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Fisher & Paykel HEALTHCARE

DIVING & HYPERBARIC MEDICINE JOURNAL

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Prior to Thailand, how many humans had been fully anesthetized before being immersed

A. None
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D. Ten

6

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How many children rescued in Thailand required extra doses of anaesthetic drug from a cave diver

A. One
B. Four
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BBC NEWS

9


อันตราย!! ห้ามเข้า ก่อนได้รับอนุญาต
เนื่องจากเป็นฤดูน้ำป่าไหลหลาก ซึ่งจะมีน้ำออกจากถ้ำปริมาณมาก
ในระหว่างเดือน กรกฎาคม - พฤศจิกายน
DANGER !!
FROM JULY - NOVEMBER THE CAVE IS FLOODING SEASON
วนอุทยานถ้ำหลวง - ขุนน้ำนางนอน

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June 23 2018
12 boys and soccer coach enter Tham Luang cave
Rain and flooding forces them further back into cave
Bikes found outside cave

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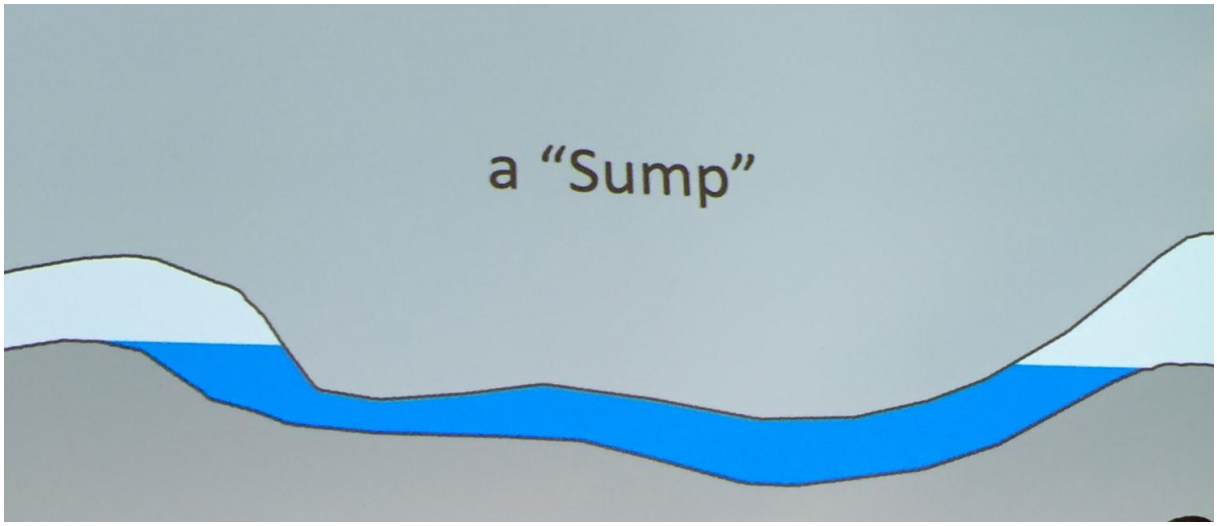
An underrated feat….

The original dive into the chamber where the boys were located has received inadequate recognition

14



6 sumps from continuous dry cave. Total 1.2 km flooded cave. Longest flooded section 350m

15

Dive them out under sedation?

stuff ☰ world

Thai cave rescue involved four more survivors, diver reveals

James Massola • 11:37, Sep 27 2018

At first the pair – who would be feted around the world four days later when they discovered the missing Thai soccer team – hoped they had found the Wild Boars.

They soon realised they had found four men who had been trapped for at least 24 hours and had not been reported as missing.

16

Richard Harris's initial response was that "sedation is not an option"

17

As a general rule it was considered that it would be very difficult to protect and manage the airway in an unresponsive diver for long enough to complete any meaningful decompression stops. Any attempt to do so might result in drowning, which, depending on the amount of omitted decompression, would likely represent a greater threat to life than decompression sickness (DCS) arising from a direct ascent.

18

18

UHM 2012, VOL. 39, NO. 6 – RESCUE OF AN UNRESPONSIVE DIVER

Recommendations for rescue of a submerged unresponsive compressed-gas diver

S.J. Mitchell [1,2], M.H. Bennett [1,3], N. Bird [1,4], D.J. Doolette [1,5], G.W. Hobbs [1,6,7], E. Kay [1,8], R.E. Moon [1,6], I.S. Neuman [1,9], R.D. Vann [1,4], R. Walker [1,6,7], H.A. Wyatt [1,10]

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7 Rubicon Foundation Incorporated, Durham, North Carolina, USA
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9 University of California San Diego, San Diego, USA
10 Department of Hyperbaric Medicine and Wound Care, West Jefferson Medical Center, Marrero, Louisiana, USA

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Evidence vacuum!

