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## **URINARY TRACT INFECTIONS - A REVIEW**

### **WHAT IS THE URINARY TRACT?**

The urinary tract makes and stores urine, one of your body's liquid waste products. The kidneys produce 1. to 2 quarts of urine every day by removing waste and water from the blood. The urine travels from the kidneys down two narrow tubes, the ureters. It is then stored in a balloon-like container called the bladder.

In an adult, the bladder can hold 10 to 20 ounces of urine (about half as much liquid as in one can of soda). When the bladder is about half full, you may begin to feel the need to empty it by urinating. Urine is carried out of the body through the urethra, a tube at the bottom of the bladder. The opening of the urethra is at the vagina in women.

Normal urine contains no bacteria (sometimes referred to as "germs"), but bacteria do cover your skin and are present in large numbers in the rectal area and in your bowel movements. Bacteria may, at times, get into the urinary tract (and the urine) and may travel up the urethra into the bladder. When this happens, the bacteria cause infection and inflammation of the bladder. In other words, they multiply, causing irritation, swelling, and pain. Bladder infection, also called cystitis, is the most common urinary tract infection.

If the bacteria travel upward from the bladder through the ureters and reach the kidneys, you may develop a kidney infection, also known as pyelonephritis. Kidney infections are much less common but often more serious than bladder infections.

### **WHAT ARE THE SIGNS OF A URINARY TRACT INFECTION?**

When you have a urinary tract infection, the lining of the bladder and urethra becomes irritated just as the inside of your nose or throat does when you have a cold. The irritation can cause pain in your abdomen and pelvic area and may make you feel the need to constantly empty your bladder.

Your need to urinate may seem urgent; but when you try to do so, you may produce only a few drops of urine. In addition, you may feel a burning sensation as the urine comes out. It may even be hard to control; in fact, some urine may leak onto your clothing. You may notice that the urine has an unpleasant odor or cloudy look. At times, bladder infections may also cause low back pain, fever, or chills.

Kidney infections produce fever and back pain much more commonly than do bladder infections. If a kidney infection is not treated promptly, the bacteria may spread to the bloodstream and cause a life-threatening infection.

In an infant or young child, the signs of a urinary tract infection may not be clear, especially if the child is too young to tell you just how he or she feels. Instead, the child may be irritable, not eat as much as usual, have a fever or loose bowel movements, or just not seem healthy. If the symptoms last more than a day, they may signal the need to see a doctor.

### **HOW DO YOU FIND OUT WHETHER YOU HAVE A URINARY TRACT INFECTION?**

Only by consulting a doctor can you find out for certain whether you or your child has a urinary tract infection. If you think that such an infection might be present, check with your doctor. If you see blood in the urine, you should see your doctor right away. Because bloody urine is not normally caused by an infection, it may mean that you have a different urinary tract problem.

Your doctor will try to find out whether you have a urinary tract infection by examining samples of your urine under a microscope. If an infection is present, the physician may also perform a urine culture, a process in which bacteria from infected urine are grown in a laboratory. The germs can then be identified

and tested to see which drugs will provide the most effective treatment. It often takes a day or two, however, to complete this testing.

### **HOW ARE THESE INFECTIONS TREATED**

Urinary tract infections are treated with antibiotics (infection-fighting drugs), Which are generally taken by mouth. Your doctor will choose a drug that treats the bacteria most likely to be causing your infection. Once the test results are in, however, the physician may switch you to another antibiotic, one that is more effective against the particular bacteria found in your urine.

The number of days you must take the medication and the number of doses you must take each day depend, in part, on the type of infection you have and how severe it is. You usually will have to take the medicine for at least 2 to 3 days and possibly as long as several weeks. The daily treatment schedule your doctor recommends depends on the specific drug prescribed: It may call for a single dose each day or up to four daily doses.

A few doses of the antibiotic may relieve you of the need to urinate and most often of the pain from a bladder infection. It may be several days, however, before the bladder infection and its symptoms vanish completely. In any case, it is important to take the medicines as prescribed by your doctor and not to stop them simple because the symptoms have gone away. Unless urinary tract infections are fully treated, they frequently return.

When you have a urinary tract infection, you should drink fluids whenever you are thirsty. It is not necessary to drink large amounts, but you should make certain that your body has the liquid it needs.

