GreatHearts®

10th Grade Physical Education:

April 21 – April 23

Time Allotment: 30 minutes per day

Student Name: _____

Teacher Name: *Ms. Carstens*

Packet Overview

Date	Objective(s)	Page #
Tuesday, April 21	1. Perform each movement in a workout with proper form. 2. Explain the significance of water in terms of the body. 3. Record your daily water intake.	2
Wednesday, April 22	1. Perform each movement in a workout with proper form. 2. Identify the benefits and signs of staying hydrated. 3. Record your daily water intake.	7
Thursday, April 23	1. Perform each movement in a workout with proper form. 2. Identify the signs and dangers of dehydration. 3. Record your daily water intake.	11

Additional Notes: Hi all! I hope you all are well and staying healthy! Here are some reminders as you work through this week's packet:

- **Be sure to complete the fitness portion of the lesson AND the enrichment portion**.
- Have a **watch, clock, or timer** available!
- **Read through all of the day's lesson and instructions BEFORE you begin**.
- **If you're unsure of a movement or task or need modifications, email me**!
- **Stay hydrated**!
- **After each lesson, you and your parent/guardian will initial Academic Integrity statements**.
- **Keep tracking those goals**! Don't forget to hold yourself to high standards!

If you have questions, email me! Kelly.Carstens@GreatHeartsNorthernOaks.org

Academic Honesty

I certify that I completed this assignment independently in accordance with the GHNO Academy Honor Code.

Student signature:

_____

I certify that my student completed this assignment independently in accordance with the GHNO Academy Honor Code.

Parent signature:

_____

Unit Introduction:

"*Water is the driving force of all nature.*" — Leonardo da Vinci

Water is necessary for all life—it enables cells to perform life functions such as nutrient transport; it allows for proper digestion in more complex organisms; it helps break down wastes; and it helps maintain an organism's body temperature. These are just a few of the major jobs water does for living things. This week we will discuss specifically how it impacts your health.

I. Tuesday, April 21

Daily Fitness Lesson: 2-4-6-8-6-4-2!
Reflection: Daily Water Intake chart; Water's Role in the Body

Socratic Guiding Questions: Keep this in mind as you study!
How does water intake affect my body and its function?

Objectives: Be able to do this by the end of this lesson.

1. Perform each movement with proper form.
2. Explain the significance of water in terms of the body.

Lesson Introduction:
This week, **we begin our introduction with instructions for an Enrichment task that you will complete for the week.** Over the course of **the next three days, you will record your water consumption and physical observations** in a chart found on the last page in this packet. **Fill in the chart for each day before bedtime.** In addition to this chart, you will have an article and reflections questions each day.

Our **fitness lesson today will be a repetitions workout**. **You will be performing three movements in a sequence**. You will start with the number 2, meaning you will do each movement twice. Then move to the next number, 4, and do each movement four times. The next round is 6, where you will do six of each movement; followed by 8, which tells you to do eight repetitions of each movement. After reaching 8, you will work back down (6-4-2) to 2 repetitions. There should be very, very little to no breaks between rounds as well as minimal transition between movements. The workout should take you between 10-15 minutes. **Immediately after the end of the workout, don't forget to record your heart rate in the Daily Activity Log.**

REMINDER: Read through the fitness lesson FIRST before attempting it. If you make modifications for any movements, please record that in the Daily Activity Log section above the Academic Integrity statements. If you need to modify an exercise outside of certain modifications we covered in class, email me and I will work with you to come up with a plan!