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ELSEVIER

Resuscitation 67 (2005) 7–11

RESUSCITATION

www.elsevier.com/locate/resuscitation

Resuscitation Great

Edgar Alexander Pask—a hero of resuscitation

Gary Enever

Royal Victoria Infirmary, Newcastle upon Tyne, UK

Received 20 April 2005; accepted 20 April 2005

Anaesthetised and set adrift in a pool, a number of different jackets and suits were tested on Pask, breathing ether through a cuffed Magill tracheal tube via an extremely long co-axial circuit (Fig. 2). The experiments were both traumatic and dramatic. They were filmed, so that they could be shown to aircrew to boost morale and to show that something was being done. After each experiment, Pask was admitted to hospital to recover, and anecdotally he was not very well after each episode, which is hardly surprising. Often he sank completely, greatly increasing the risks of aspirating pool water (Fig. 3).

Fig. 2. Pask being placed into the pool by professor Macintosh and his team.

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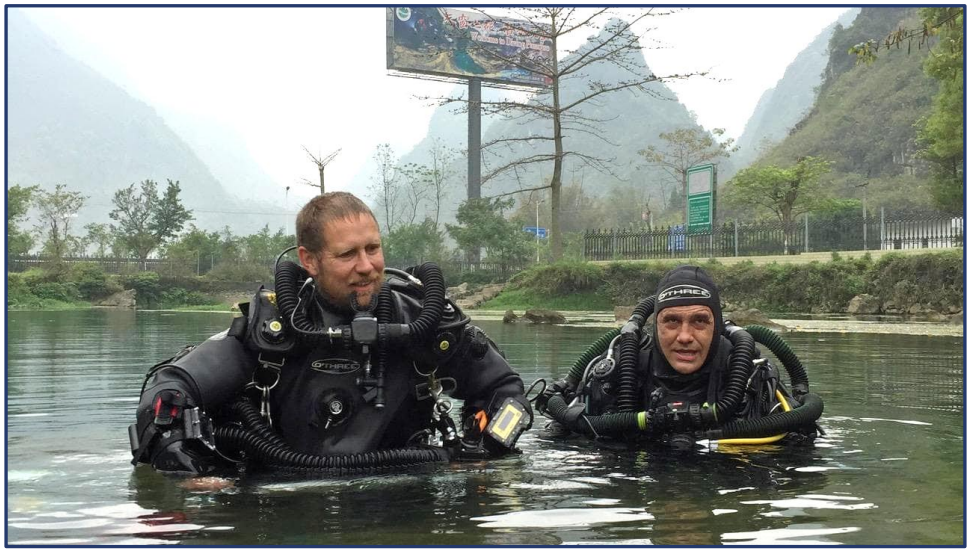

Richard and Craig arrived 4 days after boys found and visited chamber 9

21

Richard decided he had to do something which had never been done, and what people could retrospectively judge to be egregiously reckless if seen through the lens of drowned children

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The difficulty facing Richard

He had to sell a plan that he had little faith in to the Thai authorities

23

A classic line trap

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The anaesthetic

Selection

Fasted

Alprazolam 0.5mg PO

Atropine 20mcg/kg IM

Ketamine 5mg/kg IM + 100-125mg prn

FFM and gas supply (80% O_2)

Leak test x 3

± positive pressure ventilation!

Small kid **Big kid**

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If it was so dangerous, why did it work so well?

