

All about gout and other health problems



What is gout?

Gout is a common type of arthritis that usually causes sudden and very severe attacks of pain and swelling in the joints, particularly those in the feet. Other joints can also be affected. If you think you may have gout, it is important to seek help from a medical professional as quickly as possible, so that you can get the right treatment and rule out any links with other possible medical conditions.

What causes gout?

Gout is caused by too much uric acid in the bloodstream (medically known as hyperuricaemia). An overload of uric acid in the body means painful, needle-like urate crystals may start to form in and around the joints and under the skin.

Most people with gout have high levels of uric acid in their body because it hasn't been efficiently removed by the kidneys and washed out in the urine. Too much uric acid can also be caused by a diet rich in purines (a protein found in many foods), alcohol, crash dieting, stress, prolonged illness, injury, or by certain medicines e.g. diuretics (water tablets), aspirin.

Less commonly, some people produce too much uric acid in the first place – due to an inherited (genetic) abnormality or a disorder associated with the over-production of cells in the body. More information on possible triggers for gout can be found in our factsheet 'All About Gout: A Patient Guide to Managing Gout'.

What other health problems may be associated with gout?

Gout is sometimes associated with other diseases and medical conditions. These include:-

- Being overweight or obese - obesity
- Diabetes
- Hypertension (high blood pressure)
- Heart attack
- Angina
- Stroke
- Peripheral vascular disease (poor circulation in the limbs - claudication)
- Hyperlipidaemia (high levels of cholesterol and other fats in the blood)
- Psoriasis (a chronic skin condition)
- Kidney disease

Some of these medical conditions are often referred to collectively as 'vascular disease' (heart attack, angina, stroke and poor leg circulation). Gout may develop in people who already have one or more of the above vascular diseases or medical conditions. In addition, and in certain cases, the diagnosis of gout may be the first sign that you could already be suffering from a vascular-related problem. Always seek medical help as soon as possible if you suspect you may have gout.

What happens if you are diagnosed with gout?

If you are diagnosed with gout, the above health problems should be considered by you and your doctor and hopefully ruled out. However, if you are found to have pre-existing vascular disease, your doctor will advise the best and most appropriate course of medical treatment.

It may not always be possible to avoid or prevent vascular disease - it may, for example, be partly inherited or 'genetic'. However, in some cases measures can be taken to reduce the risk of developing it.

Gout and the 'metabolic syndrome'

Metabolic syndrome is a group of conditions which comprises Type II or late onset diabetes, obesity, high cholesterol levels and high blood pressure.

People with metabolic syndrome fail to respond properly to insulin (the hormone which helps to lower blood sugar levels). This is medically known as 'insulin resistance'.

The key treatment for metabolic syndrome is weight loss. This will reduce your risk of diabetes, lower blood pressure and also lower urate levels and the subsequent risk of gout. It will also lower the risk of developing vascular disease such as angina, heart attacks and stroke.

Gout and cholesterol levels?

Gout sufferers may have higher levels of triglyceride and cholesterol – which are types of fat both present in the blood. This may increase your risk of developing vascular disease, such as coronary artery disease (angina and heart attacks).

Most vascular disease is caused by the 'furring up' of arteries, called atherosclerosis. Other risk factors for developing atherosclerotic vascular disease include a family history and smoking.

Together with diabetes and high blood pressure, these are often called 'traditional' risk factors for vascular disease. There is also some medical evidence that a high urate level can be a risk factor for heart problems, quite independent of its association with the metabolic syndrome.

Does gout cause high blood pressure?

Gout doesn't directly cause high blood pressure, but is linked via its association with the metabolic syndrome (see above). Certain drugs used to treat high blood pressure may further increase the risk of gout, such as diuretics (water tablets). However, some drugs are particularly useful in patients who have both high blood pressure and gout. These drugs are able to reduce both blood pressure and urate levels because they have effects on the kidney's ability to wash out or excrete urate.

Should I ask my doctor to measure my blood pressure because I have gout?

Yes. High blood pressure is more common in patients with high urate levels and gout. This is partly due to the link with the metabolic syndrome, but may also be related to use of nonsteroidal anti-inflammatory drugs (NSAIDs) e.g. aspirin, diclofenac, ibuprofen etc which are often prescribed to treat the pain of a sudden gout attack.

Am I at a higher risk of having a stroke or heart attack if I have gout?

This is controversial. You may be at higher risk if you also have diabetes or high blood pressure. If you do not have these 'traditional' risk factors for vascular disease, then gout or hyperuricaemia per se probably does not significantly increase your risk of developing a stroke or heart disease. However, because of the strong link with the metabolic syndrome, one could argue that you should be regularly screened for these conditions.

