

urinary tract infection

What to do? The short guide.

This common problem is also called a "UTI," "bladder infection," or "cystitis."
It occurs more often with female anatomy than with male anatomy.

Symptoms

- You need to pee a lot more often all of a sudden.
- Not as much pee comes out when you go.
- It hurts/burns.
- Can include bladder pain, above the pubic bone.
- Can progress to pink or bloody pee.

Danger signs

If you get a **fever or shaking chills, nausea and vomiting, and/or persistent pain in the back** up near the ribs, you will need medical help for a kidney infection. Contact your medical provider immediately!

Some people also need prompt medical attention for symptoms of even a simple UTI:

- **kids**;
- adults with **male** anatomy;
- **pregnant** women;
- people with **sickle cell** trait;
- people who have had a recent **catheter**;
- people who have an **underactive immune** system, including people with diabetes;
- and people with a **kidney abnormality**.

How it works

With female anatomy, **germs** get into the urethra ("you-REETH-ra"), especially during sex or sweaty exercise. The germs can then spread up the urethra into the bladder. From there, they can even spread up into the kidneys.

Sometimes **"holding"** urine for long periods of time can provoke a UTI. This sometimes happens when a person is shy about using an unfamiliar bathroom.

With older male anatomy, an enlarged **prostate** gland can crowd the bladder and make it harder to empty. This can cause incomplete emptying, allowing germs to grow in the urine. (The prostate itself can become inflamed or infected as well.) This does *not* usually happen to people under 50.

With younger male anatomy, a UTI is usually caused by a **sexually transmitted infection**, and home treatments won't help. You need to see a medical care provider instead.

Prevention

For female anatomy:

- Urinate when you first feel the urge (don't postpone because you're too busy),
- Always wipe with toilet paper front to back,
- Wear clean underwear, especially after sweaty exercise,
- Pee immediately after you have sex,
- And stay well hydrated (drink a lot of water).

Home diagnosis

Pharmacies sell home test kits for about \$10. These test for two substances in the urine:

- Leukocyte esterase (LE), an enzyme made by white blood cells - immune cells that are fighting off the infection. Sometimes this is just called "white blood cells (WBCs) on the label.
- Nitrites, a waste product produced by the most common urinary bacterium, E. coli.

Your medical caregiver might be willing to prescribe antibiotics over the phone, without an appointment, if you had this positive test at home already.

You can also buy (by mail order) urine test strips that check for additional substances, such as sugar (seen in diabetes), protein (seen in kidney damage), and blood (seen with a kidney stone). These fancier strips (which are cheaper per unit cost) also test for LE and nitrites. They also test for pH of the urine, which is helpful: a bacterial infection makes the urine less acidic.

If you have symptoms that plainly indicate a UTI, and you collect a urine sample and it is cloudy and bad smelling, then you probably don't need to test your urine - it depends on how your caregiver feels about it.

If there is any possibility that you might have picked up a sexually transmitted infection (for example, chlamydia causes urinary symptoms), you will need to be tested and treated for it!

Home treatment

You can try to treat the problem at home, if you don't have any of the danger signs above. Here are some methods people have tried:

- **Cranberry** family supplements.

The Ericaceae (heather family) includes cranberries, lingonberries, and bearberry (*uva-ursi*). These herbs contain compounds called anthocyanins that pass unchanged into the urine, where they make it more difficult for the bacteria to attach to the bladder and urethral wall. This is more effective in urine that is less acid than usual (like during a bacterial infection!).

Dosages vary, but 4 cups a day of plain **cranberry juice** is a good place to start. I recommend juice rather than pills or powders, because you can see exactly what you're getting. The problem is that many juices are loaded with sugar. One quart (4 cups) of unsweetened cranberry juice is 450 calories; the same amount of cranberry-apple juice "cocktail" is more than 600 calories. That's about a quarter of the calories in a whole day's normal diet. The less added sugar, the better!

In using **uva-ursi**, a whole plant tincture can be used. Most people take one dropperful (about 30 drops or 1/4 teaspoonful) four times a day, in a glass or tea or water.

Lingonberries are just now beginning to be commercially available at Scandinavian stores in the US, but they may be cultivated and grow wild in Northern regions. They are responsible for the flavor of "Swedish Fish," but candy won't treat a UTI, of course!

- **D-mannose.**

Mannose is a simple fruit sugar that we do not digest. It is also made naturally by our cells; the cells of the bladder wall naturally have a "sugar coating" of mannose. When you take a d-mannose powder supplement, it passes into the urine, where it "tricks" the bacteria into attaching to it, instead of attaching to the bladder wall. This keeps the bacteria in solution, and you get rid of them when you empty your bladder.

The dosage is one 500-mg capsule, or 1 tsp powder in juice or water, every 3-4 hours until symptoms go away, and for an additional 3 days afterward to prevent recurrence. For UTI prevention, 500 mg daily or 1/2 tsp twice a day, every day.

- Hydration and acidification.

Sometimes you can diminish a UTI's effects by simply diluting the bacteria in a lot of **water** - drinking up to a gallon of plain water a day. You can acidify the urine by taking higher doses of **vitamin C** - usually 500 mg, 4 times a day. (Higher doses can cause loose stools as well.)

- There's an over-the-counter urinary pain reliever you can use. It does *NOT* cure the infection, but it can reduce the pain, while you are curing the infection itself. This is called **phenazopyridine** ("fen-AZ-o-PEER-i-deen"). It used to be sold under the brand name Pyridium ("peer-ID-ee-um"). It turns body fluids orange, and can stain clothing and contact lenses. It is basically a topical anesthetic.

If simple treatments don't improve your symptoms in 48 hours, you'll need to contact your medical caregiver to get antibiotics as soon as possible. If you have any of the danger signs listed earlier, you may need more testing, a special antibiotic, or a longer course of treatment.

When you're all better, go back to prevention!

More reading...

About cranberry: <http://bit.ly/c1SWOe>

About lingonberries: <http://bit.ly/riXNt4>

Uva-ursi tincture (example): <http://bit.ly/Vx8qN7>

About d-mannose: <http://bit.ly/T1NLMv>

Guide to antibiotics: <http://bit.ly/gUkPyc>

Complicated/recurrent UTIs: <http://1.usa.gov/rel4VB>