

# **Diving and Hyperbaric Medicine**

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## **EDITORIALS**

Balestra C

The lymphatic pathway for microbubbles

Doppler, bubbles, venous gas embolism, physiology, editorials

2014;44(1):1.

Pollock NW, Nishi RY

Ultrasonic detection of decompression-induced bubbles

Doppler, echocardiography, bubbles, venous gas embolism, arterial gas embolism, editorials

2014;44(1):2-3.

Aerobic demand and scuba diving: concerns about medical evaluation

Bosco G, Paoli A, Camporesi E

Aerobic capacity, oxygen consumption, fitness to dive, cardiovascular, editorials

2014;44(2):61-3.

Just say NO to decompression bubbles: is there a real link between nitric oxide and bubble production or reduction in humans?

Balestra C

Bubbles, venous gas embolism, decompression sickness, nitric, oxide, editorial

2014;44(2):63-4.

Is there a need for more diving science for divers?

Balestra C

Medical society, diving research, decompression sickness, general interest

2014;44(3):122-3.

Hydrophobicity: the link between bubbles, bubblebers and autoimmunity?

Balestra C

Bubbles, decompression sickness, endothelium, surfactant, editorial

2014;44(4):185.

### **The Editor's offering**

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2014;44(1):3.

2014;44(2):64.

2014;44(3):121.

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### **The SPUMS President's page**

Bennett M

Medical society, general interest

2014;44(1):4.

President SPUMS

Smart D

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2014;44(3):123.

President SPUMS

Smart D

Medical society, general interest

2014;44(4):186

## **ORIGINAL ARTICLES**

The use of portable 2D echocardiography and 'frame-based' bubble counting as a tool to evaluate diving decompression stress

Germonpré P, Papadopoulou V, Hemelryck W, Obeid G, Lafère P, Eckersley RJ, Tang M-X, Balestra C

Echocardiography, Doppler, bubbles, venous gas embolism, arterial gas embolism, decompression sickness, risk assessment, diving research

2014;44(1):5-13.

Sample size requirement for comparison of decompression outcomes using ultrasonically detected venous gas emboli (VGE): power calculations using Monte Carlo resampling from real data

Doolette DJ, Gault KA, Gutvik CR

Decompression, diving, echocardiography, venous gas emboli, decompression sickness, statistics, research

2014;44(1):14-9.

Decompression illness in divers treated in Auckland, New Zealand, 1996–2012

Haas RM, Hannam JA, Sames C, Schmidt R, Tyson A, Francombe M, Richardson D, Mitchell SJ

Diving, embolism, decompression illness, hyperbaric oxygenation therapy, air/diagnosis/etiology/therapy, decompression sickness/diagnosis/epidemiology/etiology/physiopathology/therapy

