

7 Benefits of Immersion

- Usually lowers blood pressure
- Reduces stress hormones
- Strengthens the muscles of respiration
- Enhances cardiovascular efficiency
- Improves kidney function
- Increases muscle blood circulation
- Offloads joints, and probably increases circulation to them

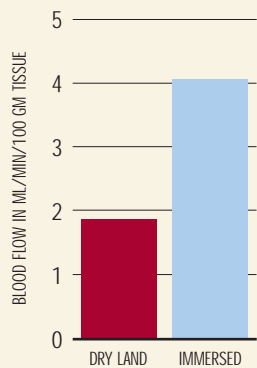
Hurdles to Establishing Aquatic Health

- Too little information in the media about aquatic health benefits
- Insufficient science is completed and published in medical journals
- Health care arena is unaware of clinical science that does exist regarding aquatic health benefits
- Health care reimbursement is not currently directed toward prevention of illness or disability

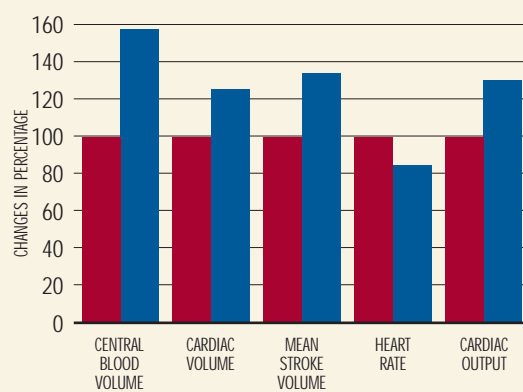
BLOOD FLOW AND IMMERSION

During immersion, more oxygen-rich blood is pushed into the deep muscle tissues — up to 250 percent more. The heart also grows in size, improving cardiac output and overall heart health.

Muscle Blood Flow with Immersion
THERMONEUTRAL TEMP., NECK DEPTH, SEATED



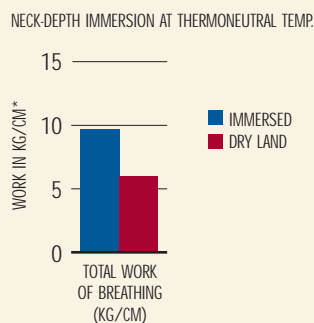
Cardiovascular Changes with Immersion
THERMONEUTRAL WATER TEMP., NECK DEPTH



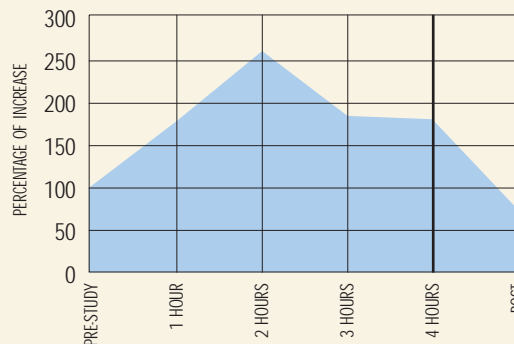
BODY FUNCTIONS AND IMMERSION

Increased resistance to breathing means more energy — 60 percent more — is expended for respiration. Meanwhile, increased blood flow and other changes cause urinary output to spike.

Energy Costs of Immersed Breathing
NECK-DEPTH IMMERSION AT THERMONEUTRAL TEMP.



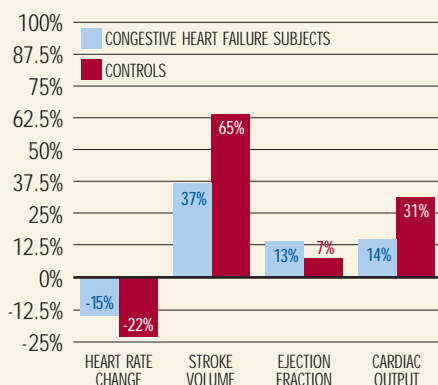
Urinary Output Changes with Immersion



WARM WATER AND IMMERSION

Warm-water immersion has numerous beneficial effects. In congestive heart failure patients, it decreases circulatory resistance and improves the heart contraction efficiency. In hypertensive patients, it lowers blood pressure.

Effects on Congestive Heart Failure Patients



Hypertension and Hot Tubs

