Gout Diet Sheet

Gout is a type of arthritis, typically caused by a build-up of uric acid in the blood. When levels of uric acid build up, it can cause crystals of uric acid to be formed, which deposit in joints and cause irritation, inflammation and swelling. This is known as a gout attack, which can be very painful. There are several reasons why the blood may contain high levels of uric acid. It may be a result of the kidney’s reduced ability to clear the uric acid. It may be an overproduction of compounds known as purines. It may be a combination of both.

While medications are key factors in the management and treatment of gout, dietary factors can also play an important role. Following dietary advice may or may not accompany medications, but can help to stabilise levels of uric acid in the blood, which can reduce the risk of gout attacks.

What can you do to prevent attacks of gout?

Achieve a healthy weight
Obesity may be a primary consideration to reduce levels of uric acid in the blood. Insulin resistance is commonly seen in those who are obese and it may be involved in the development of gout. Insulin resistance has been shown to decrease the amount of uric acid that is cleared in the urine. A condition known as the 'metabolic syndrome' is a cluster of symptoms which includes insulin resistance, along with tummy (abdominal) obesity, high blood pressure and abnormal blood fats (lipids) - for example, high cholesterol. This condition is strongly associated with high uric acid levels, which can be improved with slow, gradual weight loss.

Weight loss has been shown to improve insulin resistance and therefore reduce uric acid levels in the blood. However, it is important to avoid strict diets such as low-carbohydrate and high-protein diets. These may increase consumption of purines, a compound that breaks down into uric acid. Additionally, rapid weight loss through strict dieting can result in breakdown of tissue. This can temporarily cause a rise in uric acid levels. A gradual, safe weight loss of 1-2 lbs a week can help to achieve an optimal body weight.

Reduce alcohol
Drinking too much alcohol has been associated with gout for many years. However, it is uncertain how it may be related. Some types of alcohol, particularly beer, contain high levels of purines, which could be an indirect cause of gout. Alternatively, alcohol's association with gout could be due to its contribution to obesity through excessive consumption. Alcohol contains 7 calories per gram and so drinking too much alcohol can lead to weight gain.

There is more risk of gout attacks from drinking beer compared to spirits, and wine drinking in moderation has no associated risk. If you choose to drink alcohol, drinking in moderation is advisable. Both men and women should drink no more than 14 units of alcohol per week. These units should be spread out through the week and there should be at least two alcohol-free days each week.

A unit of alcohol is:

- One 25 ml shot of spirits.
- Half a pint of standard-strength lager/beer (3-4% alcohol by volume).
- One small 125 ml glass of wine (11% alcohol by volume).

Higher-strength alcoholic beverages will contain more units. For example, a pint of a higher-strength beer (5.2% alcohol by volume) is 3 units, and a small 125 ml glass of wine (12% alcohol by volume) is 1.5 units.
Keep hydrated
Ensuring a sufficient fluid intake helps to reduce the risk of crystals forming in joints. Keeping hydrated and avoiding lack of fluid in the body (dehydration) can lessen this risk and help to prevent gout attacks. Aim to drink at least 2 litres per day. However, you may need as many as 3-3.5 litres per day depending on your weight, whether it is hot, or whether you exercise.

Reduce your purine intake
Purines are natural compounds found in many foods. When purines are metabolised, they are broken down and their end product is uric acid. Therefore, reducing purine-rich foods, particularly if they are regularly consumed, may help to prevent attacks of gout.

Reduce red meat (particularly beef, pork and lamb), poultry meat and seafood, as these are primary sources of purines. Aim to have no more than one serving of any meat (including poultry) or fish per day, and it may be helpful to have 1-2 meat-free days each week. To make sure you are getting enough protein, include meat-free sources of protein such as eggs, low-fat dairy products, tofu, cheese, nuts or beans with lower purine content such as haricot beans. Evidence suggests that plant foods aren't associated with increased risk of gout, even if they have a higher purine content.

