

Non-Communicable Diseases Watch

DECEMBER
2025

Be Aware of Gout Attacks

Key Messages

- Gout, characterised by an acute onset of severe pain, swelling and redness in the joints, is the most common form of inflammatory arthritis affecting adults worldwide.
- In Hong Kong, three out of every hundred people experience various degrees of gout. Among gout patients, it is common to have coexisting chronic conditions including hypertension, hyperlipidemia, and obesity.
- There is no cure for gout yet, but the disease is preventable and controllable through healthy living, proper care and medication — having a balanced diet and limiting intake of high-purine foods such as organ meat and red meats, avoiding alcoholic beverages and sugar-sweetened drinks, staying well-hydrated, maintaining an optimal weight, being physically active, and taking medications as prescribed by doctor.

Gout is No Laughing Matter

Christmas and New Year mark a joyful holiday season, brimming with lively parties and gourmet treats. However, excessive consumption of meat, seafood or alcoholic beverages can trigger not-so-merry gout attacks. Gout, characterised by an acute onset of severe pain, swelling and redness in the joints, is the most common form of inflammatory arthritis affecting

adults worldwide¹. Depending on the population studied and survey methods employed, the prevalence of gout varies from less than 1% to about 7% in different countries^{1,2}. This article provides an overview of the causes, manifestations, risk factors and disease burden of gout, along with some tips for preventing gout attacks amid the holiday cheer.

What Causes Gout and How It Strikes

Gout is caused by hyperuricaemia, or increased uric acid levels in the blood. Uric acid is a metabolite produced when the body breaks down purines—substances naturally found in human tissues and certain foods and drinks. Normally, the body excretes most of the uric acid in urine through the kidneys.

However, if the body produces too much or excretes too little uric acid, the level of uric acid in the blood builds up. When crystallised in the form of needle-like urates and deposited in joints or surrounding tissues, it would induce inflammation and trigger a gout attack (Figure 1)^{3,4}.