PART 1: DAILY FITNESS:
***Warm-Up (4 minutes)*:**

- ✓ Jog in place (30 seconds)
- ✓ Skip in place (30 seconds)
- ✓ Flamingos in place (15 seconds as a stretch for each leg, 15 seconds up-tempo)
- ✓ High Knees in place (15 seconds as a stretch for each leg, 15 seconds up-tempo)
- ✓ Ankle Scoops (30 seconds)
- ✓ Zombie Walks in place (30 seconds)
- ✓ Jumping Jacks (15 jacks)

***Workout Sequence*:**
2 reps of each, then 4 of each, then 6 of each, then 8 of each, then 6 of each, then 4 of each, then 2 of each

- **Push-ups**
- **Sit-ups**
- **Jumping Squats**

✓ **TARGET HEART RATE CHECK! After completing the workout, take your pulse for 1 minute. Record your heart rate in the Daily Activity Log below.**

Cool Down (3 minutes)
For your cool down, remember to keep moving!

- Walking – *easy pace*! While you walk, incorporate the Flamingo Walk and High Knees to help stretch your legs and torso twists to stretch your core and arms!

Daily Activity Log	
Post-Workout Heart Rate: _____ **In your Target Heart Rate zone?** Yes / No	Notes (modifications, struggles, etc.):

Academic Integrity

I certify that I completed today's physical fitness portion of this lesson in its entirety to the best of my ability.

Student initials:

_____

I certify that my student completed today's physical fitness portion of this lesson in its entirety to the best of his/her ability.

Parent initials:

_____

PART 2: ENRICHMENT

Read and annotate the article found on pgs. 5-6. Answer the questions below.

1. Identify three ways water is vital for the human body.

2. Males typically have more of their body weight comprised of water. Why is that, according to the article?

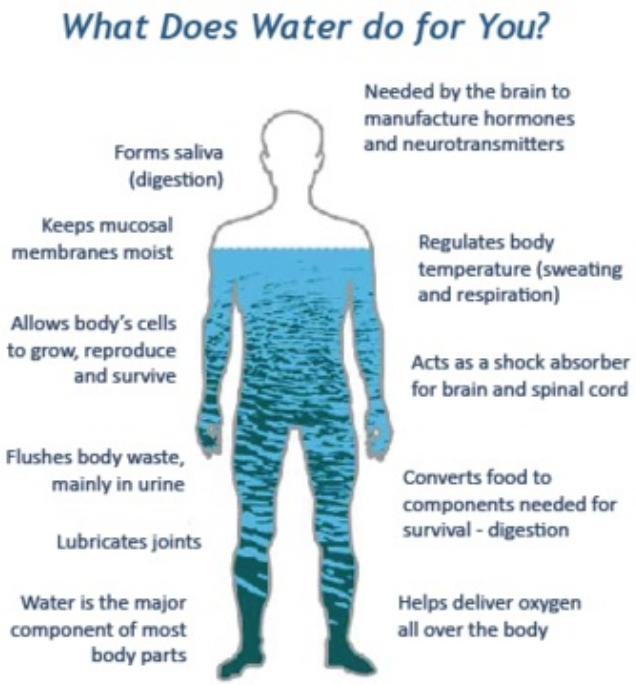
3. How might not getting enough water affect your body?

4. What do you think, if anything, might happen if you drink too much water?

The Water in You: Water and the Human Body

usgs.gov/special-topic/water-science-school/science/water-you-water-and-human-body

Water serves a number of essential functions to keep us all going



Think of what you need to survive, really just survive. Food? Water? Air? Facebook? Naturally, I'm going to concentrate on water here. Water is of major importance to all living things; in some organisms, up to 90% of their body weight comes from water. Up to 60% of the human adult body is water.

According to H.H. Mitchell, Journal of Biological Chemistry 158, the brain and heart are composed of 73% water, and the lungs are about 83% water. The skin contains 64% water, muscles and kidneys are 79%, and even the bones are watery: 31%.

Each day humans must consume a certain amount of water to survive. Of course, this varies according to age and gender, and also by where someone lives. Generally, an adult male needs about 3 liters (3.2 quarts) per day while an adult female needs about 2.2 liters (2.3 quarts) per day. All of the water a person needs does not have to come from drinking liquids, as some of this water is contained in the food we eat.