2014;44(1):20-5.  
Neuron-specific enolase and S100B protein levels in recreational scuba divers with neurological decompression sickness  
Gempp E, Louge P, De Maistre S, Emile L, Blatteau J-E  
Decompression sickness, central nervous system, brain injury, proteins, severity, outcome, diving research  
2014;44(1):26-9.  
An in-vitro examination of the effect of vinegar on discharged nematocysts of *Chironex fleckeri*  
Welfare P, Little M, Pereira P, Seymour J  
Jellyfish, envenomation, clinical toxicology, toxins, research, first aid  
2014;44(1):30-4.  
Complex tactile performance in low visibility: the effect of nitrogen narcosis  
van Wijk CH, Meintjes WAJ  
Nitrogen narcosis, deep diving, performance, psychology, diving research  
2014;44(2):65-9.  
Lung function after cold-water dives with a standard scuba regulator or full-face-mask during wintertime  
Uhlig F, Muth C-M, Tetzlaff K, Koch A, Leberle R, Georgieff M, Winkler BE  
Cold, scuba diving, lung function, physiology, diving reflex, thermal problems (hypothermia and hyperthermia)  
2014;44(2):70-3.  
Exercise intensity inferred from air consumption during recreational scuba diving  
Buzzacott P, Pollock NW, Rosenberg M  
Aerobic capacity, oxygen consumption, physiology, exercise, fitness to dive, diving research  
2014 June;44(2):74-8.  
Scuba diving injuries among Divers Alert Network members 2010–2011  
Ranapurwala SI, Bird N, Vaithyanathan P, Denoble PJ  
Injuries, decompression sickness, epidemiology, health survey, DAN – Divers Alert Network, recreational diving  
2014;44(2):79-85.  
Physiological effects of rapid reduction in carbon dioxide partial pressure in submarine tower escape  
Loveman GAM, Seddon FM, Thacker JC, White MG, Jurd KM  
Hypercapnia, oxygen, cerebral blood flow, Doppler, physiology, submarine  
2014 June;44(2):86-90.  
Field validation of Tasmania's aquaculture industry bounce-diving schedules using Doppler analysis of decompression stress  
Smart DR, Van den Broek C, Nishi R, Cooper PD, Eastman D  
Occupational diving, repetitive diving, surface supply breathing apparatus (SSBA), Doppler, decompression tables, diving tables, decompression sickness, diving research  
2014;44(3):124-36.  
Retrospective review of grommet procedures under general versus local anaesthesia among patients undergoing hyperbaric oxygen therapy  
Lamprell L, Young D, Vangaveti V, Orton J, Suruliraj A  
Barotrauma, ear barotrauma, ENT, hyperbaric oxygen, hyperbaric oxygen therapy  
2014;44(3):137-40.  
The cardiac effects of hyperbaric oxygen at 243 kPa using in-chamber echocardiography  
Gawthrope IC, Playford DA, King B, Brown K, Wilson C, McKeown B  
Physiology, cardiovascular, hyperbaric oxygen, echocardiography, hyperbaric research  
2014;44(3):141-5.  
Transcutaneous oximetry: normal values for the lower limb  
Blake DF, Young DA, Brown LH  
Transcutaneous oximetry, hyperbaric oxygen therapy, wounds, patient monitoring, standards  
2014;44(3):146-53.  
Effect of splenectomy on platelet activation and decompression sickness outcome in a rat model of decompression  
Lambrechts K, Pontier J-M, Mazur A, Buzzacott P, Goanvec C, Wang Q, Theron M, Belhomme M, Guerrero F  
Pharmacology, platelets, physiology, treatment, decompression sickness, animal model  
2014;44(3):154-7.  
Effects of Valsalva manoeuvres and the 'CO<sub>2</sub>-off' effect on cerebral blood flow  
Seddon F, Thacker J, Jurd K, Loveman G  
Hypercapnia, Valsalva, cerebral blood flow, Doppler, physiology, submarine  
2014;44(4):187-92.

Decompression management by 43 models of dive computer: single square-wave exposures to between 15 and 50 metres' depth

Sayer MDJ, Azzopardi E, Sieber A

Computers – diving, occupational diving, decompression, dive profile, decompression tables  
2014;44(4):193-201.

12-lead Holter monitoring in diving and water sports: a preliminary investigation

Bosco G, De Marzi E, Michieli P, Omar HR, Camporesi EM, Padulo J, Paoli A, Mangar D, Schiavon M

Scuba diving, cardiovascular, electrocardiography, physiology, pathology, diving research, patient monitoring  
2014;44(4):202-7.

### **THE RUBICON FOUNDATION**

Hobbs G

Diving research, education, World Wide Web, general interest  
2014;44(1):34.

### **SHORT COMMUNICATION**

The effect of air scuba dives up to a depth of 30 metres on serum cortisol in male divers

Zarezadeh R, Azarbayjani MA

Scuba diving, physiology, endocrinology, diving research  
2014;44(3):158-60.

Blood lead levels in scuba divers: a pilot study

Janisch T, Kopp R

Scuba diving, toxicity, clinical toxicology  
2014;44(4):241-2.

### **REVIEW ARTICLES**

Ultrasound detection of vascular decompression bubbles: the influence of new technology and considerations on bubble load

Blogg SL, Gennser M, Møllerløgken A, Brubakk AO

Doppler, bubbles, venous gas embolism, arterial gas embolism, decompression sickness, diving research, review article

2014;44(1):35-44.