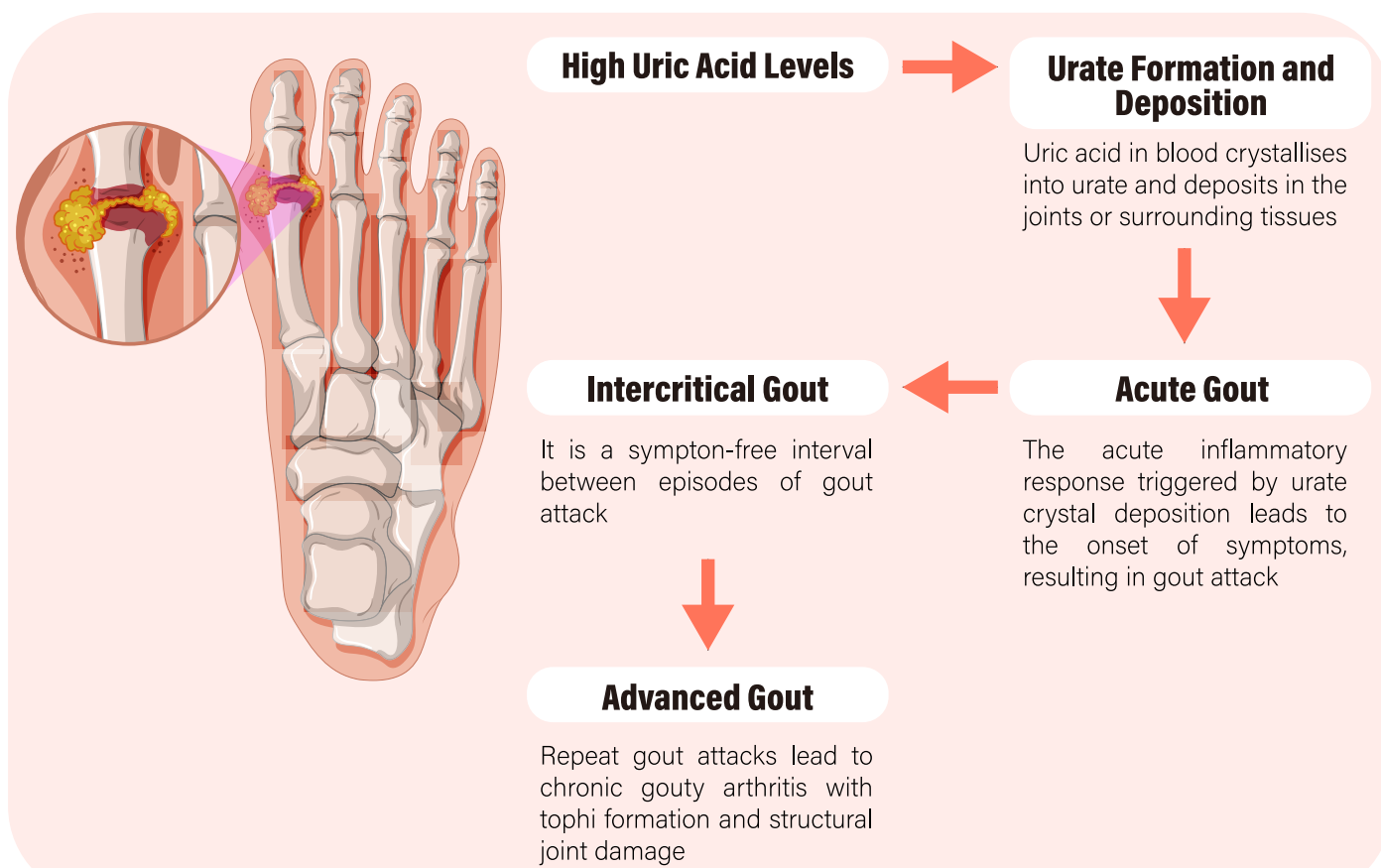


Figure 1: Clinical course of gout

The first episode of a gout attack mostly involves a single joint, the big toe joint. Joints, such as the ankle, knee, wrist, elbow and finger joints, can also be affected. Usually, the attack subsides in 7 to 14 days without treatment⁴. After resolution, the period until the next gout attacks varies and this phase is known as intercritical gout. Of note, many patients with gout falsely think "no pain, no problem", without realising that urate crystal deposition may continue in the joints and

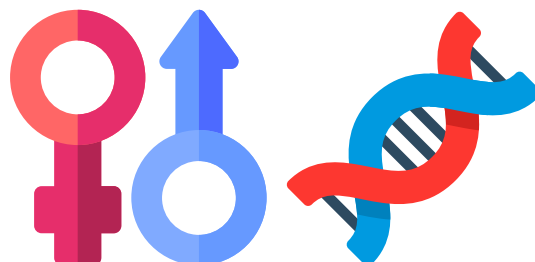
surrounding tissues during the intercritical gout phase. If uric acid levels are not properly controlled, subsequent gout attacks will occur more frequent, affect more joints and last longer with more severe symptoms³. Over time, repeated gout attacks can lead to chronic gouty arthritis with formation of tophi (which are hard lumps formed by the accumulation of urate crystals) and permanent joint damage or deformity^{3,4}.

Major Gout Risk Factors and Comorbidities

Hyperuricemia and gout are influenced by a variety of risk factors. Coexistence of other chronic diseases is also common among people with gout⁵⁻⁷.

Non-modifiable risk factors

Non-modifiable risk factors for gout include advancing age^{6,7}, gender (with a male-to-female ratio of 8:1 in Asia, 4:1 in North America and 2:1 in Europe²), ethnicity (with a higher prevalence among Taiwanese Aborigines, New Zealand Maori and Pacific Islanders⁵) as well as persons with a family history of gout⁸.