Water serves a number of essential functions to keep us all going

- A vital nutrient to the life of every cell, acts first as a building material.
- It regulates our internal body temperature by sweating and respiration
- The carbohydrates and proteins that our bodies use as food are metabolized and transported by water in the bloodstream;
- It assists in flushing waste mainly through urination
- acts as a shock absorber for brain, spinal cord, and fetus
- forms saliva
- lubricates joints

According to Dr. Jeffrey Utz, Neuroscience, pediatrics, Allegheny University, different people have different percentages of their bodies made up of water. Babies have the most, being

born at about 78%. By one year of age, that amount drops to about 65%. In adult men, about 60% of their bodies are water. However, fat tissue does not have as much water as lean tissue. In adult women, fat makes up more of the body than men, so they have about 55% of their bodies made of water. Thus:

- Babies and kids have more water (as a percentage) than adults.
- Women have less water than men (as a percentage).
- People with more fatty tissue have less water than people with less fatty tissue (as a percentage).

There just wouldn't be any you, me, or Fido the dog without the existence of an ample liquid water supply on Earth. The unique qualities and **properties of water** are what make it so important and basic to life. The cells in our bodies are full of water. The excellent ability of water to dissolve so many substances allows our cells to use valuable nutrients, minerals, and chemicals in biological processes.

Water's "stickiness" (from **surface tension**) plays a part in our body's ability to transport these materials all through ourselves. The carbohydrates and proteins that our bodies use as food are metabolized and transported by water in the bloodstream. No less important is the ability of water to transport waste material out of our bodies.

Sources and more information:

- The Nature of Water: Environment Canada
- Project WET (PDF)

Source:

"The Water in You: Water and the Human Body." *Usgs.Gov*, 2019, www.usgs.gov/special-topic/water-science-school/science/water-you-water-and-human-body?qt-science_center_objects=0#qt-science_center_objects. Accessed 13 Apr. 2020.

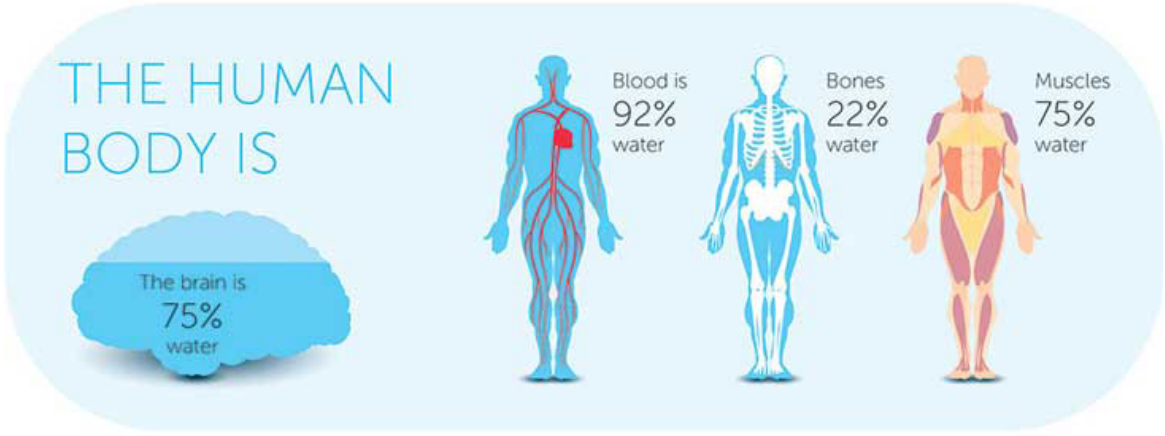


Photo Credit: https://alkalineworld.com.au/blog/wp-content/uploads/2014/12/water-percentages.png

II. Wednesday, April 22

Daily Fitness Lesson: 1-3-5-7-9-7-5-3-1! Part 2
Reflection: Daily Water Intake chart; Hydration! for Teens

Lesson 2 Socratic Guiding Question: Keep this question in mind as you study!
What is hydration?

