

21-day Water Fasting Experiment for Freediving

by Eric Fattah, Feb 22, 2017

WARNING: Going for long periods without food is very dangerous and should NOT be attempted without doctor supervision!!

Summary

I performed a self-experiment, fasting on water and minerals for 21 days to measure the effect on maximum dry static apnea and metabolic rate. After 21 days on water and minerals, metabolic rate decreased by 25% and static apnea increased by 33%.

Statistics before and after:

<u>Item</u>	<u>Before</u>	<u>After</u>
Body Mass	180.8lb	166.4lb
Resting Pulse (AM)	63	51
Heart Rate Variability	8%	1%
Metabolic rate**	12:48:24	16:64:32
Maximum Static Apnea (dry)	7:31	10:06

Procedure

For 10 days prior to the fast, I was eating only raw fruits and vegetables (1000-1500 calories per day) to allow my body to adapt to lower calorie intake. During the fast I drank non-carbonate mineral water, and took salt (NaCl), potassium citrate, calcium citrate, and magnesium citrate, in the doses per day of Na: 2000mg, K: 400mg, Ca: 1000mg, Mg: 600mg. During fasting, auto-intoxication of waste in the digestive system is a serious risk. To compensate I did colon cleansing (self-administered enemas once every 3 days = 7 times total).

Unlike a previous experiment in 2005, I did NOT perform any exercise or apnea training during the fast itself. I started the experiment in poor physical condition as evidenced by the maximum static apnea (7:31) vs. my previous personal best of 8:50 from 2012 when I was in peak physical condition. Theoretically had I started the experiment in peak condition (8:50) my static would have increased to 11:50. Heart rate variability was measured each morning upon awakening by the 'Stress Check' application on iOS for iPhone.

**Metabolic rate was measured by the slowest pranayama (1:4:2 alternate nostril breathing) pattern that I could maintain for 48 minutes, while maintaining the classic muscular bandha contractions (uddiyana, mula-bandha, jalandhara bandha).

I was very careful not to stress my body during the experiment. I did not work, and I spent the day mostly meditating or reading. I did no physical exercise except a short 20 minute walk per day, and no apnea training at all.

Background

The concept of fasting to increase static apnea was pioneered by Sam Still of UK in 2005. After 10 days on water while doing yoga in India, his dry static apnea increased from 7:30 to 9:55. He repeated this method to win the world championships in static apnea in 2006. I attempted this experiment in 2005 going for 6 days without food, just water and electrolytes. Although my metabolism slowed, my maximum apnea did not increase because I stressed my body too much by working 13 hours per day and performing extreme apnea training each day which (presumably) was too stressful to the body. The current experiment shows how stress control is critical for success.