Modifiable risk factors

Dietary factors and lifestyle choices significantly affect uric acid levels in the blood and increase the risk of gout occurrence⁵⁻⁷. Epidemiological studies consistently show a strong link between increased risk of hyperuricaemia and/or gout and consumption of foods high in purines, including organ meat, red meat and some kinds of seafood^{9,10}, alcoholic drinks especially beer and cider⁹⁻¹¹, as well as sugar-sweetened beverages^{12,13}. A study involving more than 180 000 adults aged 40–79 in the United Kingdom also indicated that consumption of ultra-processed food would increase gout risk¹⁴. Compared to individuals with the lowest/low intake of selected high-purine foods or beverages, those

with the highest/high intake showed a 29% to 43% increased risk of developing hyperuricaemia, and a 16% to 65% increased risk of gout (Table 1)^{9,12,14}. Obesity is a well-established risk factor for hyperuricaemia and gout^{7,15}. Compared with persons having a body mass index (BMI) of 20, those with a BMI of 25, 30, 35 and 40 were about 1.8 times, 2.7 times, 3.6 times and 4.6 times as likely to develop gout, respectively¹⁵. Controllable risk factors that trigger gout attacks also include hypertension and the use of certain medications (such as diuretics), which can double the risk of developing gout¹⁶.

Table 1: Hyperuricaemia or gout risk increment by selected types of food and drink

Types of food/drink	Relative risk increment estimates for high/highest versus low/lowest intakes	
	Hyperuricaemia	Gout
Alcoholic drinks ⁹ 	↑ 43%	↑ 60%
Fructose ⁹ 	↑ 29%	↑ 65%
Sugar-sweetened beverage ¹² 	↑ 35%	↑ 35%
Red meat ⁹ 	↑ 37%	↑ 32%
Seafood ⁹ 	↑ 40%	↑ 29%
Ultra-processed food ¹⁴ 	-	↑ 16%

Comorbidities

Although gout is not directly life-threatening, it can impair joint function, limit mobility and diminish quality of life. More importantly, the health implications of gout go beyond the affected joints; it can also affect the entire body. Since hyperuricaemia is a significant biomedical risk factor contributing to the development of multiple chronic conditions, gout is therefore strongly associated with cardiovascular diseases, type 2 diabetes and chronic kidney disease^{1, 17}. Metabolic syndrome is common among individuals with gout and is

characterised by a clustering of medical conditions that occur together, including central obesity, elevated blood pressure, elevated blood glucose, abnormal cholesterol or triglyceride levels. A meta-analysis of 19 studies reported that nearly one in two (46.8%) gout patients had metabolic syndrome¹⁸. Studies also showed that individuals with gout had a 23% higher risk of overall mortality and a 30% higher risk of cardiovascular mortality compared to those without gout^{19, 20}.

From Gout-Induced Individual Pain to Public Health Impact

In recent decades, the incidence and prevalence of gout have substantially increased in many other countries and regions, and Hong Kong is no exception²¹.

Global perspective

The Global Burden of Disease Study estimated that the global incidence of gout increased from 93.1 per 100 000 population in 1990 to 109.1 per 100 000 population in 2021. The corresponding number of incident cases increased from nearly 4.0 million to 9.4 million across the globe^{22, 23}. Similarly, the global prevalence of gout per 100 000 population rose over the past 30 years, from 536.5 to 653.8 between 1990 and 2021. The number of prevalent cases rose from about 22.3 million to 56.5 million over the same period^{22, 23}. Driven by population growth and ageing, the number of people with gout is projected to reach 95.8 million in 2050, more than a 70% increase from 2020²⁴.

Local situation

Gout is one of the most common conditions encountered in primary care^{5, 25}. A study analysed clinical data of more than 2.74 million individuals who attended outpatient clinics or accident and emergency departments of the Hospital Authority in 2005 and were followed until end-2016 or death. Results showed that three out of every hundred people experienced various degrees of gout. After adjusting the age factor, the age-adjusted incidence of gout increased from 92.9 per 100 000 person-years in 2006 to 133.5 per 100 000 person-year in 2016²⁶. Another study investigated 385 adult Chinese gout patients who had been followed-up in 13 outpatient clinics under the Hospital Authority in 2021 showed that gout comorbidities were common among gout patients (Figure 2)²⁵.