Objectives: Be able to do this by the end of this lesson.

1. Perform each movement in a workout with proper form.
2. Identify the benefits and signs of staying hydrated.
3. Record your daily water intake.

Introduction:
Your first task is to remind yourself to fill in today's Daily Water Intake section on your observation sheet on the last page of this packet at the end of the day. Be honest about your answers and own your personal fitness journey! Next, perform the Daily Fitness workout for the day and finally complete the Enrichment lesson over hydration and the accompanying reflection questions! Remember: **Read through the whole lesson BEFORE starting!**

PART 1: DAILY FITNESS:
Warm-Up (4 minutes)

- ✓ Jog in place (30 seconds)
- ✓ Skip in place (30 seconds)
- ✓ Flamingos in place (15 seconds as a stretch for each leg, 15 seconds up-tempo)
- ✓ High Knees in place (15 seconds as a stretch for each leg, 15 seconds up-tempo)
- ✓ Ankle Scoops (30 seconds)
- ✓ Zombie Walks in place (30 seconds)
- ✓ Jumping Jacks (15 jacks)

Daily Fitness (12-15 minutes)
Our **fitness lesson today will be another repetitions workout**. **You will be performing three movements in a sequence**. You will start with the number 1 and do each movement once. Then move to the next number, 3, and do each movement three times. The next round is 5, followed by 7, and then 9. After reaching 9, you will work back down (7-5-3-1) to 1 repetition. There should be very few to no breaks between rounds as well as minimal transition between movements. The workout should take you between 10-15 minutes. **Immediately after the end of the workout, don't forget to record your heart rate in the Daily Activity Log.**

***Workout Sequence*:**

- **Lunges –** *Lunge with your left foot. Then lunge with your right foot. This counts as ONE repetition.*
- **Bicycles –** *In a crunch position on the floor, pull your right elbow to your left knee. Then pull your left elbow to your right knee. This is ONE repetition. Alternate elbows to knees.*
- **Arm Circles –** *Rotate your arms a full rotation forward, then a full rotation backwards. This is ONE repetition. The diameter of your arm circles should be within 12-18 inches.*

✓ **TARGET HEART RATE CHECK! After completing the workout, take your pulse for 1 minute. Record your heart rate in the Daily Activity Log below.**

Cool Down (3 minutes)

For your cool down, remember to keep moving!

- Walking (1 minute)
- Helicopter twists (1 minute) – *Standing, place your hands on your hips and twist to the left, return to center, then twist to the right. Be sure not to do this quickly.*
- Overhead arm stretches (1 minute) – *Reach fully into the air, clasping your hands overhead and squeeze your shoulders together, stretching as high as you can. Return your arms to your side and shake them out.*

Daily Activity Log	
Post-Workout Heart Rate: _____ **In your Target Heart Rate zone?** Yes / No	Notes (modifications, struggles, etc.):

Academic Integrity

I certify that I completed today's physical fitness portion of this lesson in its entirety to the best of my ability.

Student initials:

_____

I certify that my student completed today's physical fitness portion of this lesson in its entirety to the best of his/her ability.

Parent initials:

_____

PART 2: ENRICHMENT

Read and annotate the article found on p. 10-12. Complete the following.

1. Identify THREE ways we receive daily water intake.

2. How much water should the average teenager drink?

3. Summarize THREE ways, or tips, to ensure you consume enough water each day.

4. Identify two sources of water that you should avoid as your primary sources of water. Why should you avoid them?

Hydration: Why It's So Important

familydoctor.org/hydration-why-its-so-important

January 1, 2010

Your body depends on water to survive. Every cell, tissue, and organ in your body needs water to work properly. For example, your body uses water to maintain its temperature, remove waste, and lubricate your joints. Water is needed for overall good health.