There are certain foods that are very high in purines and should be considerably limited, if not avoided completely. These include:

<table>
<thead>
<tr>
<th>Meat Sources</th>
<th>Liver; heart, kidney, sweetbreads, ox, game (eg, venison, rabbit), meat extracts (eg, stock cubes/graves).</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fish Sources</td>
<td>Anchovies, crab, fish roes, herring, mackerel, trout, sardines, shrimps, sprats, whitebait.</td>
</tr>
<tr>
<td>Other Sources</td>
<td>Yeast and extracts, beer, high fructose corn syrup.</td>
</tr>
</tbody>
</table>

Limit sugary foods/sweetened foods
Overindulging in these foods can lead to weight gain and obesity. Additionally, sugary foods, drinks and snacks often contain fructose or what might be labelled as high-fructose corn syrup/glucose-fructose syrup. A high intake of fructose can increase uric acid levels in the blood and may increase insulin resistance. These are both risk factors for developing gout, so aim to limit these foods.

As well as biscuits, cakes, sweets, fruit juices and sugary drinks, high-fructose corn syrup can be found in unexpected foods. These include:

- Bread.
- Yoghurts.
- Frozen pizzas.
- Cereals and cereal bars.
- Jarred sauces.
- Some condiments such as jams, ketchup, mayonnaise or salad dressings.

Check labels to compare products and choose fresh ingredients rather than processed foods when possible.

Although fruit contains fructose it should not be limited. This is because fruit is not a concentrated form of fructose. When eaten whole it contains fibre, and protective vitamins and minerals such as potassium, vitamin C and other antioxidants, which are otherwise lost in processing.

Which foods are the best to eat?
A healthy balanced diet can help to achieve and maintain a healthy weight. It can also provide energy and nutrients sufficient for optimal health and reduce risk of gout attacks.
Include daily:

**Plenty of fruit and vegetables**
The recommendation is **five portions per day**, but try to include as many as possible. Bulking out meals, such as Bolognese, casseroles and stews with vegetables can help to reduce the meat content. Fruit and vegetables contain vitamin C. Although evidence is unclear, high intakes of vitamin C (500 mg or more) may help to reduce uric acid levels in the blood. Cherries may be particularly useful to include in the diet, as they have also been found to reduce levels of uric acid in the blood.

**Plenty of starchy carbohydrates**
These may include rice, potatoes, pasta, bread, couscous, quinoa, barley or oats, and should be included at each meal time. These foods contain only small amounts of purines, so these along with fruit and vegetables should make up the basis of your meals. Wholegrain varieties are better choices as they contain more fibre and nutrients.

**Some meat, fish, eggs, beans and pulses**
Eat these foods in moderation. Having vitamin C with meals can help to improve the absorption of iron, so drink a small glass of orange juice, have a piece of fruit for dessert, or serve up meals with plenty of vegetables. Keep your portions of meat controlled by using your hands as a serving size guide. A serving is about the size and thickness of the palm of your hand.

**Some milk and dairy products**
Including low-fat dairy products (such as skimmed milk, low-fat yoghurt and low-fat cottage cheese) may help to prevent high levels of uric acid in the blood. These foods are a good source of protein and also have a low purine content so are useful additions to meals if you are trying to reduce meat (including poultry) and fish intake.

**Summary**
Reducing the amount of uric acid levels in the blood can help to prevent gout attacks. This can be done by:

- Achieving a healthy weight.
- Limiting alcohol.
- Avoiding/reducing foods high in purines.
- Drinking plenty of fluid.
- Limiting foods sweetened with fructose.
- Eating plenty of fruit and vegetables.
- Consuming low-fat dairy products.

**Further reading & references**
- 2016 updated EULAR evidence-based recommendations for the management of gout; European League Against Rheumatism (2016)
- Gout; NICE CKS, April 2015 (UK access only)

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