

# It's not good enough for you to be in the water, the water has to be in you – Hydration Status of Swimmers



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## Introduction

Dehydration can lead to weakness, poor performance, lack of coordination, and muscle cramping, therefore, being well hydrated is important for optimal performance. Fluid replacement may be overlooked by athletes competing in water consequently an athlete must be aware of the accuracy of their self-perceived hydration status.

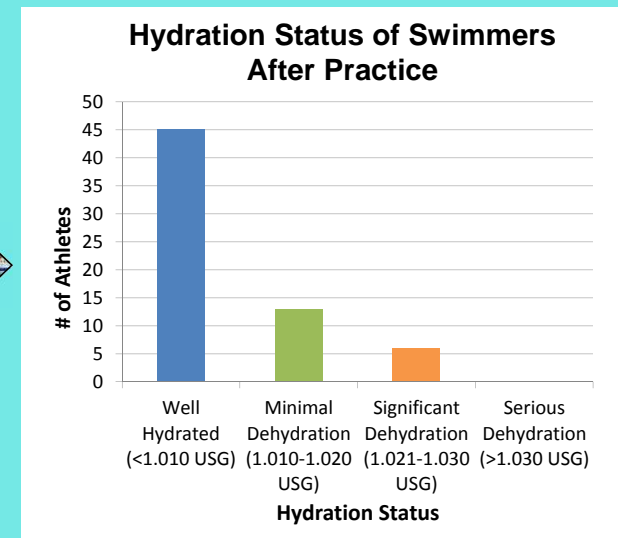
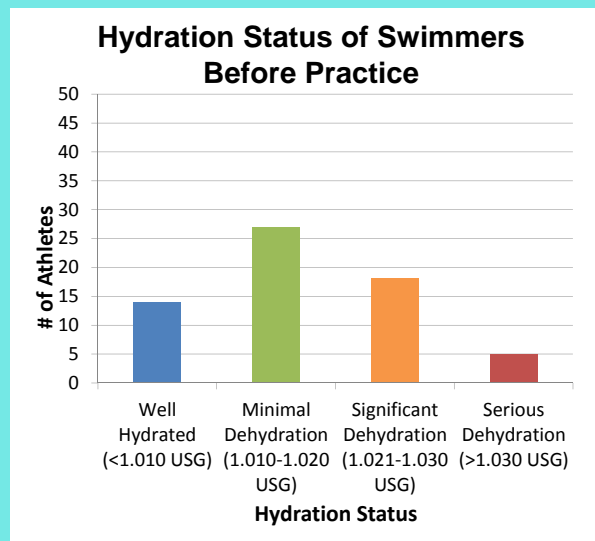
## Purpose

The purpose of this study was to examine the perceived hydration status versus actual hydration status of DIII female collegiate swimmers before and after training sessions.

## Materials & Methods

- Research was approved by the Institutional Review Board and signed informed consents were obtained from 25 female subjects from the College of Saint Benedict Swim Team
- Subjects completed surveys before and after three practices concerning their perceived personal hydration status on a scale of 1-10
- Subjects answered two survey questions regarding their knowledge of dehydration's effects on athletes
- Urine samples were collected immediately before and after the three practices
- Samples were analyzed for urine specific gravity using a refractometer
- Subjects were given a 32 ounce water bottle which was refilled upon request
- Water bottles were collected and fluid intake of each athlete was recorded after each practice

## Results



- Urine specific gravity before practice averaged  $1.017 \pm 0.009$  [1.001-1.036].
- Urine specific gravity after practice averaged  $1.009 \pm 0.007$  [1.000-1.030].

- Fluid consumption during practice averaged 16.11oz  $\pm 7.098$  [2-32].
- 92% of subjects were either well informed or possessed some knowledge of the signs of dehydration and dehydration's effects on athletic performance.

## Conclusions

- Only 22% of swimmers came to practice well hydrated while 36% were significantly or seriously dehydrated.
- Individuals coming to practice well hydrated drank more than those significantly dehydrated at the beginning of practice.
- The athletes were unable to accurately assess their own hydration status before and after practice.
- The swimmers know the signs and symptoms of dehydration but many are coming to practice chronically dehydrated.
- The obstacles preventing adequate fluid consumption need to be identified.

## Acknowledgments

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