

Dec 13, 2021

Using Urine Color as a marker of hydration status

Study Protocol and Statistical Analysis Plan

The study protocol consists of a crossover design. During one arm the subjects will report euhydrated and then dehydrate 2% by walking on a treadmill in the heat. During the second arm, subjects will report dehydrated after an overnight fast, and then rehydrate by drinking water ad lib over 2 hours. Urine specific gravity, urine osmolality, subjective urine color and objective urine color (expressed in CIELab space) will be collected at the start and end of each arm of the study. Paired t-tests will be used to determine if significant changes occur in each physiological variable during each of the 2 arms. Overall study significance will be set to $p<0.05$