Diving fatality investigations: recent changes

Edmonds C, Caruso J

Diving deaths, investigations, autopsy, radiological imaging, review article

2014 June;44(2):91-6.

The assessment and management of inner ear barotrauma in divers and recommendations for returning to diving

Elliott EJ, Smart DR

Inner ear, barotrauma, diving, pathophysiology, treatment, ENT, review article

2014;44(4):208-22.

### **CONTROVERSIES IN HYPERBARIC MEDICINE – RÉUNION2013**

Medical devices and procedures in the hyperbaric chamber

Kot J

Hyperbaric medicine, safety, equipment, implantable devices, patient monitoring, ventilators, resuscitation, review article

2014;44(4):223-7.

Unestablished indications for hyperbaric oxygen therapy

Mitchell SJ, Bennett MH

Hyperbaric oxygen therapy, hyperbaric research, trauma and stress, central nervous system, children, evidence, ethics, review article

2014;44(4):228-34.

### **CASE REPORTS**

Cutaneous decompression sickness

Tasios K, Sidiras GG, Kalentzos V, Pырpasopoulou A

Decompression sickness, decompression illness, allergy, first aid, oxygen, treatment

2014;44(1):45-7.

Two fatal cases of immersion pulmonary oedema – using dive accident investigation to assist the forensic pathologist

Smart DR, Sage M, Davis FM

Immersion, pulmonary oedema, deaths, snorkelling, scuba diving, autopsy, coroner's findings, case reports  
2014;44(2):97-100.

Hyperbaric oxygen treatment for unilateral testicular torsion in a child

Alp BF, Cebi G, Özdemir A, Irkilata HC, Uzun G

Genitourinary tract, children, hyperbaric oxygenation therapy, reperfusion injury, case report  
2014;44(3):161-2.

Severe lower limb crush injury and the role of hyperbaric oxygen treatment: a case report

Stefanidou S, Kotsiou M, Mesimeris T

Hyperbaric oxygen therapy, trauma and stress, wounds, case reports  
2014;44(4):243-5.

### **THE WORLD AS IT IS**

Survey of referral patterns and attitudes toward hyperbaric oxygen treatment among Danish oncologists, ear, nose and throat surgeons and oral and maxillofacial surgeons

Fornier L, Lee A, Jansen EC

Osteoradionecrosis, bone necrosis, hyperbaric oxygen therapy, radiotherapy, questionnaire, survey  
2014;44(3):163-6.

The silent witness: using dive computer records in diving fatality investigations

Sayer MDJ, Azzopardi E

Diving deaths, scuba accidents, investigations, computers – diving  
2014;44(3):167-9.

### **BRITISH SUB-AQUA CLUB (BSAC) DIVING INCIDENTS REPORT 2013**

British Sub-Aqua Club (BSAC) diving incidents report 2013

Compiled by Brian Cummings, Diving Incidents Advisor

Wilson C

Recreational diving, accidents, diving deaths, abstracts, case reports  
2014;44(3):170-1.

### **REPRINTED FROM OTHER SOURCES**

Systematic review of the effectiveness of hyperbaric oxygenation therapy in the management of chronic diabetic foot ulcers

Liu R, Li L, Yang M, Boden G, Yang G

2014;44(3):153.

Influence of repeated daily diving on decompression stress

Zanchi J, Ljubkovic M, Denoble PJ, Dujic Z, Ranapurwala SI, Pollock NW

2014;44(3):166.

Appearance of gas collections after scuba diving death: a computed tomography study in a porcine model

Laurent PE, Coulange M, Bartoli C, Boussuges A, Rostain JC, Luciano M, Cohen F, Rolland PH, Mancini J, Piercecchi MD, Vidal V, Gorincour G

2014;44(4):227.

### **LETTERS TO THE EDITOR**

Treatment of decompression illness with heliox: the best of both worlds?

van Hulst RA

Decompression illness, treatment, helium, neuroprotection, letters (to the Editor)

2014;44(2):101.

Vinegar and *Chironex fleckeri* stings

Gibbs CR, Corkeron M, Blake DF

Jellyfish, envenomation, clinical toxicology, toxin, first aid, letters (to the Editor)

2014;44(2):102.

Vinegar and *Chironex fleckeri* stings – reply

Welfare P, Little M, Pereira P, Seymour J

Jellyfish, envenomation, clinical toxicology, toxin, first aid, letters (to the Editor)

2014;44(2):102-3.

