



***HRITIKA PANDEY
BHN 2 ND YEAR
SCHOOL OF HEALTH SCIENCE
C.S.J.M.UNIVERSITY .***

TOPIC – FEVER ; TROPICAL SPRUE AND GOUT

SUBMITTED TO – DR. AAMENA ZAIDI MAM

FEVER

- Fever, also known as pyrexia, high temperature or high fever is the body's normal reaction to a variety of conditions, infections and the most common medical symptom. Fever is the febrile response and defined as having a temperature above the normal range 98.6F (37C).
- It is mostly a side effect of ailments like flu, influenza, cold and it is an indication that the immune system is working hard to combat an infection or illness. Generally, fever set off when the immune system produces more white blood cells to battle an infection, increased white blood cells stimulate the brain to heat the body up and result in fever. The body reacts to this and tries to cool itself off by constricting the blood flow to the skin and contracting muscles, which cause chills, body and muscle aches.



**Infections
(most common)**



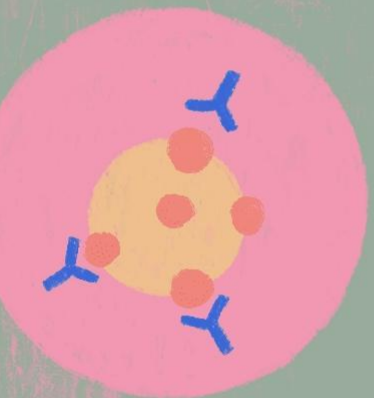
Cancer



Heat exhaustion



**Side effects of
certain medications**



**Autoimmune
disorders and diseases**



**Overdressing
(common with infants)**



TYPES OF FEVER

- A low-grade fever happens when the body temperature rises to 100.4F (38C)
- Moderate fever if the temperature rises above 102.2-104F or 39.1-40C
- High-grade fever indicates if the body temperature is 104F (39.4C) or above.
- Hyperpyrexia, if the temperature is above 106F or 41.1C
- Generally, most fevers settle on their own within 1 - 3 days. However, persistent or continuous fever may start or reoccur for up to 14 days.
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- Acute – if the duration of fever is less than 7 days
- Sub-acute- if the fever lasts up to 14 days
- Chronic or persistent- if fever continues for over 14 days

SYMPTOMS

- Sweating
- Chills
- Headaches
- Muscle ache
- Poor appetite
- Fatigue
- Weakness
- Seek immediate medical care if you have a high-grade fever with a temperature of 103F or above continuously for more than 3 days and symptoms include:
 - Pondering headache
 - Dizziness
 - Skin rashes
 - Sensitivity to light
 - Difficult breathing
 - Vomiting
 - Muscle cramps and abdominal pain
 - Dehydration
 - Seizures

CAUSES

- Some of the causes of fever in adults include viral infection (flu or a cold), bacterial infection, fungal infection, food poisoning, heat exhaustion, sunburn, inflammation and tumor. Comorbid health conditions like asthma, diabetes, liver disease, kidney disease, rheumatoid arthritis and intake of certain medications for a longer duration may lead to serious febrile illness.

TREATMENT

- A fever is usually not dangerous on its own, as most fevers go away within hours to days as the body beats an infection. Follow these simple and effective measures to feel better and recover.
- Drink enough to stay hydrated, like water, juice, clear soup
- Eat a bland and soft diet that is light on the tummy
- Take enough rest
- Take a warm sponge bath
- Some of the over-the-counter medications may help you relieve fever and other symptoms associated with it like headache, body ache and muscle pain. If the fever is very severe, then the mode of treatment depends on knowing the causative factor behind this and the doctors may prescribe medications like antibiotics, antivirals and antifungals to treat any serious infections.