Path to improved wellness

You should drink water every day. Most people have been told they should drink 6 to 8, 8-ounce glasses of water each day. That is a reasonable goal. However, different people need different amounts of water to stay hydrated. Most healthy people can stay well hydrated by drinking water and other fluids whenever they feel thirsty. For some people, fewer than 8 glasses may be enough. Other people may need more than 8 glasses each day. If you are concerned that you are not drinking enough water, check your urine. If your urine is usually colorless or light yellow, you are well hydrated. If your urine is a dark yellow or amber color, you may be dehydrated.

Water is best for staying hydrated. Other drinks and foods can help you stay hydrated. However, some may add extra calories from sugar to your diet. Fruit and vegetable juices, milk, and herbal teas add to the amount of water you get each day. Even caffeinated drinks (for example, coffee, tea, and soda) can contribute to your daily water intake. A moderate amount of caffeine (200 to 300 milligrams) is not harmful for most people. This is about the amount in 2 to 4, 8-ounce cups of coffee. However, it's best to limit caffeinated drinks. Caffeine may cause some people to urinate more frequently, or feel anxious or jittery.

Water can also be found in fruits and vegetables (for example, watermelon, tomatoes, and lettuce), and in soup broths.

Sports drinks can be helpful if you are planning on exercising at higher than normal levels for more than an hour. It contains carbohydrates and electrolytes that can increase your energy. It helps your body absorb water. However, some sports drinks are high in calories from added sugar. They also may contain high levels of sodium (salt). Check the serving size on the label. One bottle usually contains more than one serving. Some sports drinks contain caffeine, too. Remember that a safe amount of caffeine to consume each day is between 200 and 300 mg (milligrams).

Energy drinks are not the same as sports drinks. Energy drinks usually contain large amounts of caffeine. Also, they contain ingredients that overstimulate you (guarana, ginseng, or taurine). These are things your body doesn't need. Most of these drinks are also

high in added sugar. According to doctors, children and teens should not have energy drinks.

If staying hydrated is difficult for you, here are some tips that can help:

- Keep a bottle of water with you during the day. To reduce your costs, carry a reusabl water bottle and fill it with tap water.
- If you don't like the taste of plain water, try adding a slice of lemon or lime to your drink.
- Drink water before, during, and after a workout.
- When you're feeling hungry, drink water. Thirst is often confused with hunger. True hunger will not be satisfied by drinking water. Drinking water may also contribute to healthy weight-loss plan. Some research suggests that drinking water can help you feel full.
- If you have trouble remembering to drink water, drink on a schedule. For example, drink water when you wake up, at breakfast, lunch, and dinner, and when you go to bed. Or, drink a small glass of water at the beginning of each hour.
- Drink water when you go to a restaurant. It will keep you hydrated, and it's free.

Things to consider

Recognizing signs of dehydration is important. They include:

- Little or no urine.
- Urine that is darker than usual.
- Dry mouth.
- Sleepiness or fatigue.
- Extreme thirst.
- Headache.
- Confusion.
- Dizziness or lightheadedness.
- No tears when crying.

Don't wait until you notice symptoms of dehydration to take action. Actively prevent dehydration by drinking plenty of water.

Some people are at higher risk of dehydration, including people who exercise at a high intensity (or in hot weather) for too long, have certain medical conditions (kidney stones, bladder infection), are sick (fever, vomiting, diarrhea), are pregnant or breastfeeding, are trying to lose weight, or are not able to get enough fluids during the day. Older adults are also at higher risk. As you get older, your brain may not be able to sense dehydration. It doesn't send signals for thirst.

Water makes up more than half of your body weight. You lose water each day when you go to the bathroom, sweat, and even when you breathe. You lose water even faster when the weather is really hot, when you are physically active, or if you have a fever. Vomiting and diarrhea can also lead to rapid water loss. If you don't replace the water you lose, you can become dehydrated.

