

## WHAT IF WATER INTAKE IS INADEQUATE?

When we don't provide our bodies with enough water, sweat and urine output decreases, which leads to dehydration. Dehydration causes many health issues. The body is not able to regulate its cooling mechanisms, leading to a possible rise in body temperature and the inefficient clearance of bodily waste. A lack of water may cause the blood to thicken, and blood flow becomes difficult, which leads to a greater risk of clotting, stroke or heart attack. Insufficient water intake also leads to constipation.3

Dehydration may cause a person to experience dizziness or headaches. During prolonged, arduous exercise serious dehydration may occur, so careful attention to fluid intake is particularly important under these circumstances. Drinking an inadequate amount of water also increases the risk of developing kidney stones and gallstones.4 In 2019, a study done in India revealed that 12% of the population suffers from kidney stone disease.5



## Water of like

Life cannot exist without water. All body functions require it. Water cleanses, refreshes, and powerfully aids the body's restoration. Similarly, in our spiritual lives, we cannot live eternally without the Water of Life.

What does the term "Water of Life" mean? Two thousand years ago, Jesus Christ met a woman in Samaria who had come to a well to draw water. He asked her for a drink, and in the ensuing conversation, He said He could give her water that would take away her thirst forever. "Whoever drinks of this water [from the well] will thirst again," Jesus told her, "but whoever drinks of the water that I shall give him will never thirst. But the water that I shall give him will become in him a fountain of water springing up into everlasting life" (John 4:13-14, NKJV). Such a concept implies a spiritual thirst-quenching that would satisfy the yearning for peace, joy, freedom from guilt, forgiveness, and a sense of oneness with God.

Christians find such a solution in the person of Jesus Christ. His life was in marked contrast to the turmoil, strife, jealousy, anger and dissatisfaction among the people both



of His day and ours. His offer to all is that we come to Him and dedicate ourselves to His service. He promises that this will bring relief from toil, anxiety and stress, providing rest and fulfillment in Him. His offer is still valid today. May we be transformed as we drink in His compassion, love, and acceptance.



The gray matter of the brain is approximately 85% water, blood is 83% water, muscles are about 75% water, and even bones are 20 to 25% water.1 Almost every cell and tissue of the body contains water, is continually bathed in fluid, and requires water to perform its functions. Water, the liquid of life, is a medium in which metabolism takes place. It is:

- the transport system within the body
- a lubricant for movement
- the facilitator of digestion
- the prime transporter of waste via the kidneys
- a temperature regulator
- a major constituent of the circulating blood



More than half of the water our body requires come from ingested liquid, and less than a quarter comes from our food. Fruits and vegetables generally have higher water content than other food groups. Examples include:

Fruits	Vegetables
Watermelon	Lettuce
Citrus	Tomatoes
Cherries	Cucumbers
Apples	Cauliflower
Papaya	Spinach

Ideally, the body maintains a balance between the amount of water lost each day and the amount taken in to replace it. The amount of daily water lost depends on climatic conditions and physical activities, as shown in the following table:

### \*DAILY LOSS OF WATER IN MILLILITERS PER DAY OF AN AVERAGE HUMAN BODY AT NORMAL TEMPERATURE

	Low Activity	Prolonged Heavy Exercise
Insensible (invisible) loss from skin	350	350
Insensible (invisible) loss from lungs	350	650
Sweat	100	5000
Feces	100	100
Urine	1400	500
Total Output	2300	6600

This table shows that sweat is excreted 50 times quicker under conditions of prolonged heavy exercise compared to Jow activity in normal temperatures.2

#### WATER AS A CLEANSING AGENT

Another important use of water is cleansing. Regular bathing removes accumulated dirt and contaminating debris, reducing the risk of infection.

Frequent hand washing may reduce transmission of many infectious agents from person to person. If people thoroughly washed their hands with soap and water before eating and after activities that soil their hands, a large percentage of infectious diseases would be eliminated.



### HOW MUCH WATER IS NEEDED TO STAY HYDRATED?

To help stay hydrated during prolonged physical activity or in hot weather, the 2005 Dietary Guidelines for Americans recommends that we drink fluids during the activity as well as several glasses of water or other fluid after the physical activity is completed.6

In a healthy person, a practical guide to water intake is to consume sufficient amounts throughout the day to ensure that the urine is a pale color. (Urine may be a bright yellow color after taking certain medications, including vitamins and antituberculosis medication.)

Begin drinking water in the morning because the body is relatively dehydrated from insensible (invisible) perspiration during sleep. Then continue to drink water at regular intervals throughout the day.

Be sure to drink water that is pure and clean. It is the most healthfully beneficial liquid we can consume because it's relatively free of electrolytes and diuretic agents such as caffeine. Alcoholic drinks, apart from having other deleterious effects, are also diuretic agents. And most soft drinks are loaded with sugar, contributing to problems of obesity, diabetes and dental caries.



