

Search Rubicon

[Advanced Search](#)

[Home](#)

Browse

[Communities & Collections](#)

[Titles](#)

[Authors](#)

[By Date](#)

Sign on to:

[Receive email updates](#)

[My Rubicon](#)
authorized users

[Edit Profile](#)

[Help](#)

[Rubicon Research Repository](#) >
[Rubicon Foundation Archive](#) >
[Undersea and Hyperbaric Medicine Journal](#) >

Please use this identifier to cite or link to this item:

<http://archive.rubicon-foundation.org/2168>

Title: Perception of thermal comfort during narcosis

Authors: Mekjavic, IB
Passias, T
Sundberg, CJ
Eiken, O

Keywords: cold
narcosis
air
thermal comfort

Issue Date: 1994

Abstract: We examined the perception of thermal comfort in six male subjects immersed in water at 28 degrees C (study I) and 15 degrees C (study II), breathing either room air (AIR) or a normoxic mixture containing 30% N2O (N2O). Immersions were terminated if esophageal temperature (Tes) decreased by 2 degrees C from resting levels or to 35 degrees C. At regular intervals, subjects rated their perception of thermal comfort on a 21-point scale (thermal comfort vote, TCV; +10 = very, very hot, 0 = neutral, -10 = very, very cold). For similar decreases in Tes from resting preimmersion values (mean +/- SD = -0.90 degrees +/- 0.13 degrees C and -0.92 degrees +/- 0.15 degrees C during the AIR and N2O trials in study I, and -0.90 degree +/- 0.22 degree C and -0.89 degree +/- 0.27 degree C during the AIR and N2O trials in study II), subjects perceived the immersions as less cold during the N2O trials. The median TCVs for the AIR condition of -5 in study I and -7.75 in study II, were significantly lower than those reported by the subjects for the respective N2O conditions (1.75 in study I and -5.5 in study II). It is concluded that behavioral adjustments required for maintaining thermal balance may be diminished during narcosis due to the altered perception of thermal discomfort. Assuming that the effect of inert gas narcosis on thermoregulatory responses is similar to that of N2O, then combined with the significant attenuation of heat gain mechanisms by anesthetic gases, the attenuation of the

perception of thermal comfort may represent a significant factor in the etiology of hypothermia observed in compressed air divers.

Description: Undersea and Hyperbaric Medical Society, Inc. (<http://www.uhms.org>)

URI: [PMID: 8180569](#)
<http://archive.rubicon-foundation.org/2168>

Appears in Collections: [Undersea and Hyperbaric Medicine Journal](#)

Files in This Item:

File	Size	Format	
8180569.pdf	1603Kb	Adobe PDF	View/Open

[Show full item record](#)

All items in DSpace are protected by copyright, with all rights reserved.