DIETARY MANAGEMENT OF FEVER

- It is essential to manage the fever with good nutrition to ease the symptoms and promote faster convalescence. The body needs more calories to function properly in fever than it requires in normal time. A well-balanced diet regimen in fever is important to build a robust immune system. As more calories are burnt by the body during a fever it is important to give energy-dense foods.
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- A high-calorie, protein, low-fat and fluid diet is recommended during fever. In the initial two-three days of fever, the diet should comprise more liquid-based like soups, glucose water, juice and milk (if there is no diarrhoea). Small frequent meals are given at about every two hours and gradually increased to every four hours.

- **Soft bland, easily digestible and absorbable foods are included- porridge, cereal, milk, soft fruits like banana, papaya, apple, orange, melons and musambi, soft or mashed dal rice and well-boiled vegetables are also given to meet the demands of nutrients. During fever, there is an increased need for essential nutrients like vitamins A, C, B and minerals calcium, iron and sodium.**
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- **Foods such as fatty, spicy and high fibre ones which are hard to digest should be restricted.**

FOODS TO BE ADDED

Fruit juices

Milk

Tender coconut water

Barley water

Rice Porridge

Custard

Boiled Egg

Vegetable juices

Soups

Cereal porridges

Lean meat

Poached or steamed fish

Boiled Vegetables (potato, sweet potato, carrots, pumpkins)

