus.gov/ctscans.html>] to look for uric acid crystal buildup in the affected joint and check for other conditions that may be causing the symptoms.


## What are the treatments for gout?

There are effective treatments for gout. Which treatment you get will depend on your symptoms and the cause of your gout. The goals of your treatment will be to:



- **Reduce the pain from gout flares**, by using medicines such as:
  - Nonsteroidal anti-inflammatory drugs (NSAIDs) like ibuprofen.
  - Acetaminophen and the anti-inflammatory drug colchicine.
  - Oral or injected corticosteroids [<https://medlineplus.gov/steroids.html>] .
- **Prevent future flares**, for example by:
  - Making lifestyle changes such as losing weight, limiting alcohol, and avoiding foods high in purines. If you are taking medicines that can cause high uric acid in the blood, your provider may suggest stopping or changing those medicines.
  - If needed, taking medicines to lower uric acid in the blood.
- **Prevent tophi and kidney stones**, for example with medicines that lower uric acid in the blood.

With early diagnosis, treatment, and lifestyle changes, gout is one of the most controllable forms of arthritis. Treatment and lifestyle changes may help people avoid gout flares, lessen their symptoms, and sometimes even become gout free.

## Start Here

- Gout [<https://rheumatology.org/patients/gout>] (American College of Rheumatology)  
Also in Spanish [<https://rheumatology.org/patients/gota>]
- Gout [<https://www.niams.nih.gov/health-topics/gout>]  (National Institute of Arthritis and Musculoskeletal and Skin Diseases)  
Also in Spanish [<https://www.niams.nih.gov/es/informacion-de-salud/gota>]

## Diagnosis and Tests

- Synovial Fluid Analysis [<https://medlineplus.gov/lab-tests/synovial-fluid-analysis/>]  (National Library of Medicine)  
Also in Spanish [<https://medlineplus.gov/spanish/pruebas-de-laboratorio/analisis-del-liquido-sinovial/>]
- Uric Acid Test [<https://medlineplus.gov/lab-tests/uric-acid-test/>]  (National Library of Medicine)  
Also in Spanish [<https://medlineplus.gov/spanish/pruebas-de-laboratorio/prueba-de-acido-urico/>]

## Treatments and Therapies

- Joint Injections (Joint Aspirations) [<https://rheumatology.org/patients/joint-injections-joint-aspirations>]  
(American College of Rheumatology)  
Also in Spanish [<https://rheumatology.org/patients/inyecciones-aspiraciones-articulares>]
- NSAIDs (Nonsteroidal Anti-Inflammatory Drugs) [<https://rheumatology.org/patients/nsaids-nonsteroidal-anti-inflammatory-drugs>]  
(American College of Rheumatology)  
Also in Spanish [<https://rheumatology.org/patients/aines-medicamentos-antiinflamatorios-no-esteroides>]





## Living With

- Gout Diet [<https://www.mayoclinic.org/healthy-lifestyle/nutrition-and-healthy-eating/in-depth/gout-diet/art-20048524?p=1>]  
(Mayo Foundation for Medical Education and Research)  
Also in Spanish [<https://www.mayoclinic.org/es/healthy-lifestyle/nutrition-and-healthy-eating/in-depth/gout-diet/art-20048524?p=1>]

## Related Issues

- Calcium Pyrophosphate Deposition (CPPD) [<https://rheumatology.org/patients/calcium-pyrophosphate-deposition-cppd>]  
(American College of Rheumatology)
- Diuretics and Gout: What's the Connection? [<https://www.mayoclinic.org/diseases-conditions/gout/expert-answers/diuretics-and-gout/FAQ-20058146?p=1>]  
(Mayo Foundation for Medical Education and Research)  
Also in Spanish [<https://www.mayoclinic.org/es/diseases-conditions/gout/expert-answers/diuretics-and-gout/faq-20058146?p=1>]
- Gout or Pseudogout? [<https://www.arthritis.org/diseases/more-about/gout-or-pseudogout>] (Arthritis Foundation)

## Genetics

- Autosomal dominant tubulointerstitial kidney disease--UMOD: MedlinePlus Genetics [<https://medlineplus.gov/genetics/condition/autosomal-dominant-tubulointerstitial-kidney-disease-umod/>]  
 (National Library of Medicine)
- Gout: MedlinePlus Genetics [<https://medlineplus.gov/genetics/condition/gout>]  (National Library of Medicine)
- Phosphoribosylpyrophosphate synthetase superactivity: MedlinePlus Genetics [<https://medlineplus.gov/genetics/condition/phosphoribosylpyrophosphate-synthetase-superactivity>]  
 (National Library of Medicine)
- REN-related kidney disease: MedlinePlus Genetics [<https://medlineplus.gov/genetics/condition/ren-related-kidney-disease>]  
 (National Library of Medicine)