Does gout cause diabetes?

Not directly. It is associated with Type II (late-onset) diabetes through the link with insulin resistance and the metabolic syndrome. Insulin resistance (the body's inability to lower blood sugars) causes, amongst other problems, excessive re-absorption of urate by the kidney (rather than washing it out into the urine). Gout does not appear to be strongly associated with Type I (early-onset) diabetes (treated with insulin injections) except when it is poorly controlled, which may lead to a complication called diabetic ketoacidosis.

What can I do to reduce my risk of developing the metabolic syndrome?

As mentioned above, losing weight if you are overweight or obese is the best way of reducing your risk of being diagnosed with metabolic syndrome. This will reduce blood pressure, insulin resistance and lipid (fat) levels in the blood.

Weight reduction is best achieved using a combination of diet and exercise, particularly reducing the intake of fat and carbohydrate (especially refined sugars such as those found in sweets, cakes and fizzy drinks). Regular aerobic exercise (enough to get the heart pumping and breaking out in a sweat) such as running, brisk walking, cycling or swimming for 20 minutes at least three times a week is optimal.

I have been prescribed anti-inflammatory painkillers (NSAIDs) and have heard that they may also be linked to heart problems/ cardiovascular disease. Should I stop taking them?

No, but you may wish to discuss this with your doctor. NSAIDs have indeed been associated with an increased risk of certain forms of vascular disease. However, this increase in risk is very small (much lower than the effect of high blood pressure or smoking for example) and is probably only associated with certain NSAIDs. These drugs can in theory cause a small amount of fluid retention and a very small rise in blood pressure. However, in patients with gout they are generally only used in short courses for a few days. The link with vascular disease probably only becomes important when they are used continually, long-term.

It is generally advisable to use the lowest possible effective dose of an NSAID for the shortest possible time. This can be tricky in acute gout, and if you're concerned about the use of NSAIDs you should discuss this with your doctor. Alternative drugs for treating acute gout include colchicine and prednisolone (steroid tablets).

Remember that all medications may have side effects, which is why it's advisable to help yourself by dieting, exercising and trying to avoid becoming overweight.

Does gout cause kidney damage?

Continuously high levels of urate in the blood can lead to the development of kidney stones (renal calculi) and also kidney damage. The latter may cause leakage of tiny amounts of blood and protein into the urine, and in more advanced cases, a reduction in the production of urine. Kidney stones can cause severe lower back/loin pain. However, both these consequences of high blood urate levels are very rare and are preventable using urate lowering drugs such as allopurinol. Drinking lots of fluid may also help.

Patients receiving chemotherapy for cancer may also occasionally develop high urate levels. This rarely causes gout, but can potentially harm the kidneys. However, this is easily preventable nowadays by using an intravenous drip and special urate lowering medication alongside the chemotherapy.

NSAIDs are commonly used to treat sudden, unexpected (acute) attacks of gout. These drugs can potentially harm the kidney, but this is rare. However, it is more likely in older patients, in patients who are dehydrated and those on other medication that may also put strain on the kidneys. It is also more likely to be a problem when these drugs are used long-term, but in general they are only used in short courses to treat acute attacks of gout.

What is psoriasis and why does it increase my risk of getting gout?

Psoriasis is a long-term (chronic) inflammatory skin condition. It is quite common and can lead to the development of a type of arthritis (psoriatic arthritis). Moderate to severe psoriasis can lead to high urate levels in the blood and the development of gout. Gout sufferers who also suffer from psoriasis can therefore potentially develop psoriatic arthritis (which has some similarities to rheumatoid arthritis) and/or gout.

Many chronic inflammatory conditions are associated with an increased risk of vascular disease. This includes psoriasis, rheumatoid arthritis and ulcerative colitis (inflammation in the large bowel). People diagnosed with such conditions have a higher risk of developing coronary artery disease and cerebrovascular disease, such as mini strokes (TIAs)/stroke. The risk is lowered if these conditions are well controlled by medication. Having gout on top of these conditions probably further increases the risk of vascular disease.

For further information:

1. UK Gout Society. Web: www.ukgoutsociety.org
Email: info@ukgoutsociety.org.
2. Factsheet: All about Gout: A Patient Guide to Managing Gout. Downloadable at www.ukgoutsociety.org
3. Factsheet: All about Gout and Treatments. Downloadable at www.ukgoutsociety.org
4. Factsheet: All About Gout and Diet. Downloadable at www.ukgoutsociety.org
5. Arthritis Research UK: www.arthritisresearchuk.org
6. The Psoriasis Association: www.psoriasis-association.org.uk/arthritis

