Printed July 3, 2015 from http://www.cancer.net/navigating-cancer-care/side-effects/dehydration

Dehydration [1]

This section has been reviewed and approved by the Cancer.Net Editorial Board [2], 06/2014

Dehydration occurs when a person does not take in enough fluid or loses too much fluid. Every cell and organ depends on water, and without it the human body cannot function properly. The water in your body performs the following essential functions:

- Removes waste and toxins
- Transports nutrients and oxygen
- Controls heart rate and blood pressure
- Regulates body temperature
- Lubricates joints
- Protects organs and tissue, including the eyes, ears, and heart
- Creates saliva

Although it is possible to go for a long time without food, people cannot live without water for more than a few days. People receiving cancer treatment may be at a higher risk for dehydration due to treatment side effects, such as diarrhea and vomiting.

Signs and symptoms

The longer you go without taking in enough fluid, the more dehydrated you will become. Although thirst is one way your body alerts you to drink more, other symptoms of dehydration include:

- A dry or sticky mouth or a swollen tongue [3]
- Fatigue [4] or weakness
- Irritability
- Dizziness or lightheadedness
- Nausea [5]
- Headaches [6]
- Constipation [7]
- Dry skin
- Weight loss [8]
- Dark yellow urine or a decrease in urination

Severe dehydration, which can be life-threatening and needs immediate medical treatment, can cause the following symptoms:

- Extreme thirst
- Fever
- Rapid heartbeat
- Lack of urination for more than eight hours
- Sunken eyes
- Inability to sweat
- Inability to produce tears
- Low blood pressure
- Disorientation or confusion

Talk with your health care team about any symptoms you may experience, including any new symptoms or a change in symptoms.

Causes

You lose water every day through natural body functions, such as breathing, sweating, and going to the bathroom. Most people easily replace that fluid through drinking and eating. However, certain conditions affect the body?s ability to stay hydrated, requiring a conscious effort to take in more fluids. In fact, waiting to drink until you are thirsty is often not enough because you may be dehydrated and not feel thirsty.

Causes of dehydration include:

Diarrhea, nausea, and vomiting. Cancer treatments [9], such as chemotherapy, can cause these side effects, which increase dehydration risk.

Fever. A high fever can result in dehydration. People receiving cancer treatment may be at risk for developing infections [10] that can cause fever.

Age. Infants, children, and older adults are at greater risk for dehydration. Although young children do not weigh much, they pass water and electrolytes, which are minerals that help regulate the body, out of the body frequently. As a person gets older, the body slowly loses the ability to conserve water. Older adults are also at risk because they are less likely to sense that they are thirsty and may not eat or drink enough, especially if they live alone. Illnesses, disabilities, and some medications may also contribute to dehydration.

Chronic illness. Many diseases, such as diabetes, cystic fibrosis (a disease in which thick mucus affects the lungs and digestive system), and kidney disease, increase dehydration risk and/or the need for fluids. For example, people with uncontrolled diabetes urinate frequently. Also, some medications can cause a person to urinate or sweat more than normal.

Environment. Living, working, and exercising in a hot or humid environment increase the need for fluids. People living at high altitudes, from 8,000 feet to 12,000 feet above sea level, also need more fluids because their bodies lose water as they work to take in more oxygen.

Exercise. Everyone loses water through sweat, and people who engage in physical activity generally produce a significant amount of sweat. Even if you do not see sweat, you are likely sweating. The more you exercise, the more fluid you need to replace.

Other factors. Women and overweight or obese individuals are at greater risk for dehydration.

Diagnosis

Your doctor can use several different methods to diagnose dehydration, including:

- Taking your vital signs, which include your temperature, blood pressure, and pulse.
- Pressing on your fingertips. Fingertips that do not return to pink after pressing can indicate dehydration.
- Gently pinching the skin on the back of your hand, arm, or other area. Skin that is slow to snap back can indicate dehydration.

Your doctor may also recommend laboratory tests, including:

- Urine tests to determine the level of dehydration or to identify a health issue that may be causing dehydration
- Blood tests to examine factors such as your electrolytes and kidney function

Treatment

Relieving side effects, also called symptom management, palliative care [11], or supportive care, is an important part of cancer care and treatment. Treatment for dehydration depends on its severity. For mild dehydration:

- Suck on ice chips or popsicles if you have trouble drinking or eating.
- Apply moisturizer to cracked lips and medication to mouth sores so that drinking and eating is less painful.
- If you are able to drink, take in small amounts of fluid frequently instead of a large amount at one time. Drinking too much at once may cause vomiting.
- Keep a water bottle with you at all times, and sip from it throughout the day.
- Drink a large glass of water before bed and when you wake up each morning.
- If you have diarrhea, choose beverages that have sodium and potassium to help replace these lost minerals.
- If you have fatigue, keep ice and drinks within reach so you do not have to get up more often than necessary.

If you are not vomiting or experiencing diarrhea and are moderately dehydrated, your doctor may recommend your drink an oral rehydration solution. Severe dehydration requires fluids to be given intravenously (through a vein).

Prevention

The following tips can help you keep your body's fluid balance in check.

Drink lots of fluids. The amount of fluid needed each day to stay hydrated depends on your health and lifestyle. Ask your doctor how much water you should drink. If you dislike plain water, try drinking flavored water or adding a slice of lemon. Other fluids, such as milk, juice, and tea, also count.

Eat foods with high water content. While drinking water is the best hydration source, many foods contain water and can help replenish lost fluids. Choose foods like lettuce (95% water), watermelon (92% water), and broccoli (91% water). Soups, popsicles, and yogurt also have high water content.

Manage side effects. If you are having a cancer treatment that is causing nausea, vomiting, or diarrhea, talk with your doctor about ways to prevent or minimize these side effects.

Don't wait to drink. Make a conscious effort to drink enough on a regular basis and more often when you begin feeling ill, before you exercise, or before you go outside in hot weather. Ensuring that you are well hydrated before you lose water can help reduce your risk for dehydration.

Avoid foods and drinks that may contribute to dehydration. Beverages with sugar and/or caffeine, such as fruit juice, soda, and coffee, are not as effective at hydrating your body as low-sugar or low/non-caffeine beverages.

More Information

Cancer.Net Podcast: The Importance of Hydration [12]

Side Effects of Chemotherapy [13]

When to Call the Doctor During Cancer Treatment [14]

Diet and Nutrition [15]

Additional Resource

MedlinePlus: Dehydration [16]

Links:
[1] http://www.cancer.net/navigating-cancer-care/side-effects/dehydration
[2] http://www.cancer.net/about-us
[3] http://www.cancer.net/node/25047
[4] http://www.cancer.net/node/25048
[5] http://www.cancer.net/node/25052
[6] http://www.cancer.net/node/25253
[7] http://www.cancer.net/node/25246
[8] http://www.cancer.net/node/25263
[9] http://www.cancer.net/node/25071

[10] http://www.cancer.net/node/25256
[11] http://www.cancer.net/node/25282
[12] http://www.cancer.net/sites/cancer.net/files/Importance_of_Hydration.mp3
[13] http://www.cancer.net/node/24676
[14] http://www.cancer.net/node/26366
[15] http://www.cancer.net/node/24965
[16] http://www.nlm.nih.gov/medlineplus/ency/article/000982.htm