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Choice of anaesthetic

Small skinny boys

Expertise of British cave divers

Choice of full-face mask

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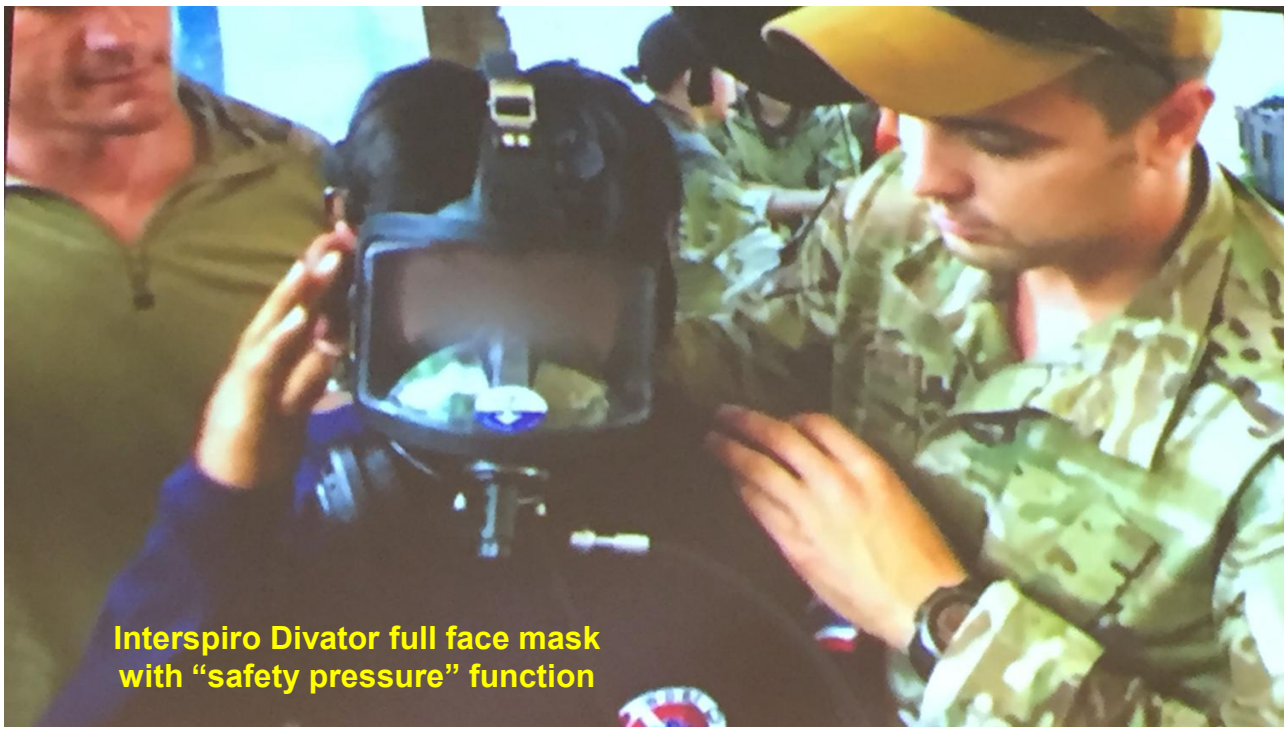

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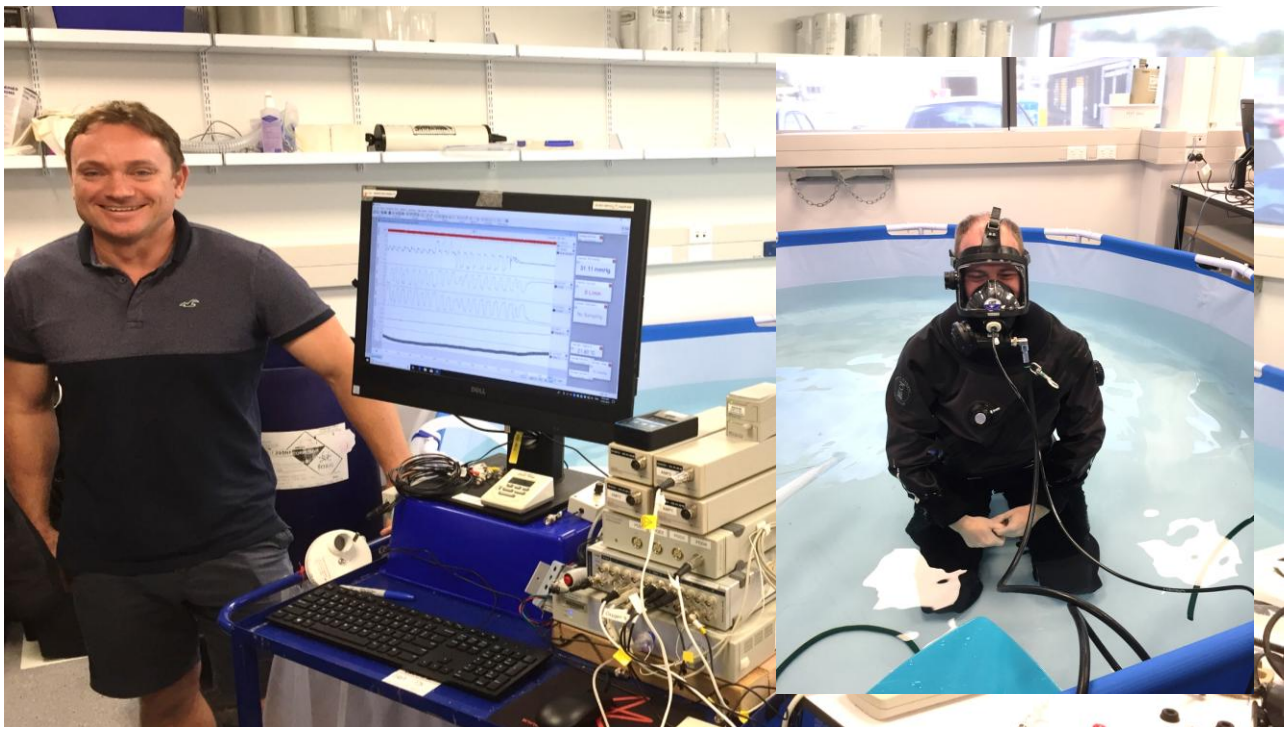

