We refer to any infection involving the urinary tract as a UTI,” says Dr. Christiana (Tina) Zhang, a primary care physician and assistant professor of medicine at Johns Hopkins University School of Medicine. “That’s because ‘UTI’ has become a catch-all term for infections involving the whole urinary system. A recent study says, ‘More than 50% of women will develop a UTI at least once in their lifetime.’”

Our normal urinary systems, both male and female, include two kidneys, two ureters, a bladder and a urethra. Its purpose is to clean our blood; to do that, it runs about 150 quarts of blood each day through those kidneys. It is rather incredible that we don’t have more problems. But when we do, it makes life very uncomfortable.

“All the different parts of the urinary tract can become infected. The most common infections involve the lower urinary tract, including the bladder and urethra,” explains Zhang. “Infections like cystitis – an infection of the bladder – can become more complicated and result in an infection of the kidneys, called pyelonephritis.”

“Pyelonephritis is a type of urinary tract infection where one or both kidneys become infected. They can be infected by bacteria or a virus. It can cause people to feel very sick and it requires treatment,” says the American Urological Association (www.urologyhealth.org).

Symptoms
The most common symptoms for a UTI are a burning sensation when you urinate, more urgency to urinate and more frequent urination.

Dysuria refers to the painful or uncomfortable sensation experienced when you urinate. Should this happen to you, see your doctor, either primary or gynecologist, as soon as possible. Even though this is probably an uncomplicated UTI, you are better off taking care of it immediately as it can affect the quality of your life and should be managed.

If your symptoms include fever and chills, with, possibly, flank pain around your kidneys (they’re actually toward your back), it could indicate a more complicated infection, so it’s important to address it right away.

Testing
“There are two tests that we would recommend to determine if you have a UTI: a urinalysis and a urine culture,” Zhang explains.

“A urinalysis can test for a lot of things, such as pH, protein, glucose and blood in your urine. We specifically look at three items in the urinalysis that may indicate a UTI is present:

- **Nitrites:** the presence of nitrites in the urine indicates that there may be an infection
- **Leukocyte esterase:** the presence of leukocyte esterase indicates that there are white blood cells in your urine, which may be of concern for infection or inflammation.
- **White blood cells:** these will be elevated if there is inflammation or an infection in the urine”

A urine culture, which can take a day or two, will identify the specific type of bacteria that’s causing the infection and identify any antibiotics to which it is susceptible or resistant. That way, the treating physician ensures the antibiotic will be effective. The results usually take a bit longer to come back compared to the urinalysis.

Once the infection is confirmed, your health care provider will prescribe an antibiotic to treat it. One warning: always take the complete course of any antibiotic you are prescribed. If you don’t take all the pills, there is a chance some of the infection will remain in your body. That could cause a relapse. You don’t want that to
happen. And now you’re back to implementing ways to prevent another UTI.

Prevention
Given the discomfort UTIs can cause, what can you do to prevent them?
“One of the best ways to prevent UTIs is to stay hydrated,” Zhang says. “The more water you drink, the more you urinate, which flushes out bacteria from the urinary tract. Another tip is that when you wipe, start at the front and wipe towards the back. This prevents the spread of bacteria. And when you urinate, stay on the toilet a little bit longer to ensure you’ve emptied your bladder completely. If you’re sexually active, urinating after intercourse can also eliminate bacteria that could cause problems.

“As for hygiene, try to avoid douching or using harsh products like anti-bacterial wipes or spermicides. These items can eliminate the good bacteria that is part of the vaginal microbiome and protect you from developing UTIs. The best way to clean is to use a gentle unscented cleanser and water. And only wash the exterior.

“If you are post-menopausal, there is an increased risk of developing UTIs due to decreased estrogen and thinning of the vaginal tissue. Post-menopausal patients with recurrent UTIs could, therefore, benefit from vaginal estrogen cream if they don’t have any contraindications.

In general, though, change your undergarments daily and be careful about your hygiene. There is mixed data regarding drinking cranberry juice or taking cranberry supplements to prevent UTIs, but anecdotally, it can be helpful, so go for it.”

Dehydration
There are some people who just don’t like to drink water or any other liquid that will keep them hydrated. My mother was one such person. Time after time, she would end up in the emergency department where they would give her IV (intravenous) fluids and antibiotics. One time, the nurse showed her the bag of fluids, about a liter, and said, “You need two of these each day just to perform the normal functions of living.” She tried.

And recently, a friend was hospitalized for dehydration and was there a full week. He had no idea he wasn’t getting enough liquids; then he fell. That is what sent my friend to the hospital.

Zhang talked about the dangers when you are dehydrated. “Dehydration can lead to low blood pressure, which could cause dizziness and lightheadedness. This could increase your risk for falls, which can be very dangerous. Dehydration can also affect your kidneys so they stop functioning as they should. This can cause acute kidney injury.”

Other things can cause dehydration: diarrhea, vomiting, fever and sweating too much. And older adults are more at risk because they lose their sense of thirst, or due to some medications they take for chronic illnesses.

Just know you’re at risk to become dehydrated. Once it is something you understand, it’s one less concern to worry about.

Preventing Dehydration
What liquids are good to ensure you’re properly hydrated? The Taste of Home (www.tasteofhome.com/article/best-and-worst-hydrating-drinks-ranked) has a list of what works and what doesn’t, and why they are effective…or not.

What Works
First and always, the best is water. Given all the fancy water bottles available, pick your favorite, keep it filled and sip it constantly. There are tons of additives available; my personal favorite is lemon-flavored Chrystal Light. There are also lots of flavorings like Stur and Mio.

Next is milk. “In addition to calcium and vitamin D, milk contains protein to keep you fueled on even the hottest of days, another thing water can’t do.”

Water infused with fruit is next up because it adds flavor without sugar. Try adding lime and basil, or cucumber with mint.

Other good choices are actual fruit juices, watermelon (so much of it is water) and sports drinks. For this last item, watch All about UTIs, continued on page 20.