CALIFORNIA STATE SCIENCE FAIR
2002 PROJECT SUMMARY

Name(s)

Kelsey G. Weeks

Project Number

22026

Project Title

Yur A Peein': The Specific Gravity of Urine

Abstract

Objectives/Goals

The objective was to see which fluid, after drinking it, will cause urine to have the lowest specific gravity and the most output. I believe that water will have the lowest specific gravity and the most output.

Methods/Materials

I drank three different fluids for one four-hour time period each. I drank 16 fluid ounces of each flui| within the first ten minutes of the hour. Towards the last five minutes of the hour, I went into the bathroom, urinated into the cup(s), measured the spcific gravity, and then measured the output. I repeated this process three more times with each fluid. I drank water, 7up, and Gatorade. I used a glass measuring cup to measure my intake, a plastic measuring cup to measure my output, and Multistix 10SG to measure the specific gravity. I urinated into 16-ounce plastic cups.

Results

Gatorade had the lowest specific gravity with three readings of 1.005 and one reading of 1.010. Water was second with two readings of 1.005 and two readings of 1.010. 7up was last with two readings 1.005, one reading of 1.010, and one reading of 1.015. Water had the most output with 72 fluid ounces total. Gatorade was second with 56 2/3 fluid ounces total. 7up was last with 49 1/3 fluid ounces total. This means that my hypothesis was incorrect when it stated that water would have the lowest specific gravity.| My hypothesis was correct when it stated that water would have the most output.

Conclusions/Discussion

I was able to obtain my objective of seeing which fluid, after drinking it, would have the lowest specif| gravity and the most output. My results did not support the first part of my hypothesis, but they did support the second part. This project expands my knowledge about the function of kidneys and excess fluid intake on the specific gravity of urine.

Summary Statement

My project determines which fluid, after drinking it, will cause my urine to have the lowest specific gravity and the most output.

Help Received

Dr. Kathryn Hall, M.D. gave me information about specific gravity and project idea. Kaweah Delta Hospital's lab sold me the Multistix to measure the specific gravity. Mom helped design the graph and with the layout of information on the board.

Preliminary