

Too Much Water

Have you been to a movie and just before it ends, you have to leave to go to the bathroom? I always miss the best part! If we knew what was going on inside our bodies that make us have to use the bathroom so often, could we control when we have to go and maybe not miss any of the movie?

The body system that removes liquid waste from our body goes by two names. Some call this system the excretory system since excrete means to separate and remove waste. Some call this system the urinary system since the purpose of the system is to remove urine. No matter which name it is called, this waste removal system is a necessity for a healthy body.

The excretory/urinary system has two main organs, the kidneys and bladder. Three tubes are also part of the system, two ureters that connect the kidneys and bladder, and the urethra that leads out of the body.

Each body has two kidneys. They are located on each side of the body, just under the ribcage. Locate your kidneys by placing your arms straight down by your sides. Your kidneys are just under your elbows. Kidneys are the filter system of the blood. Another job is to keep the body's water and mineral balanced. As blood passes by cells, food is exchanged for urea, the waste made by the cells. The waste filled blood then passes through the kidneys where the urea is removed. Here the urea is combined with unneeded water to form urine. Actually, the real name for "going to the bathroom" is urinating and comes from the name for the waste made by our cells, urea.

The kidneys are always working, cleaning the blood and making urine. Urine leaves the kidneys 24 hours a day at the rate of about one drop per minute through tubes called ureters that lead into the bladder. However, when extra liquid enters the body, more urine is produced to rid the body of this extra liquid.

The bladder is the storage organ for the excretory/urinary system. Urine is stored until the bladder feels full, about one pint for an adult. Then the urine is released through a tube called the urethra and leaves the body.

An adult produces about three pints of urine a day, but the body *must* produce at least one pint to get rid of its waste. Therefore it is important for the health of the body that liquids be taken in and used to transport waste out.

Knowing about the excretory/urinary system and how it works to keep the body cells alive and healthy let's us know the importance of drinking liquids and urinating.

Possible Implicit Questions
From the Article
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1. How can you keep from having to leave the movie to urinate? **Since we know that we urinate more when we drink liquids, it is implied that not drinking during the movie may keep our bladder from filling during the movie.**
2. What would happen if our kidneys did not work correctly? **Since we know that our kidneys clean our blood, it is implied that if they were not working correctly, our blood would not be cleaned and our cells would not stay healthy.**
3. Where did the word urine come from? **Since we are told that the word urinating comes from the word urea, it is implied that urine also comes from the word urea.**
4. Why would you have to get up during the night to urinate? **Since we know that urine drips from the kidneys to the bladder 24 hours a day, it is implied that our bladder may fill during our sleep.**
5. If urine is mostly water, how come orange juice makes us have to urinate? **Since we know that urine is made from extra water that our body does not need, and we know that drinking orange juice makes us have to urinate, it is implied that orange juice contains a lot of water.**
6. Why do children urinate more often than adults? **Since we know that we must urinate when the bladder is full, it is implied that a child's bladder may be smaller than an adults and therefore fills faster and must be emptied more often.**
7. Which part of the excretory system changes size? **Since we know that the bladder fills with up to a pint of urine, it is implied that the bladder will get larger as it fills and get smaller as it empties.**

Too Much Water Outline

- I. Name
 - A. Excretory
 - B. Urinary
- II. Parts
 - A. Organs
 - 1. Kidneys
 - a. Cleans blood
 - b. Removes urea
 - c. Makes urine
 - 2. Bladder
 - a. Stores urine
 - b. Holds about one pint
 - B. Tubes
 - 1. Ureters – kidneys to bladder
 - 2. Urethra – out of body