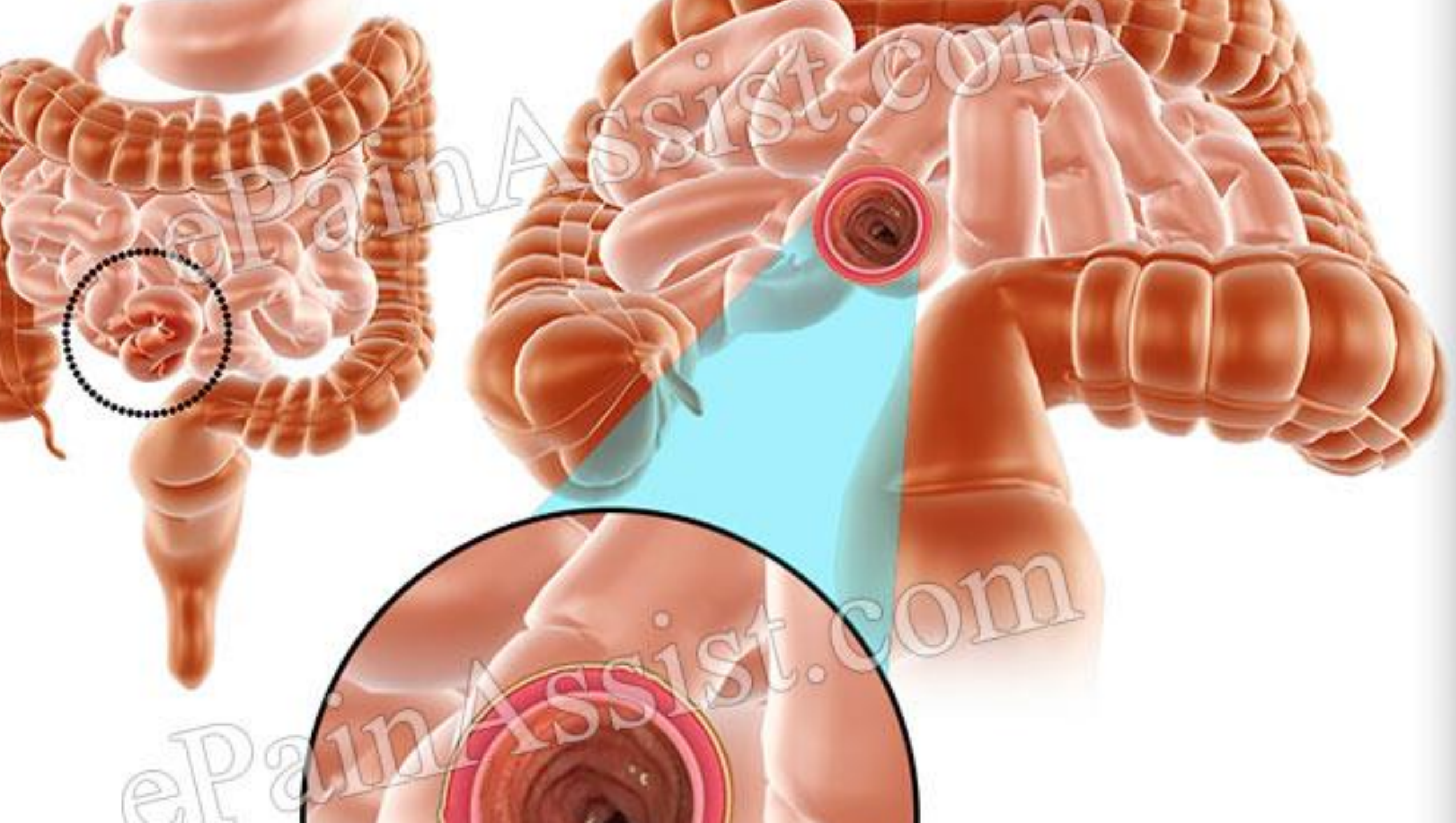
Citrus fruits

FOODS TO BE AVOIDED

- Ghee
- High fibrous foods
- Fried foods
- Sugary pastries
- Canned foods
- Spicy foods
- Strongly flavoured beverages.
- Rich soups

TROPICAL SPRUE

- Tropical sprue is caused by inflammation of your intestines. This swelling makes it more difficult for you to absorb nutrients from food. This is also called malabsorption. Tropical sprue makes it particularly difficult to absorb folic acid and vitamin B12.
