

Plant-based Diets and Gout



Gout has long been known as the “disease of kings” as it is most common in overweight or obese men who consume rich foods, and excessive alcohol. It is also associated with hypertension and renal impairment. Diet can help to reduce the incidence of gout, and can play an important role in the treatment of gout.

Generally, with active disease, dietary purines are restricted. In the body, purines are metabolized to uric acid. Purines can elevate uric acid in the blood. Although normal levels of uric acid can assist in scavenging free radicals, higher levels increase risk of gout. The richest dietary sources of purines are organ meats and small fish (internal organs are eaten with the fish). Diets rich in plant foods are not associated with increased risk of gout, even when higher purine plant foods are consumed. Generally, plant foods are less concentrated in purines than meat and seafood. Dairy products are low in purines and have not been found to increase risk, although high fat dairy products may contribute to cardiovascular disease and diabetes, so low or skim milk products are preferable to higher fat options.

Common Myth – Beans and Gout

It is commonly believed that beans are high purine foods and should be avoided by people who are at risk for gout, have high uric acid levels, or who have active gout. This is because most tables listing the purine content of foods list the amount of purines found in 100 grams (just over a half cup) of dried beans. When 100 grams of beans are cooked, the yield is about 1 1/2 cups of beans. A typical serving of

cooked beans is about a half cup, thus the figures shown in most tables are triple the usual serving size. Using a one-half cup serving size, the purine content of beans ranges from about 20-75 mg per serving. See the chart below for the purine content of specific legumes.

Dietary Guidelines for Gout Prevention and Treatment

1. Avoid very high purine foods and limit high purine foods to not more than a serving per day (see chart below). Avoid meat extracts, broths, bouillon and gravy.
2. Avoid rich, high-fat, meat-centered meals. Rely on plant foods as your primary sources of protein.
3. Eat several servings of fiber-rich plant foods such as whole grains, vegetables, fruits, each day.
4. Minimize intake of refined carbohydrates, including both starches (white flour products) and sugar. Concentrated fructose can increase uric acid levels and increase insulin resistance.
5. Drink 2-3 L of fluids each day. Most of this should be water.
6. Avoid alcohol, as it tends to interfere with uric acid excretion.
7. Maintain a healthy body weight. If you are overweight, aim for a slow gradual weight loss of $\frac{1}{2}$ -1 kg (1-2 lbs) per week. Rapid weight loss from fasting or severely calorie-restricted diets is not recommended as this can raise uric acid levels and aggravate gout.
8. Increase your physical activity. (Check with your doctor first if you are currently not active).

Purine Content of Common Foods

Avoid very high purine foods (>200 mg purine per serving)

Minimize high purine foods (>100 mg purine per serving)

Moderate medium purine foods (50-100 mg/serving)

Enjoy low purine foods (< 50 mg/serving)

Food	Serving Size	Purines (mg)
Anchovies, fresh	100 g (3.5 oz)	411
Sardines, canned	100 g (3.5 oz)	399
Herring, canned	100 g (3.5 oz)	378
Sardines, fresh	100 g (3.5 oz)	345
Kidney, pig	100 g (3.5 oz.)	334
Anchovy fish, canned	100 g (3.5 oz.)	321
Liver (pork)	100 g (3.5 oz.)	289
Salmon, fresh	100 g (3.5 oz)	260
Mackerel, canned	100 g (3.5 oz)	246
Liver, chicken	100 g (3.5 oz.)	243
Red fish (ocean perch)	100 g (3.5 oz.)	241
Chicken heart	100 g (3.5 oz)	223
Mackerel, fresh	100 g (3.5 oz)	194
Shrimp, brown	100 g (3.5 oz.)	147
Tuna, canned	100 g (3.5 oz.)	142
Clams, fresh	100 g (3.5 oz)	136
Squid, fresh	100 g (3.5 oz)	135

Chicken meat	100 g (3.5 oz.)	130
Lamb	100 g (3.5 oz)	128
Steak, broiled	100 g (3.5 oz.)	121
Haddock, broiled	100 g (3.5 oz.)	119
Pork	100 g (3.5 oz)	119
White fish	100 g (3.5 oz)	116
Lentils, cooked	$\frac{1}{2}$ cup (99 g)	74
Oats, dry	$\frac{1}{2}$ cup (78 g)	73
Great northern beans, cooked	$\frac{1}{2}$ cup (88.5 g)	71
Small white beans, cooked	$\frac{1}{2}$ cup (89.5 g)	68
Tofu	100 g (3.5 oz)	68
Split peas, cooked	$\frac{1}{2}$ cup (196 g)	64
Soybeans, cooked	$\frac{1}{2}$ cup (172 g)	64
Pinto beans, cooked	$\frac{1}{2}$ cup (85.5 g)	57
Red beans, cooked	$\frac{1}{2}$ cup (85.5 g)	55
Select fruits and vegetables*	100 g (3.5 oz)	51-81
Large lima beans, cooked	$\frac{1}{2}$ cup (94 g)	49
Sunflower seeds	28 g (1 oz)	40
Flaxseeds	28 g (1 oz)	28
Peanuts	28 g (1 oz)	22
Garbanzo beans, cooked	$\frac{1}{2}$ cup (82 g)	19
Almonds	28 g (1 oz)	10
Yogurt (dairy)	4 oz (113 g)	9
Walnuts	28 g (1 oz)	7

Most other vegetables and fruits	100 g (3.5 oz)	10-49
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* Fruits and vegetables with moderate purine content:
broccoli, peas, artichokes, apricots, mushrooms, spinach,
bananas and green peppers.