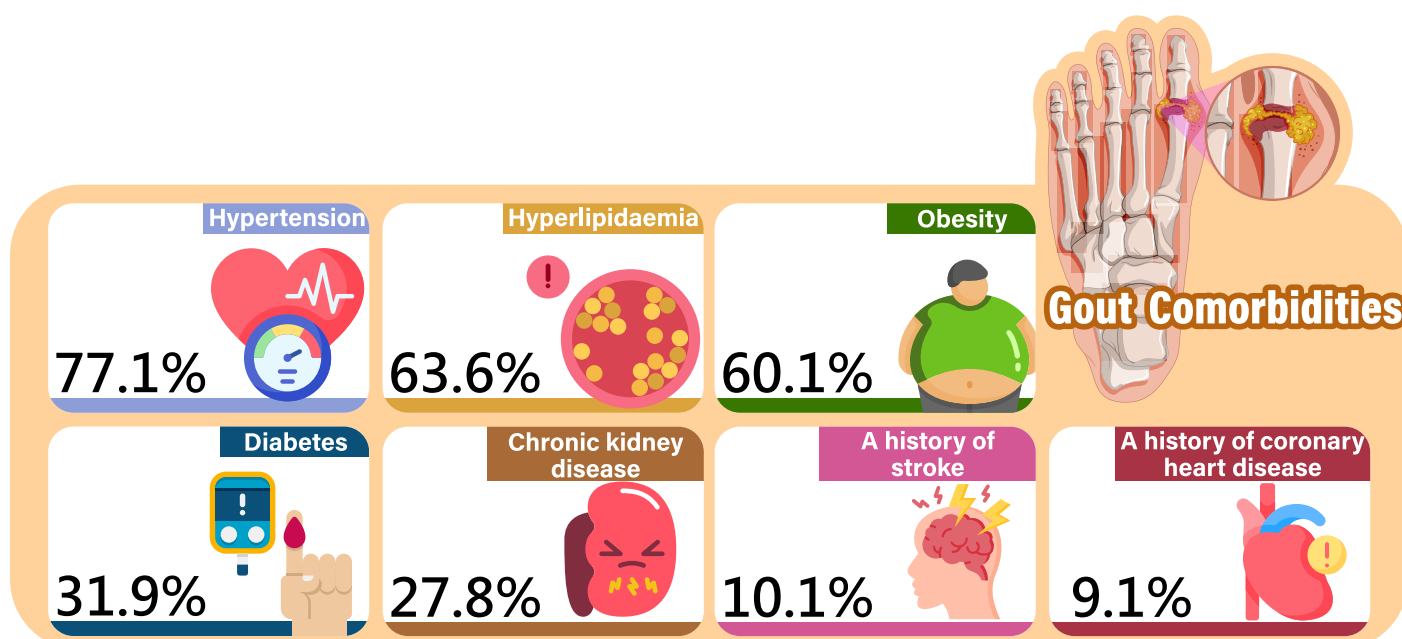


Figure 2: Comorbidities among local gout patients

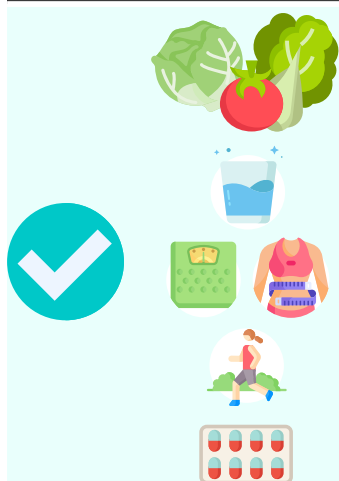
Healthy Living Can Prevent and Cut the Risk of Gout Attacks

