

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

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### 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 roomtemperature 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