Effect of Deep Sea Water Supplementation on Heart Rate Variability after Exercise

I-Jung Liu¹, Ching-Hung Lin², Chien-Wen Hou, M.S (Ph.D)¹ *

¹Institute of Sports Sciences, University of Taipei, Taipei, Taiwan
²Physical Education Office, Yuan Ze University, Taoyuan, Taiwan

*Corresponding author: om65726@yahoo.com.tw

Abstract

Purpose: The purpose of this study was to investigate the effect of Deep Sea Water (DSW) supplementation on Heart Rate Variability (HRV) after exercise.

Method: Ten healthy male participants were recruited for this study and randomly divided into two trails (placebo and DSW) in a cross-over design. Baseline HRV was measured before dehydration for all subjects. On the day of experiment, subjects were asked to perform dehydration exercise (40% maximum oxygen uptake intensity of treadmill running at room temperature 30±2°C) to lose 3% of their weight, then deep sea water or placebo was provided to respective trials (1.5*lost weight). Heart rate variability was measured at 4 hours, 24 hours and 48 hours after the supplementation of deep sea water.

Result: There were no significantly changes in parasympathetic nervous system, total power and variability. The sympathetic nervous system activity in DSW trail was significantly (p < .05) higher than placebo group.

Conclusion: This study indicates that supplementation of deep sea water increased the sympathetic nervous system activity through autonomic nervous system.

Keywords: Deep sea water, Dehydration, Heart rate variability