Although there is currently no cure for gout, the disease is preventable and controllable through healthy living, proper care and medications²¹. Research indicates that adherence to a healthy lifestyle can substantially lower the risk of gout, even among individuals with a genetic predisposition^{27, 28}. For those who are obese, losing weight can decrease uric acid levels in the body and reduce the risk of gout attacks²¹. However, rapid weight loss may temporarily raise uric acid levels, so it is recommended to achieve gradual weight reduction and adhere to treatment plans. Consult doctors before using over-the-counter drugs, herbal remedies or other complementary treatments.

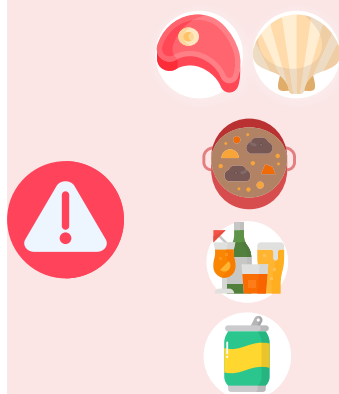
To enjoy a merry Christmas without the pain of gout, follow a gout-friendly low-purine dietary principle. During the Christmas and New Year, some individuals may experience significant physical and mental stress from social gatherings, banquet preparations or holiday shopping. These stressors can elevate uric acid levels and potentially trigger gout attacks. It is important to ensure adequate rest and find healthy ways to manage holiday stress, such as walking which not only helps relieve stress but also burns off excess calories from festive feasting.



Key actions that help reduce uric acid levels, prevent gout attacks and stay healthy



- Eat a balanced diet with at least 5 daily servings of fruit and vegetables, in particular vitamin C-rich citrus fruits, kiwi, strawberries, blueberries, cherries, tomatoes as well as leafy greens like choy sum and lettuce that can help lower uric acid levels and reduce inflammation
- Drink more plain water which is the best to facilitate excretion of uric acids
- Maintain an optimal body weight and waist circumference
- Be physically active to help speed up blood circulation and slow down urate deposition in joints
- Take medications as prescribed by the doctor



- Avoid foods that are high in purines, such as organ meat and red meats, oily fish and fish roe, shellfish such as scallops and mussels, certain vegetables such as mushrooms and broccoli, legumes such as soybeans and soy products
- Avoid meat sauces, broths, meat extracts and chicken essence
- Refrain from drinking alcohol, especially beer and cider
- Limit consumption of sugar-sweetened beverages, such as sodas and fruit juices with fructose corn syrup or added sugars

Wishing you a happy, gout-free festive season!

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The WHO Director visited the Department of Health

Dr. Huong Thi Giang Tran, Director of the Division of Disease Control Programmes at the World Health Organization (WHO) Western Pacific Regional Office, visited the Department of Health on 6 November 2025. She met with the Director of Health, Dr Ronald Lam, the Controller of the Centre for Health Protection, Dr Edwin Tsui, and other DH officers to learn about Hong Kong's efforts and achievements in the prevention and control of non-communicable diseases (NCDs), cancer screening programmes, promotion of mental health, and the Whole School Health Programme. Dr Huong Tran commended Hong Kong for its remarkable achievements in reducing the risk of premature death caused by the four major NCDs. She was also impressed by Hong Kong's mental health promotion with its clear strategy and strong approach. Both parties looked forward to maintaining close communication and collaboration to explore more effective public health measures and advance population health.



Photo shows Dr Huong Tran (third left), the Director of Health, Dr Ronald Lam (third right), the Controller of the Centre for Health Protection, Dr Edwin Tsui (second left), Consultant Community Medicine (Family and Student Health), Dr SK Chuang (second right), Head, Health Promotion Branch, Dr Kellie So (first left), Head, Non-Communicable Disease Branch, Dr Anne Chee (first right).

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