

# Dennis Madden PhD, MSc, RD

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## Education

- University of Split School of Medicine:** PhD, Evidence-Based medicine **Jan 2012 – Dec 2014**
- Dissertation: The impact of exercise on the physiological alterations of SCUBA diving: Investigations beyond venous gas emboli.
- St Cloud State University:** Masters of Science, Exercise Physiology **Aug 2009 – May 2011**
- Thesis: High intensity interval training and 40 km cycling time trial.
- The Ohio State University:** Bachelor of Science, Medical Dietetics **Jan 2005 – May 2009**
- Minor in exercise science

## Other Education and Certifications

- **Registered Dietitian** **Aug 2009 - present**
- **ACLS/PALS/BLS** **May 2015 - May 2017**
- **Hyperbaric Tender Course** **Dec 2013 (1 week)**
  - Sharm el-Sheikh, Egypt
- **SSI Open water diver** **Jun 2002 - present**

## Experience

### **Researcher, University of Split School of Medicine Split, Croatia**

**Jan 2012 – Dec 2014**

- Part of an international European Union funded grant for the research of diving and hyperbaric physiology. Represented our lab as part of a network of research partners from 12 different countries including three multisite studies culminating in the publication of a SCUBA textbook.
- Operated ultrasound equipment for the analysis of right-to-left cardiac shunt in a variety of populations using injected contrast during rest or exercise.
- Provided pulmonary function testing for COPD and HF patients as well healthy subjects.
- Developed protocol and utilized supine cycling ergometry for high risk subjects (HF, COPD) as well as healthy subjects for stress testing,  $\text{VO}_2$  max, and echocardiography.
- Responsible for the ordering, operation, and maintenance of over \$500K of laboratory equipment including ultrasound, gas analyzers, ECG, ergometers, transcranial Doppler, and general clinical supplies.
- Developed selection criteria and recruitment strategies for research subjects resulting in the screening of over 100 unique research participants for eight different studies.
- Created exercise physiology testing protocols to determine the fitness and cardiac risk factors of military special operations forces; this data was used to publish novel recommendations for safe procedures related to physical activity and diving.
- Oversaw data collection working independently in the field accumulating 1800 hours over three years including subject instrumentation, organization of research including 2 to 3 assistants per study, and data collection.
- Aggregated data from four facilities in three different countries for statistical analysis which was used to publish five papers and create a database for ongoing research.

- Designed physiological testing procedures including equipment selection and environmental variables to validate components of prototype dive computers funded in part by the Office of Naval Research.

**Laboratory Technician, Human Performance Laboratory, St Cloud State University**

**St Cloud, MN**

**Aug 2009 – May 2011**

- Provided cardiac stress testing under MD supervision as a community service providing lower cost alternatives for screening and preventative treatment of approximately 25 to 30 patients per year.
- Provided evaluation, counseling, and testing for Division I and III collegiate sports teams, elite athletes, and community members including pulmonary function,  $\text{VO}_2$  max, lactate threshold, energy expenditure, cardiac stress testing, and body composition. This data was used to track and improve performance by coaching staff.
- Participated in community health and scientific outreach events in topics ranging from simple health screening to applied physiology for annual corporate health fairs (500 to 750 attendees) and high-school education (45 to 60 attendees per visit).

**Registered Dietitian, St Cloud State University**

**St Cloud, MN**

**Aug 2010 – May 2011**

- Created a pilot program from a \$1000 grant to demonstrate the benefit of having a registered dietitian on staff to provide services for students, staff, and faculty.
- As a part of this process I provided approximately 70 individual counseling sessions for 22 people and created and presented original content to a variety of groups for health and sports performance.
- Based on customer recommendations and satisfaction, a permanent part-time position was approved.

**Running Coach, St Cloud State University**

**St Cloud, MN**

**Nov 2009 – Apr 2011**

- Created the SCSU half marathon training program, including presentations to students and staff on the topics of nutrition, health, wellness, and sports performance leading up to the Earth Day half marathon in St. Cloud.
- Designed individualized training programs for a total of 48 participants over two races, supervised bi-weekly running workouts, and recorded performance metrics to optimize individual results.

**Laboratory Instructor, Rasmussen College**

**St Cloud, MN**

**Aug 2010 – Aug 2011**

- Supervised and instructed laboratory practice required for students to complete basic anatomy, physiology, and biology courses. Each lab group contained 10 to 20 students and was a series of ten weekly assignments from simple chemistry demonstrations to dissection.

**US Navy**

**Naples, Italy/Norfolk, VA**

**Aug 2000 – Aug 2004**

- Honorable Discharge from active duty as Petty Officer Second Class, E5.