The effect of vinegar on discharged nematocysts of *Chironex fleckeri*

Yanagihara AA, Chen JJ

Jellyfish, marine animals, envenomation, statistics, research, letters (to the Editor)

2014;44(3):172.

The effect of vinegar on discharged nematocysts of *Chironex fleckeri* – reply  
Welfare P, Little M, Pereira P, Seymour J  
Jellyfish, marine animals, envenomation, statistics, research, letters (to the Editor)  
2014;44(3):172-3.

Measuring aerobic fitness in divers  
Pollock NW, Buzzacott P  
Fitness to dive, oxygen consumption, medicals – diving, letters (to the Editor)  
2014;44(3):174.

Diving and hyperbaric medicine: an undergraduate's experience  
Modell M  
Diving, hyperbaric medicine, scuba, medical education, tourism, fitness to dive, letters (to the Editor)  
2014;44(3):174-5.

Immersion pulmonary oedema and diving fatalities  
Tin SS, Wiwanikit V  
Immersion, pulmonary oedema, scuba diving, deaths, letters (to the Editor)  
2014;44(3):175.

Australia's model work health and safety regulations and medical fitness requirements for professional divers  
Smart D  
Diving at work, occupational diving, occupational health, fitness to dive, letter (to the Editor)  
2014;44(4):248.

### **BOOK AND JOURNAL REVIEWS**

NOAA Diving Manual – Diving for Science and Technology, 5th Edition  
Dinsmore DA, Bozanic JE, editors  
Sayer M  
Scientific diving, operations – diving, textbook, book reviews  
2014;44(2):107-8.

### **CONTINUING PROFESSIONAL DEVELOPMENT**

Transcutaneous oximetry, problem wounds and hyperbaric oxygen  
Hyldegaard O  
Hypoxia, hyperoxia, inflammation, transcutaneous oximetry, chronic wounds, MOPS (maintenance of professional standards)  
2014;44(1):48-9.

Diving hazards  
Millar I  
Underwater diving, nitrogen narcosis, pulmonary function, cold, hypercapnia, aerobic capacity, deaths, MOPS (maintenance of professional standards)  
2014;44(2):105-6.

Oxygen in wound healing  
Fabricius C  
Oxygen, wounds, transcutaneous oximetry, MOPS (maintenance of professional standards)  
2014;44(3):177-8.

Inner ear barotrauma  
Gawthrop I  
Inner ear, barotrauma, MOPS (maintenance of professional standards)  
2014;44(4):246-7.

### **CRITICAL APPRAISAL**

Pre-conditioning with hyperbaric oxygen treatment (HBOT) may induce cerebral and cardiac protection in patients undergoing onpump coronary artery bypass graft (CABG) surgery

Hui B, Bennett M  
Surgery, cardiovascular, injuries, brain injury, hyperbaric oxygen therapy, outcome, hyperbaric research, critical appraisal  
2014;44(1):50.

Weak evidence for benefit of hyperbaric oxygen in patients more than six months after stroke  
Bourke A  
Central nervous system, neuroprotection, hyperbaric oxygen therapy, outcome, research, critical appraisal  
2014;44(2):104.

**OBITUARY**

Thomas Richard Hennessy, MSc, PhD, CMTH, FIMA, FSUT, 1940–2014  
Hennessy D  
Obituary, decompression tables, diving tables, diving research  
2014;44(3):179.

**SPUMS NOTICES and NEWS**

SPUMS Annual Scientific Meeting 2014  
2014;44(1):53.  
SPUMS news now on the website  
2014;44(1):53.  
SPUMS Diploma in Diving and Hyperbaric Medicine  
2014;44(1):54.  
Education Officer's Report May 2014  
Smart D  
Qualifications, underwater medicine, hyperbaric oxygen, research, medical societies  
2014;44(2):111-3.

**EUBS NOTICES and NEWS**

EUBS news now on the website  
2014;44(1):51.  
40th EUBS 2014, Second Announcement and Call for Abstracts  
2014;44(1):52.  
European Editor for *Diving and Hyperbaric Medicine*  
2014;44(2):109.  
41st EUBS Annual Scientific Meeting 2015, First Announcement  
2014;44(4):250.