## Images

- Gout [<https://skinsight.com/skin-conditions/gout/?lmiw9cApl=1>] (VisualDX)

## Statistics and Research

- Arthritis by the Numbers: Book of Trusted Facts and Figures [<https://www.arthritis.org/getmedia/73a9f02d-7f91-4084-91c3-0ed0b11c5814/abtn-2020-final.pdf>] (Arthritis Foundation) - **PDF**

## Clinical Trials


- ClinicalTrials.gov: Chondrocalcinosis [<https://clinicaltrials.gov/search?cond=%22Chondrocalcinosis%22&aggFilters=status:not%20rec>]  (National Institutes of Health)
- ClinicalTrials.gov: Gout [<https://clinicaltrials.gov/search?cond=%22Gout%22&aggFilters=status:not%20rec>]  (National Institutes of Health)

## Journal Articles

References and abstracts from MEDLINE/PubMed (National Library of Medicine)

- Article: Association of systemic inflammatory response index with serum uric acid levels,... [<https://www.ncbi.nlm.nih.gov/pubmed/40725889>]
- Article: The disease burden of gout in Asian countries and regions from... [<https://www.ncbi.nlm.nih.gov/pubmed/40720428>]
- Article: Risk of incident gout in rheumatoid arthritis from a nationwide cohort... [<https://www.ncbi.nlm.nih.gov/pubmed/40707554>]
- Gout -- see more articles [<https://pubmed.ncbi.nlm.nih.gov/?term=%22Gout%22%5Bmajr%3Anoexp%5D+AND+humans%5Bmh%5D+AND+english%5Bla%5D+AND+%22last+1+Year%22+%5Bedat%5D+NOT+%28letter%5Bpt%5D+OR+case+reports%5Bpt%5D+OR+editorial%5Bpt%5D+OR+comment%5Bpt%5D%29+AND+free+full+text%5Bsb%5D+>]

## Find an Expert

- Find a Rheumatologist [<https://my.rheumatology.org/rheumatology-provider-directory>] (American College of Rheumatology)
- National Institute of Arthritis and Musculoskeletal and Skin Diseases [<https://www.niams.nih.gov/>]   
Also in Spanish [<https://www.niams.nih.gov/es/portal-en-espanol>]

## Patient Handouts

- Calcium pyrophosphate arthritis [<https://medlineplus.gov/ency/article/000421.htm>] (Medical Encyclopedia)  
Also in Spanish [<https://medlineplus.gov/spanish/ency/article/000421.htm>]
- Gout [<https://medlineplus.gov/ency/article/000422.htm>] (Medical Encyclopedia)  
Also in Spanish [<https://medlineplus.gov/spanish/ency/article/000422.htm>]
- Uric acid - blood [<https://medlineplus.gov/ency/article/003476.htm>] (Medical Encyclopedia)  
Also in Spanish [<https://medlineplus.gov/spanish/ency/article/003476.htm>]
- Uric acid urine test [<https://medlineplus.gov/ency/article/003616.htm>] (Medical Encyclopedia)  
Also in Spanish [<https://medlineplus.gov/spanish/ency/article/003616.htm>]



## MEDICAL ENCYCLOPEDIA

Calcium pyrophosphate arthritis [<https://medlineplus.gov/ency/article/000421.htm>]

Gout [<https://medlineplus.gov/ency/article/000422.htm>]

Synovial biopsy [<https://medlineplus.gov/ency/article/003922.htm>]

Synovial fluid analysis [<https://medlineplus.gov/ency/article/003629.htm>]

Uric acid - blood [<https://medlineplus.gov/ency/article/003476.htm>]

Uric acid urine test [<https://medlineplus.gov/ency/article/003616.htm>]

## Related Health Topics

Arthritis [<https://medlineplus.gov/arthritis.html>]

## National Institutes of Health

The primary NIH organization for research on *Gout* is the National Institute of Arthritis and Musculoskeletal and Skin Diseases [<http://www.niams.nih.gov/>]

## Other Languages

Find health information in languages other than English [<https://medlineplus.gov/languages/gout.html>] on *Gout*

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