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- If you suffer from malabsorption, you're not getting enough vitamins and nutrients in your diet. This can cause a number of different symptoms. Your body needs vitamins and nutrients to function properly.



SYMPTOMS OF TROPICAL SPRUE

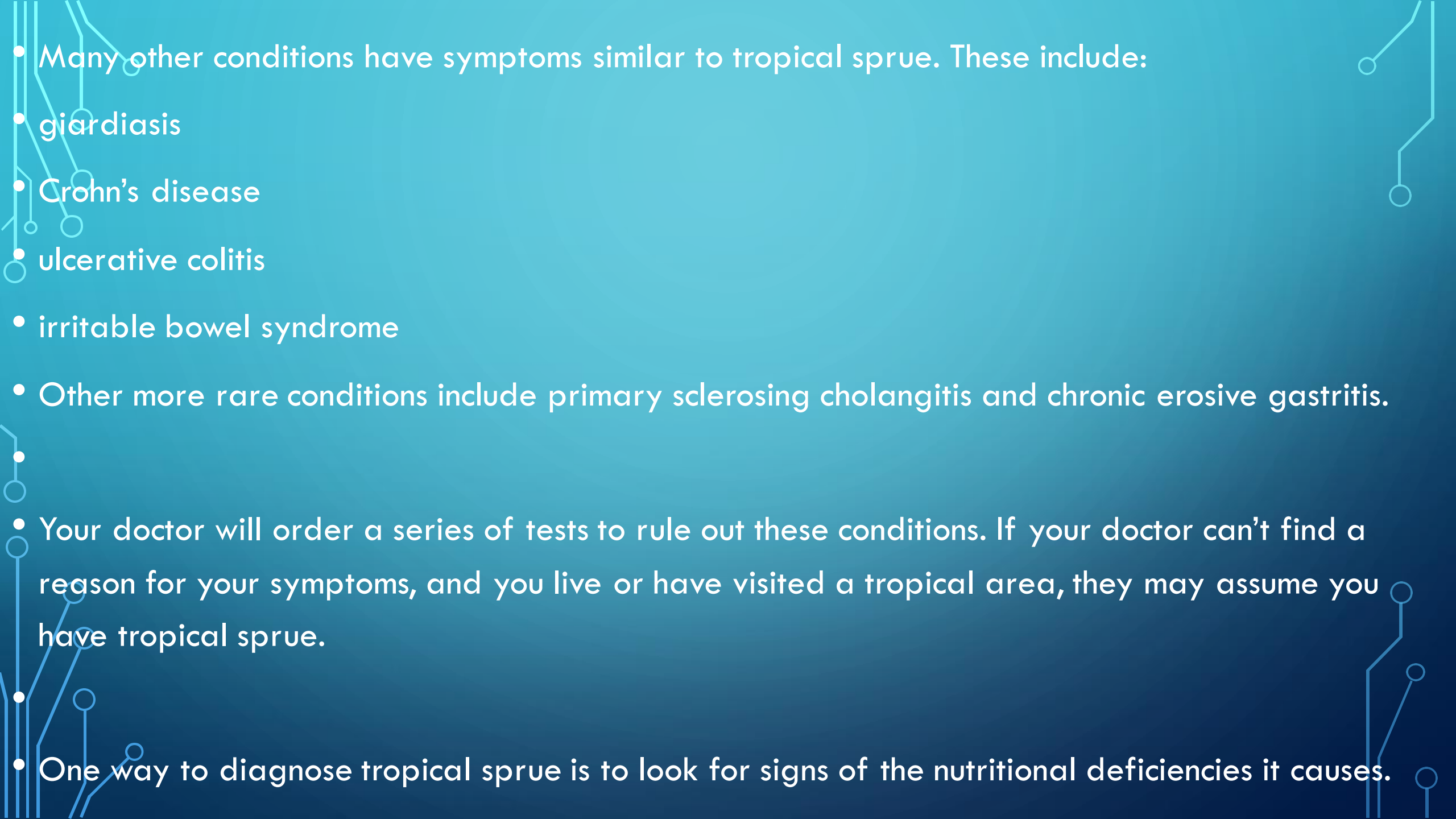
- Symptoms of tropical sprue may include any of the following
- abdominal cramps
- diarrhea, which may get worse on a high-fat diet
- excessive gas
- indigestion
- irritability
- muscle cramps
- numbness
- paleness
- weight loss