Questions to ask your doctor

- I don't like water. What's the next best thing to keep me hydrated?
- What if I can't consume as many fluids as doctors recommend?
- What does it mean if I drink a lot of fluids but don't urinate often?
- How does drinking alcohol affect hydration?

Resources

Centers for Disease Control and Prevention, Water & Nutrition

U.S. National Library of Medicine, Dehydration

Source:

familydoctor.org staff. "Hydration: Why It's So Important - Familydoctor.Org." *Familydoctor.Org*, 2010, familydoctor.org/hydration-why-its-so-important/. Accessed 13 Apr. 2020.

III. Thursday, April 23

Fitness Lesson: 2-4-6-8-6-4-2!
Enrichment: Goal Reflection; Daily Water Intake chart; Dehydration: Key Points

Socratic Guiding Questions: Keep this in mind as you study!
How much water did I drink and was it enough?

Objectives: Be able to do this by the end of this lesson.

1. Perform each movement in a workout with proper form.
2. Identify the signs and dangers of dehydration.
3. Record your daily water intake.

Lesson Introduction:
Today's workout will be another 2-4-6-8-6-4-2 workout with three different movements than Tuesday. See Tuesday's instructions for this if needed. Read through the workout first. **Immediately after the end of the workout, don't forget to record your heart rate in the Daily Activity Log.**

PART 1: DAILY FITNESS:
***Warm-Up (4 minutes)*:**

- ✓ Jog in place (30 seconds)
- ✓ Skip in place (30 seconds)
- ✓ Flamingos in place (15 seconds as a stretch for each leg, 15 seconds up-tempo)
- ✓ High Knees in place (15 seconds as a stretch for each leg, 15 seconds up-tempo)
- ✓ Ankle Scoops (30 seconds)
- ✓ Zombie Walks in place (30 seconds)
- ✓ Jumping Jacks (15 jacks)

***Workout Sequence*:**

- **Leg raises**
- **Squats**
- **Burpees**

✓ **TARGET HEART RATE CHECK! After completing the workout, take your pulse for 1 minute. Record your heart rate in the Daily Activity Log below.**

Cool Down (2 minutes)

- Walking – *easy pace*!

Daily Activity Log	
Post-Workout Heart Rate: _____ **In your Target Heart Rate zone?** Yes / No	Notes:

Academic Integrity

I certify that I completed today's physical fitness portion of this lesson in its entirety to the best of my ability.	I certify that my student completed today's physical fitness portion of this lesson in its entirety to the best of his/her ability.
Student initials:	*Parent initials:*
_____	_____

PART 2: ENRICHMENT

Read and annotate the article found on pgs. 15-17. Then complete the following.

1. Define *dehydration*. What does it mean for the body?

_____

_____

_____

2. List two signs a person may be dehydrated.

_____

_____

3.What is the single-most effective way to prevent dehydration?

_____

Complete the Weekly Goal Check below.

✓ ***Weekly Goal Check:*** **Reflect on the following.**

Did you meet your target heart rate during each of the workouts this week? Explain.

_____

_____

_____

List ***at least one*** effort you have made this week to accomplish your stretching goal.

_____

_____

_____

Dehydration

kidshealth.org/en/teens/dehydration.html

What Is Dehydration?

Dehydration is when someone loses more fluids than he or she takes in. Dehydration isn't as serious a problem for teens as it can be for babies or young children. But if you ignore your thirst, dehydration can slow you down.

When someone gets dehydrated, it means the amount of water in the body has dropped below the level needed for normal body function. Small decreases don't cause problems, and in most cases, they go completely unnoticed. But not drinking enough to keep up with the loss of fluid can sometimes make a person feel quite sick.

What Causes Dehydration?

One common cause of dehydration in teens is gastrointestinal illness. When you're flattened by a stomach bug, you lose fluid through vomiting and diarrhea. On top of that, you probably don't feel very much like eating or drinking.