#### **HYDROTHERAPY**

A man named Rahul Kumar once injured his elbow during a badminton game. He would not listen to advice to apply ice compresses to the injury, which would reduce the bleeding. The next day the bruised area around his elbow had swollen so much that he went to see the doctor right away. The doctor advised the use of ice compresses at home, and charged a consultation fee of 3,500 rupees (or about US\$50)!

Hydrotherapy is the use of water as a simple home therapeutic application. It's best applied to relieve mild muscle aches, pains and bruises. When dealing with muscle aches, apply hot, wet towels alternated with cold, wet towels (ending with a cold application) to affected areas to improve blood flow. If recent injury and bruising have occurred, cold compresses are more appropriate.

Caution should be exercised where the skin is diseased or cut. When blood flow becomes impaired or there is neurological damage resulting in an inability to feel heat, hot applications may lead to serious injury, so caution is again advised. This is especially applicable to people with diabetes or those whose nerves have been damaged by injury or surgery.

There are many modes of hydrotherapy, such as cold mitten friction, hot foot baths, heat compresses, and ice compresses, and it's unfortunate that so few utilize this most useful tool for relief.

"The external application of water is one of the easiest and most satisfactory ways of regulating the circulation of the blood.... But many have never learned by experience thebeneficial effects of the proper use of water.... All should become intelligent in its use in simple home treatments." 7

# LIFE APPLICATION QUESTIONS:

Take the time to consider these questions and apply what you are learning in your life.

- Based on my level of activity, how much water does my body lose daily? How much liquid am I taking in every day? Based on the suggested criteria of the color of my urine, am I getting sufficient liquid on a daily basis? What can I do to increase my intake of liquid? Do I need to fill a water bottle each morning and make sure I drink it all? Would a schedule for drinking at specific times each day be useful (not forgetting the important first glass in the morning)?
- Saurav and his family enjoy exercising outdoors. When it is hot and humid, they drink a lot of soda to keep hydrated. Sometimes they complain of headaches and dizziness. What is wrong? How could I encourage them to exercise while also keeping safe? What are the symptoms of dehydration and heatstroke that I should look for?
- What percentage of my liquid intake is pure water? What drinks increase the chance of dehydration? Do I consume too many sugary drinks (including fruit juices) that contribute to a weight problem? Do I make too many of these drinks readily available for my family, rather than keeping them for special times only?
- Because a third of the water my body gets comes from my food, do I need to reevaluate the amount of water-rich foods I'm eating?
  Which of the fruits and vegetables mentioned that are high in water content am I going to choose to use more regularly?



How often do I use water as a cleansing or healing agent? How should I tactfully remind others to wash their hands more frequently in order to stop the spread of infection? When is it appropriate to use hydrotherapy? Do I have ice or ice packs in my refrigerator for use on bumps or bruises?

How often do I think about and thank God for the wonderful gift of sufficient water? Which of the suggested ways to conserve water will I begin implementing? Which plant--based foods consume less water in production and reduce the amount of contamination in water supplies?

Being thirsty reminds us of the greater thirst for the "Water of Life" that God offers. How can I accept that gift so that I also can be a source of life to those with whom I interact on a daily basis?

## APPROPRIATE CONCERN FOR EARTH'S INHABITANTS

Water is a precious and indispensable resource. It's therefore important to conserve water resources:

- 1. Avoid wasting water. When possible, install toilets and shower heads in your home that use less water. When brushing your teeth, turn on the water only to wet and rinse your toothbrush; turn it off while brushing your teeth. Repair leaking faucets; continuous small drips over time can turn into huge amounts of wasted water. Also watch for other appropriate ways to conserve water in your day-to-day routines.
- 2. Avoid polluting water. Water can be polluted by human excrement, industrial waste, and chemicals. Animals raised in large agricultural feedlot operations consume huge quantities of water, and their excrement has the potential to pollute groundwater and nearby rivers and streams. Eating a vegetarian diet helps to conserve water because foods consumed as part of a plant-based diet require much less water to produce.



1 M. G. Hardinge, A Philosophy of Health (Loma Linda, CA: Loma Linda University School of Public Health, 1980), 37. 2 H. C. Guyton and J. E. Hall, Textbook of Medical Physiology (Philadelphia, PA: W. B. Saunders, 2000), 265. 3 "The Basics of Constipation," WebMD, accessed April 4, 2012, http://www.webmd.com/digestive-disorders/digestive-diseases-constipation#causes. 4 E. Braunwald et al., eds., Harrison's Principles of Internal Medicine (New York: McGraw Hill, 2011), 1616-17. 5 M. Guha et al., "The Demographic of Good Intake and Prevalence of Kidney Stone Diseases in the Indian Continent," Foods 8, no. 1 (January 2019): 37, accessed January 6, 2021, https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6352122: 6 US Department of Agriculture, "Adequate Nutrients Within Calorie Needs" in Dietary Guidelines for Americans (Washington, DC: US Government Printing Office, 2005), accessed May 24, 2007, http://www.health.gov/dietaryguidelines/dga2005/document/html/chapter2.htm. 7 Ellen G, White, The Ministry of Healing (Mountain View, CA: Pacific Press Publishing Association, 1942), 237.





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