

Strange but True: Drinking Too Much Water Can Kill

By Coco Ballantyne - Thursday, June 21, 2007

Directions: Access the article electronically by clicking the link above. You will also be given a paper copy of this article in class. Follow all of the steps completely and accurately to receive full credit. Answer the questions in a different color font (that is VISIBLE - like red or blue).

Step 1: Identify Key Words (3 pts each - 24 points total)

Define the following words before you read the article.

- Sine qua non:
- Hyponatremia:
- Solutes:
- Sieving:
- Neurons:
- Edema:
- Manifests:
- Vasopressin:

Step 2: Read and Annotate (20 points)

Read the article below. As you are reading, *use the annotation strategies of underlining or highlighting important text*. Add notes and observations in the margin. Be sure to note any key vocabulary terms.

Step 3: Reading Comprehension Questions (30 points)

Use the text to answer the questions below. Cite relevant quotes from the text when needed.

1. How did Jennifer Strange die?
2. How does the article describe the relationship between homeostasis and the regulation of water and salt in the body?
3. Explain how hyponatremia disrupts homeostasis.
4. Why does hyponatremia have the most impact on neurons in the brain?
5. How does vasopressin help regulate water balance in the body?
6. Based on the information provided, why is it important to consider both water intake and physical condition when preventing water poisoning?

Step 4: Making Inferences (24 points total)

Use what you learned from the article to answer the questions below. If the question involves a scientific concept, apply your understanding of that concept to help infer the answer. The answers to these questions may not be explicitly stated in the text.

7. Describe the differences in cell response to hypertonic and hypotonic environments. How would you classify the blood environment of someone experiencing water intoxication, and what impact does this have on cells? (12 points)
8. If a person is advised to "drink to their thirst," how does this advice align with the body's natural mechanisms for maintaining homeostasis, particularly in regulating water balance? (10 points)
9. What are some questions that you still have after reading the article regarding homeostasis, cell transport, or water intake? ("No I do not have any other questions" is not an acceptable answer) (4 pts)