



Kinship Link

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Pro Kinship for Kids

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Pro Kinship for Kids
Lower level Our Saviors
Lutheran Church
1400 S. State Street
P.O. Box 666
New Ulm, MN 56073
Phone 359-2445 or
1-800-642-5779
Website:
www.prokinship.org

Newsletter by
Kari Beran, Director

March is National Nutrition Month Liquid Assets: The Value of Fluids

What is the most abundant compound in your body? What is utilized by every system in your body? What is the most important (but most forgotten) nutrient? The correct answer to all three questions is water. Most of us are aware of the value of healthy food choices in disease control and prevention. Most of us have heard of the health benefits of increasing our physical activity and getting plenty of rest. But, many of us are unaware of the marvelous dividends we can receive from daily consumption of adequate amounts of water and other nutritious fluids.

Your body is mostly water. As the most abundant compound in the body, water constitutes about 55% to 75% of an adult's body weight. The numbers are even higher in children. That means each adult's body contains about 10 to 12 gallons of water. Muscle tissue is about 70% water while body fat is about 25% water. Even bones are 22% water.

Water ... Protecting your assets. Some critical functions of water within the body include. Transportation - blood, which is 83% water, is the body's transportation system for oxygen, nutrients, hormones, enzymes, and other life-sustaining materials to the cells. Blood also carries water products to organs for

removal. Lubrication - water is present in the mucous linings of organs and in the fluids between internal organs. These fluids make movement easier and reduce friction within the body. Water also lubricates joints, making it easier for our bodies to move. Digestion - in the digestive tract, water is present in mucus, salivary juices, and digestive juices. These help break down certain foods and transport food through the digestive system. Temperature control - it's important for good health that the body's temperature stays within a narrow range. Since water changes temperatures slowly, the water in our bodies is able to store heat and help regulate temperature. Water also helps regulate body temperature through perspiration. Heat leave our bodies as we sweat, and the water evaporates off the skin. Cellular work - water helps build hormones, and enzymes that control reactions in the body. Within the cells of our bodies, many reactions that involve water take place. For example, water plays an important role in the digestion of protein and carbohydrates. Waste removal - our bodies produce wastes in many ways. Water plays a key role in removing them through our urine and bowel movements. Wastes also leave our bodies through perspiration and in the air we exhale.

Water plays an incredible role in keeping your bodily systems functioning properly. Following are some examples: Water and your brain - brain tissue is 85% water. Dehydration can cause fatigue, dizziness, headache, depression, confusion, and disorientation. Dehydration also may lead to migraine headaches. Water and your muscles - muscles are 70% water. A small loss of fluid will affect their function because water helps regulate electrolytes. Muscles need electrolytes to function, especially during exercise. Muscles are weakened when they are slightly dehydrated. Dehydration can cause muscle cramping and loss of muscle coordination. New muscle growth is supported by proper amounts of water being available. Water and your kidneys - waste products are removed in water by your kidneys. Urea and lactic acid (a substance that causes muscle aches) must be dissolved in water for effective removal. Dehydration can damage your kidneys because they have to work too hard to remove toxins and waste products. Dehydration is especially harmful to your kidneys if you also exercise heavily or are on a high protein diet. Water and breathing - we need water to breathe. It moistens the lungs, promotes oxygen intake, and helps us exhale carbon dioxide. We



Liquid Assets: The Value of Fluids to Your Health continued

loss 1/2 to 1 liter of water every day just by breathing as we exhale water vapor. Water and your back - water stored in the spinal column supports 75% of the body weight. The remaining 25% of body weight is supported by the fibrous material around the disks. Dehydration can cause back pain. The joints in the spinal column are dependent on the hydraulic properties of the water stored in the disks. Water and your joints - water is necessary for the lubrication of the joints. Proper hydration decreases damage caused by friction as we move. Dehydrated joints deteriorate over time faster than well hydrated joints. Weight loss - water contains no calories. Drinking water may help reduce appetite. Water assists the body in metabolizing fats. When you feel hungry, your body is often only dehydrated. Fluids are the most important foods consumed during the day.

