



Gout – Eat A Low Purine Diet

If you have gout then you need to know that it is a disease caused by a congenital disorder of the metabolism of a chemical called uric acid. In gout uric acid crystals are deposited in the joints, on tendons and within the tissues surrounding certain joints. This deposition of uric acid crystals is caused by an elevated concentrations of uric acid in the blood stream. The depositing of the uric acid crystals provokes an inflammatory reaction of these tissues. Over time and with recurring episodes of gout the amount of crystals deposited can increase until it deforms the joint. In its early stages the only symptoms may be pain but over time there is also swelling, and enlargement of the joint as more and more crystals are laid down and the joint or tissues are destroyed. Sometimes even during the early stages an x-ray of the affected area can show damage to the joints which is characteristic of gout.

The Signs and Symptoms of Gout

The classic picture of gout is an individual with a sudden onset of excruciating, unexpected burning pain, with swelling, redness, warmth and stiffness in one or more joints. The individual may also have a low-grade fever, but not always. Pain usually occurs for two reasons, 1) the crystals inside the joint cause intense pain whenever the affected area is moved and 2) the inflammation of the tissues around the joint may also causes the skin to become swollen, tender and sore, even if only lightly touched. In some cases even a blanket or the lightest sheet draping over the affected area can cause extreme pain.

Gout usually attacks the big toe about 75% of the time during the first few attacks, however it can affect other joints such as the ankle, heel, instep, knee, wrist, elbow, fingers, and spine. In some cases the condition may appear in the joints of the small toes which have become immobile due to impact injury earlier in life. Any injury that causes reduced blood circulation can leads to gout.

Individuals with longstanding elevated uric acid in their blood stream (usually referred to as *hyperuricemia*) can have uric acid crystal deposits called tophi (singular - tophus) in other tissues for example in the whorl part of the ear. Elevated uric acid can also lead to the formation of kidney stone in some people.

The goal for treatment of gout is to reduce the level of uric acid in the blood stream. There are two ways to do this. 1) take medications that lowers uric acid in the blood stream and 2) reduce the intake of *purines*, the amino acids that are broken down into uric acid. We will not discuss the medical treatment of gout only the dietary changes needed to prevent high uric acid levels.

The Diet That Can Prevent Gout

A low purine diet eliminates or limits foods which are high in purine in order to reduce blood levels of uric acid. A purine restricted diet can be used either on its own or to supplement medication therapy.

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Since obesity seems to be a contributing factor in some cases of gout, effective weight reduction should also be a part of the overall treatment for this condition. The reduction in weight should be gradual, as fasting or drastic dieting may increase blood uric acid.

Foods which are high in purine and thus should be omitted from your diet are anchovies, sardines, organ *meats*, and meat extracts. Foods moderately high in purine should be restricted, these include: meats, poultry, fish, seafood, dried legumes, spinach, asparagus, cauliflower, mushrooms, oatmeal, wheat germ and bran.

Food Allowed and To Be Avoided		
Food Group	Foods Allowed	Foods Avoided
Beverages	Coffee, decaf coffee, tea, carbonated beverages, all milk, cocoa	Alcoholic beverages
Bread	Refined, enriched bread	Whole grain breads, wheat-germ , Yeast (baker's and brewer's), Yeast extracts (e.g., Marmite, Vegemite)
Cereal	Any refined cereal	Oatmeal, wheat germ, bran cereals, whole grain cereals
Desserts	Plain cakes and cookies, custards, puddings, ice cream, gelatin, ices, sherbets, pie and fruit whip	Desserts made with mince meat
Fats	All fats and oils, salad dressings, butter, margarine or cream	Meat drippings and gravies
Fruit	All	Large amounts of fructose
Potatoes & Substitutes	Any as tolerated	None
Meats	Limit to 3 oz daily; lean beef, lamb, fish, eggs, poultry, cheeses, ½ cup legumes, if substituted for 1 oz meat	Brains (sweetbreads), liver, kidney, sweet breads, heart and other organ meats, tripe, mincemeat, anchovies, sardines, goose, duck, partridge, heart, shrimp, herring, mackerel mussels, caviar, roe, scallops, smelts and game meats.
Soups	Milk soups made with allowed foods	Bouillon, broths, consomme, meat stock soups
Sweets	All	None
Vegetables	Any except those listed on avoid list	Asparagus, dried beans, peas, lentils, spinach, mushrooms
Miscellaneous	All but those listed on avoid list	Gravy, meat extracts

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Daily protein intake should *not exceed* one gram/2.2 pounds of ideal body weight and generally no more than 80 gm or 3 ounces (if you have a severe problem and 6 ounces at very most if you only have an occasional problems with gout) of protein in any one day. Therefore a 150 lb. person should eat no more than 1/4 pounds of protein per day.

Eat in Moderation

- Vegetables: asparagus, cauliflower, spinach, mushrooms and green peas
- Lentils, dried peas and beans
- Beef, pork, poultry, fish and seafood
- Oatmeal, wheat bran and wheat germ

Make Sure that You stay Well Hydrated

- Drink 2 to 3 liters of fluid daily. Adequate fluid intake helps dilute urinary uric acid.
- Avoid alcohol
- Do you be overly active such as playing sports, without plenty of drinking

Foods That Are Allowed

- Beverages (carbonated)
- Butter
- Cereals and cereal products
- Cheese (all kinds)
- Cocoa (however, caffeine is prohibited in Lesch-Nyhan Syndrome)
- Corn
- Cornbread
- Eggs (limit to 3 to 4 per week maximum)
- Fruit juices
- Fruits
- Gelatin
- Ice cream
- Milk
- Noodles (rice, refined flour)
- Nuts
- Refined wheat flour
- Tapioca
- Vegetables (except those noted above to be avoided)
- White bread and crackers (but not whole wheat, which is moderately high in purines)
- White rice

Sample Menu (One Day)		
Breakfast	Lunch	Dinner
Orange juice Cornflakes Egg, soft cooked or scrambled Toast, margarine Milk Coffee, cream Sugar, jelly	Macaroni and cheese Green Beans Coleslaw Apple pie Dinner roll, butter A fruit and type Milk Coffee, or tea Sugar, cream	2-3 oz Roast Beef Baked potato, butter Cauliflower Sliced tomato on lettuce, mayonnaise Baked custard Bread, margarine Angel food cake Coffee, tea with or without sugar or cream

Ordering Food When Dining Out

The problem as you can see is that if you were a heavy meat eater you are going to have to severely change your eating habits. Going to a steak house would not be a very smart idea as it would be much too tempting to decide that for tonight you are going to go off of your diet. The reason this might likely be a problem is that tomorrow you may have an attack of gout if you do this.

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Pick where you are going to eat wisely. Go to a restaurant that has a very broad based menu where you can find more of the foods you are able to eat and that will not trigger an attack of gout.

As we say to all persons who must eat a special diet be sure that you ask as many questions as you need to ask to determine what is in the foods you might be considering. Be sure that they contain no ingredients that would be a problem for you. Pick foods that will be nourishing and satisfying from with those that you can eat. Do not over eat, BUT do not under eat for if you do you will likely return home hungry and be tempted to eat foods that you should not be eating.

If you are taking medication be sure you take it as ordered by your doctor.