If the urinary tract infection is severe, it may involve the kidneys. In that case, antibiotic drugs may have to be injected. Hospital treatment with medication given intravenously (injected directly into the bloodstream) is sometimes necessary.

### **FACTS ABOUT URINARY TRACT INFECTIONS**

- \* Every year, 8 to 10 million visits to doctors occur because of urinary tract infections.
- \* The bacteria that cause urinary tract infections are treated with bacteria-fighting drugs called antibiotics.
- \* Women are usually more prone to urinary tract infections
- \* 1 to 2 percent of children develop urinary tract infections.
- \* Young children have the greatest risk for kidney damage due to urinary tract infections.
- \* Certain people who get one or more urinary tract infection may need further testing to make sure that they do not have other health problems.

### **WHY DO YOU GET A URINARY TRACT INFECTION**

Some people, mainly women, develop urinary tract infections because they are prone to such infections the way other people are prone to getting coughs or colds. Urinary tract infections are much less common in men and children than in adult women.

A number of factors may increase a person's risk of getting a urinary tract infection. Some of those factors include:

- \* having certain diseases (such as diabetes) or an abnormal urinary system
- \* recently having had a medical instrument inserted into the urethra
- \* sexual contact

A urinary tract infection in a man or child may be the sign of an abnormal urinary tract. For this reason, when men or children are found to have a urinary tract infection, they may be referred to a urologist (a specialist in diseases of the urinary system and the male reproductive system) for additional tests and x-rays.

### **WILL YOU NEED FURTHER TESTS AFTER THE INFECTION IS GONE?**

Once your infection has cleared, your doctor may recommend that you have additional tests. The tests are performed to assure that there are no abnormalities in the urinary tract that might result in kidney damage from urinary tract infections. Certain types of patients are most likely to need the tests; these types include:

- \* young children
- \* men
- \* people who have urinary tract infections that are frequent or that won't go away with treatment
- \* people who have had fever with the infection
- \* people who have had blood in the urine

### **WHAT ELSE MAY FEEL LIKE A URINARY TRACT INFECTION**

The symptoms of a urinary tract infection may resemble those of other urinary tract diseases. If no infection can be found or the infection won't go away, your doctor may refer you to a urologist to find out why. Other programs that the urologist may look for are described below:

- \* Urethritis may be either an inflammation or an infection of the urethra. When infection is present in the urethra, the condition often is due to bacteria passed by sexual contact.
- \* Interstitial cystitis is a bladder irritation found mainly in adult women; its cause is not known.
- \* Urinary stones sometimes develop in the bladder, irritating it and causing symptoms similar to those of a urinary tract infection. On occasion, the stones have bacteria inside that trigger hard-to-cure infections.
- \* Bladder tumors (cancerous or noncancerous growths), when present, may irritate the bladder. The symptoms often include a frequent need to urinate and possibly blood in the urine.
- \* Prostatitis is an inflammation or infection of the male gland, the prostate, which surrounds the urethra just below the bladder. In adult males, prostate disorders may cause symptoms that resemble those of urinary tract infection.

### **DO URINARY TRACT INFECTIONS HAVE LONG-TERM EFFECTS?**

Urinary tract infections in most adults can be successfully treated without causing long-term problems.

Young children have the greatest risk for kidney damage may lead to poor kidney function, high blood pressure, and other problems. For this reason, it is important that children with urinary tract infections receive prompt treatment and careful checkups.

Pregnant women with a history of repeated urinary tract infections should have their urine tested often. Urinary tract infections during pregnancy can cause serious kidney infections in the mother and possible risks for the baby.

### **WHAT STEPS CAN YOU TAKE TO HELP PREVENT THESE INFECTIONS?**

The following are steps that you can take to reduce your risk of getting urinary tract infection:

\* Don't postpone -- urinate when you feel the urge.

\* Don't rush -- take the time when you urinate to empty your bladder completely.

\* Respond to your body's signals of thirst by drinking enough water or other liquids every day.

\* Urinate after having sex. (Of course, using condoms during intercourse -- practicing safe sex -- is wise for many reasons.)

Consult your doctor at the first sign of a problem. Urinary tract infections are very common, and they are easiest to treat if caught before they become severe or spread beyond the bladder.

This information is provided largely by the BLADDER HEALTH COUNCIL c/o American Foundation for Urologic Disease. For more information call 1-800-242-2383.