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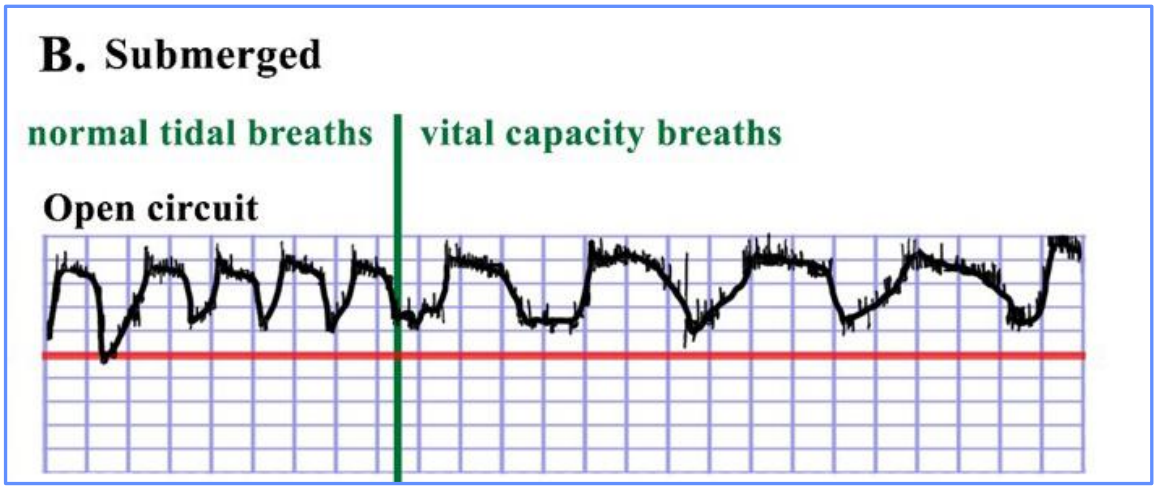
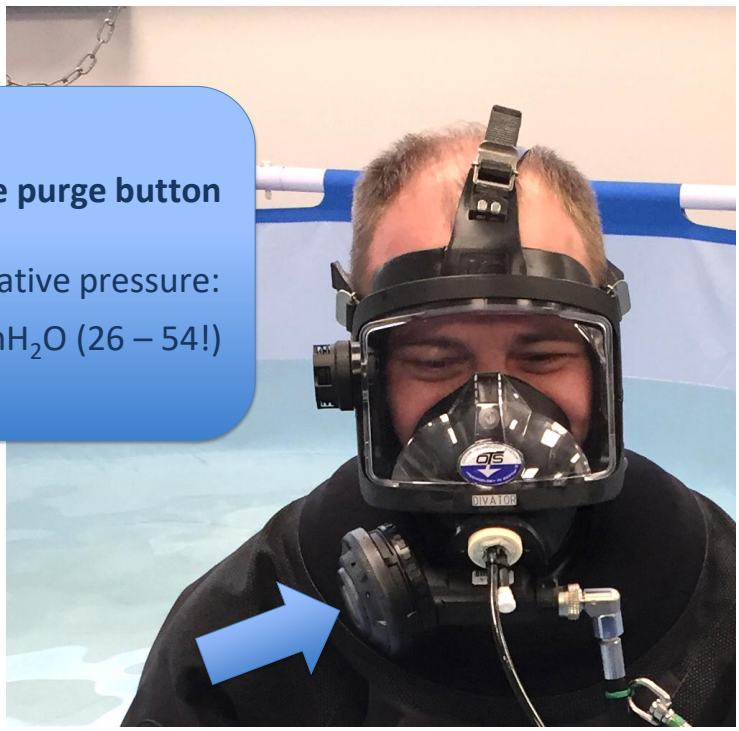


Black line: pressure inside mask

Red line: surrounding water pressure

35



Pushing the purge button

In-mask relative pressure:

Mean 40cmH_2O (26 – 54!)

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121 Diving and Hyperbaric Medicine Volume 50 No. 2 June 2020

Deep anaesthesia: The Thailand cave rescue and its implications for management of the unconscious diver underwater

Hanna van Waart[1], Richard J Harris[2], Nicholas Gant[3], Xavier CE Vrijdag[1], Craig J Challen[4], Chanrit Lawthaweesawat[5], Simon J Mitchell[1,6,7]

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[5] *Medical Association of Thailand, Bangkok, Thailand*
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sj.mitchell@auckland.ac.nz

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7481118/pdf/DHMJ-50-121.pdf

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