CAUSES OF TROPICAL SPRUE

- Tropical sprue is rare unless you live in or visit tropical areas. Specifically, it generally occurs in the tropical areas of
 - the Caribbean
 - India
 - South Africa
 - Southeast Asia
- Researchers believe the condition is caused by an overgrowth of bacteria in your intestines. The specific bacteria that cause tropical sprue

TREATMENT AND DIET IN TROPICAL SPRUE

A person suspected of having tropical sprue is treated with the antibiotic tetracycline. This drug is given for up to 6 months. Nutritional supplements, especially folate and injections of vitamin B12, are given for several weeks. Other nutritional replacements are given as needed.

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- Many other conditions have symptoms similar to tropical sprue. These include:
 - giardiasis
 - Crohn's disease
 - ulcerative colitis
 - irritable bowel syndrome
 - Other more rare conditions include primary sclerosing cholangitis and chronic erosive gastritis.
 - Your doctor will order a series of tests to rule out these conditions. If your doctor can't find a reason for your symptoms, and you live or have visited a tropical area, they may assume you have tropical sprue.
 - One way to diagnose tropical sprue is to look for signs of the nutritional deficiencies it causes.

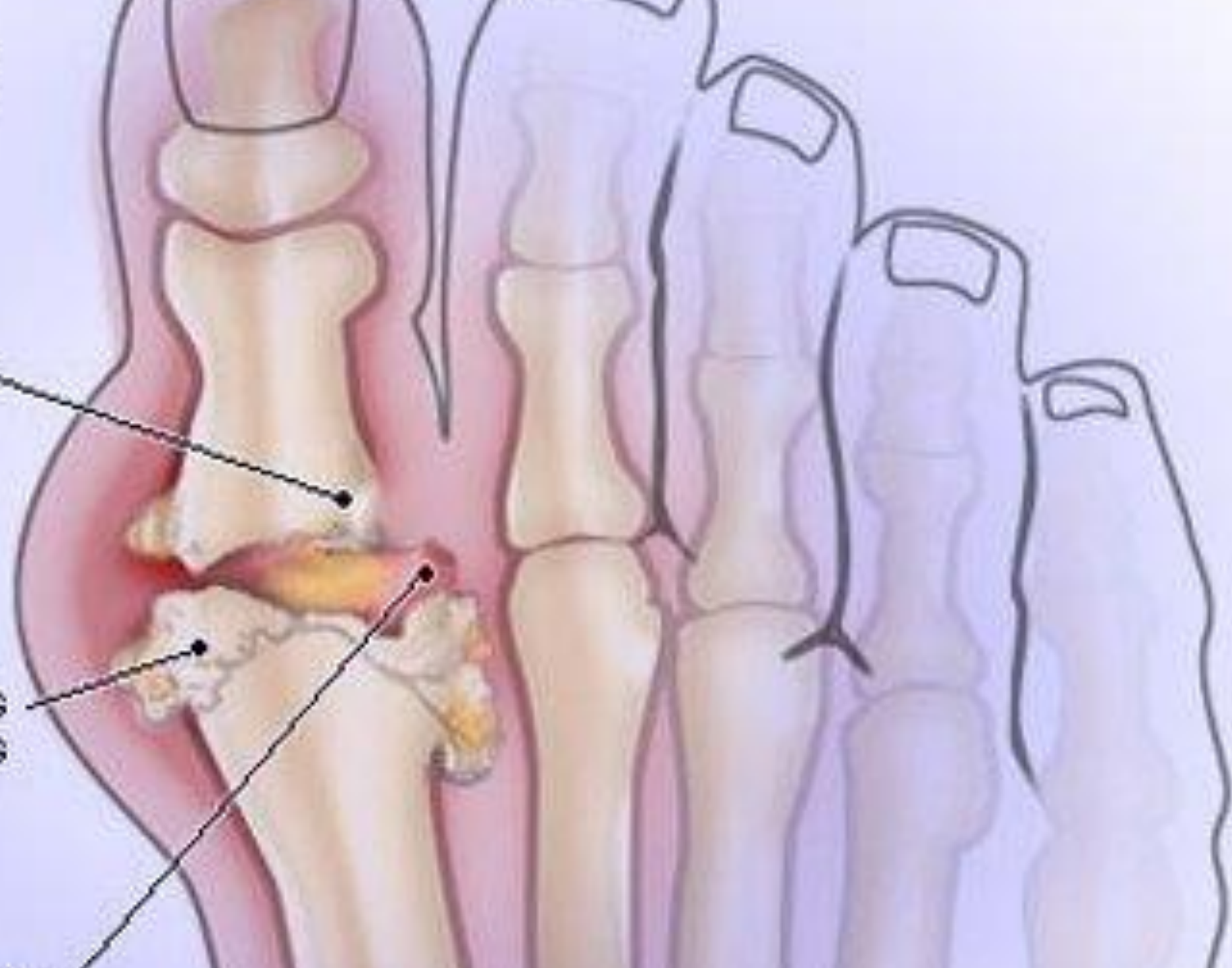
GOUT

- Gout is a painful form of arthritis. When your body has extra uric acid, sharp crystals may form in the big toe or other joints, causing episodes of swelling and pain called gout attacks. Gout is treatable with medications and changes in diet and lifestyle.
- Doctors place gout under the umbrella term “arthritis” — a broad range of joint diseases and joint pain. Some forms of arthritis inflame joints, while others don’t. Gout is a common form of inflammatory arthritis. It’s due to a crystal called uric acid.
- Gout causes pain and swelling in one or more joints. It typically affects the big toe. But it’s also found in other joints, including the knee, ankle, foot, hand, wrist and elbow.

Gout

Bone erosions

Urate crystals
in a tophus



WHO IS AFFECTED BY GOUT?