Even if you don't have a stomach virus, you can get dehydrated for other reasons when you're sick. For example, if you have a sore throat, you might find it hard to swallow food or drinks. And if you have a fever, water evaporates from your skin in an attempt to cool your body down.

You also can get dehydrated from from lots of physical activity (like during sports). If you don't replace the fluid you lose through sweat as you go, you can get dehydrated, especially on a hot day. Even mild dehydration can affect an athlete's physical and mental performance.

What Are the Signs and Symptoms of Dehydration?

To counter dehydration, you need to restore the proper balance of water in your body. First, though, you have to recognize the problem.

Thirst is one indicator of dehydration, but it is **not** an early warning sign. By the time you feel thirsty, you might already be dehydrated. Other symptoms of dehydration include:

- feeling dizzy and lightheaded
- having a dry or sticky mouth
- peeing less and darker pee

If dehydration continues, a person will start to feel much sicker as more body systems (or organs) are affected.

How Is Dehydration Treated?

It's important to know the early signs of dehydration and to respond quickly if you have them. The goal in treating dehydration is to replace fluids and restore body fluids to normal levels.

If you're mildly dehydrated from lots of activity, you'll be thirsty and should drink as much as you want. Plain water is the best option. Then rest in a cool, shaded spot until the lost fluid has been replaced.

Can Dehydration Be Prevented?

The easiest way to avoid dehydration is to drink lots of fluids, especially water, especially on hot days. Drinking water does not add calories to your diet and is great for your health.

The amount that people need to drink will depend on things like age, size, level of physical activity, and the weather.

When you're going to be outside on a warm day, dress appropriately for your activity. Wear loose-fitting clothes and a hat if you can. That will keep you cooler and cut down on sweating. If you do find yourself feeling parched or dizzy, take a break and sit in the shade or someplace cool and drink water.

Sports and Exercise

If you're participating in sports or strenuous activities, drink some fluids before the activity begins. Then drink at regular intervals (every 20 minutes or so) during the course of the activity and after it ends. The best time to train or play sports is in the early morning or late afternoon or evening to avoid the hottest part of the day.

Gastrointestinal Infections

If you have a stomach bug and you're spending too much time getting acquainted with the toilet, you probably don't feel like eating or drinking anything. But you still need fluids. Take frequent, small sips of fluids. For some people, ice pops may be easier to tolerate.

Caffeine

Caffeine is a diuretic, meaning it causes a person to pee more. It's not clear whether this causes dehydration or not, but to be safe, it's probably a good idea to stay away from too much caffeine in hot weather, during long workouts, or in other situations where you might

sweat a lot.

When Should I Call the Doctor?

Dehydration can usually be treated by drinking fluids (water). But if you can't hold down any fluids; feel faint, weak, or dizzy; or are peeing much less than usual, you should tell an adult and visit your doctor.

If you're more dehydrated than you realized, especially if you can't hold fluids down because of vomiting, you may need to get fluids through an IV (into a vein) at a hospital to speed up the rehydration process.

Occasionally, dehydration might be a sign of something more serious, such as diabetes, so your doctor may run tests to rule out any other potential problems.

Dehydration is often preventable. So don't ignore your thirst and keep drinking that H2O for healthy hydration.

Reviewed by: Patricia Solo-Josephson, MD
Date reviewed: June 2017

Source:

"Dehydration (for Teens) - Nemours KidsHealth." *Kidshealth.Org*, 2017,

kidshealth.org/en/teens/dehydration.html. Accessed 12 Apr. 2020.

Day	How many ounces of water did I drink today? (Think in terms of 8 oz. cups)	How did I feel throughout the day? (My thirst level, energy level, etc.)	How did I feel in the workout? (My thirst level, energy level, amount of sweat, amount of time to cool down, etc.)	Did I drink enough water? Why do I think that?
Tuesday				
Wednesday				
Thursday				