Water Reducing your liabilities. Dehydration is a liability you want to avoid. It is essential to good health to consume adequate amounts of fluids daily. The body's requirement for water is greater than its ability to produce it, so we must replace the water that is lost from our bodies. Water is expelled from the body by the skin as perspiration, by the kidneys as urine, and by the intestine in feces, or exhaled by the lungs as water vapor. Dehydration occurs when the body's water output exceeds water input. Dehydration is a condition that develops from inadequate water intake or from excessive water loss. Unfortunately, the onset of thirst lags behind the body's need for water. Thirst occurs when a person has already lost .8% to 2% of his or her body weight. Water loss that develops slowly can turn on a sense of thirst in time to prevent serious dehydration. Water loss that develops quickly, such as with physical activity, may not be accompanied by a sense of thirst. Fluid needs of children should be monitored very carefully, especially during warmer months. Children don't tolerate heat as well as adults do because their bodies generate more heat relative to their size. They are not as quick to adjust to changes in temperatures. Plus, children have more skin surface relative to their body size which means they lose more water through evaporation from the skin. Kids tend to forget to drink when they are playing and need to be reminded. They usually don't instinctively drink enough fluids to replace what their body loses. As people get older, they may not be able to rely on thirst to indicate a need for fluids because the ability to sense thirst declines over the years. Older adults may just forget to drink

enough liquid. It is especially important for older adults to monitor their fluid intake to maintain adequate hydration. Failure to do so can increase risk of urinary tract infection, pneumonia, pressure ulcers, confusion, and disorientation. Also, since body water decreases with age, older adults have a smaller margin of safety and are at higher risk for dehydration. Lack of fluids is one of the most frequent reasons people over 65 years of age go to the hospital.

Drink how much? How much fluid you should drink each day is a simple question with no easy answer. Your need for liquids depends on many factors, including your health, how active you are, and where you live. The Institute of Medicine has determined that an adequate intake for men is roughly 13 cups of fluid a day. The adequate intake for women is 9 cups of fluid a day. For many people, 80% of this amount is met by consuming water and beverages including caffeinated ones, while the other 20% is derived from foods. When you exercise or engage in any activity that makes you sweat, you need to drink extra liquid to compensate for fluid loss. An extra 1 1/2 to 2 1/2 cups of water should suffice for short bouts of exercise. The simplest way to tell if a person is properly hydrated is to check the color and quantity of urine. If the urine is very dark and scanty, it is concentrated with metabolic wastes. This is a signal that the body needs more fluids. When urine is clear, light color, the body has a normal water balance. If a person takes vitamin supplements, these may color the urine. In this case, the volume of urine may be a better indicator than color.

Cold weather leads to an increased need for fluids as well as warm weather. Why? When the temperature drops, the body works even harder to maintain a normal temperature.

Is water my only choice? Better or best choices - water remains the best drink for keeping humans "hydrated" because it's easier for people to absorb. Cool water absorbs more readily than warm, hot, or ice water. Other replacement fluids can come from food and beverages with a high water content, such as milk, fruit juice, fruits, and vegetables (for example, melons and tomatoes), soups, and broths. These foods offer more nourishment than just replacement of water. Drinks that do not do the job as well, such as sports drinks, energy drinks, carbonated beverages and fruit drinks, for they include a large dose of sugar that pulls body fluids into the stomach

and intestine. This takes fluids away from other parts of the body and can cause gastric distress.

Energy drinks frequently contain massive amounts of caffeine. These drinks can cause minor health effects (such as a laxative effect, insomnia, and headaches), as well as very serious adverse health effects (such as increased blood pressure, irregular and abnormal heart rhythms, impaired blood flow to the heart, and sudden death).

What about bottled water? Bottled water is the fastest growing drink choice in the United States. Bottle water is defined as water that is intended for human consumption and that is sealed in bottles or other containers with no added ingredients. Bottled water can be a good beverage choice. It contains no caffeine, no calories, and no sugar. It is convenient to carry with you and may also have a better taste and smell than tap water because of the blend of minerals and method of processing. Be aware of these facts about bottled water. Bottled water is much more expensive per gallon than tap water. Therefore, it is important to consider your reasons for purchasing bottled water and to compare the cost to the value it provides you. Regarding safety, bottled water and tap water are equally safe to drink since both must meet the high control standards set by the EPA or the FDA. Filtering water at home versus purchasing bottled water. Numerous companies sell point-of-use filtration systems. Some attach to the faucet and filter water as it comes through the tap. Others are containers that filter water in them. Water purified by these products typically costs less than buying bottled water. However, consumers need to be careful about maintaining these filters. Without proper maintenance, it is possible that bacteria or other contaminants can build up in the products.

Maintaining your body is a lot like running a business. You have certain assets available to keep your body healthy. These assets include nutritious foods, physical activity, and adequate rest. However, the greatest assets you have at your disposal are liquid assets ... plenty of water and nutritious fluids. Your body can't survive for long without fluids. Your body will function a lot better if you remember to make large deposits of fluids into your health account every day. Consistent deposits of liquid assets can contribute to large dividends of good health.