- Gout can affect anyone. It usually occurs earlier in men than women. It generally occurs after menopause in women. Men can be three times more likely than women to get it because they have higher levels of uric acid most of their lives. Women reach these uric acid levels after menopause.
- People are more likely to get gout if they have:
 - Obesity, or a lot of extra weight.
 - Congestive heart failure.
 - Diabetes.
 - Family history of gout.
 - Hypertension (high blood pressure).
 - Kidney disease.
- You are also more likely to develop gout if you:
 - Consume a diet high in animal proteins
 - Consume a significant amount of alcohol
 - Are on water pills (diuretics).

WHAT CAUSES GOUT?

- The human body makes uric acid during the breakdown of chemicals called purines found in certain food and drinks. This normal byproduct goes through the kidneys and exits the body when you pee.
- Sometimes the body produces too much uric acid. Or the kidneys can't do a good job handling it. When the body has high levels of uric acid, or hyperuricemia, uric acid crystals can concentrate in the joints. The sharp, needle-like crystals cause gout. However, many people with higher uric acid levels never get gout.

SYMPTOMS OF GOUT

- An episode of gout is called a gout attack. Gout attacks are very painful and can happen quite suddenly, often overnight. During a gout attack, symptoms in the affected joint(s) may include:
 - Intense pain.
 - Redness.
 - Stiffness.
 - Swelling.
 - Tenderness, even to light touch, such as from a bedsheet.
 - Warmth, or a feeling like the joint is “on fire.”
- How long does a gout attack last?
- A gout attack can last a week or two. Between gout attacks, you may have no symptoms at all.

HOW IS GOUT TREATED?

- Your healthcare provider may prescribe certain medications to treat gout.
- Some drugs help control symptoms:
 - NSAIDs can reduce pain and swelling. Some people with kidney disease, stomach ulcers and other health problems are unable to take NSAIDs.
 - Colchicine can reduce inflammation and pain if you take it within 24 hours of a gout attack. It's given by mouth.
 - Corticosteroids can relieve pain and swelling. You take steroids by mouth or with an injection.
- Drugs that help lower levels of uric acid in your body to prevent or reduce future episodes of gout attacks:
 - Allopurinol, taken as a pill.
 - Febuxostat, taken as a pill.
 - Pegloticase, given as an intravenous (in the vein) infusion.
 - Probenecid, taken as a pill.

FOODS TO AVOID IF YOU HAVE GOUT

- Skip foods and drinks that are high in purines to help lower your chances of an attack.
- You should stay away from these types of food:
 - Beer and grain liquors (like vodka and whiskey)
 - Red meat, lamb, and pork
 - Organ meats, such as liver, kidneys, and glandular meats like the thymus or pancreas (you may hear them called sweetbreads)
 - Seafood, especially shellfish like shrimp, lobster, mussels, anchovies, and sardines
 - High-fructose products like soda and some juices, cereal, ice cream, candy, and fast food

BEST FOODS FOR A GOUT DIET

- You'll want to go for low-purine options like:
- Low-fat and nondairy fat products, such as yogurt and skim milk
- Fresh fruits and vegetables
- Nuts, peanut butter, and grains
- Fat and oil
- Potatoes, rice, bread, and pasta
- Eggs (in moderation)
- Meats like fish, chicken, and red meat are fine in moderation (around 4 to 6 ounces per day).
- Vegetables: You may see veggies like spinach and asparagus on the high-purine list, but studies show they don't raise your risk of gout or gout attacks.



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- It's a good idea to drink lots of fluids – 8 to 16 cups a day. At least half of what you drink should be water. Vitamin C (think orange juice) also can help lower uric acid, but studies also show that the high fructose in OJ may boost uric acid levels, so drink it in moderation. Caffeinated coffee can cut uric acid, too, as long as you don't overdo it.

- Don'ts

- Stay away from sugary drinks like soda and fruit juice. You also may need to limit or avoid alcohol as well. Talk with your doctor to find out what's right for you.
 - While a healthy diet can help control how much uric acid is in your system, you may still need medicine to prevent future attacks. Talk with your doctor about all your treatment options.
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