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Title: Narcotic potency of N2, A, and N2O evaluated by the physical performance of mouse colonies at simulated depths

Authors: Rahn, H
Rokitka, MA

Keywords: animal
mice
narcosis
nitrogen
argon
nitrous oxide

Issue Date: 1976

Citation: Undersea Biomed Res. 1976 Mar;3(1):25-34.

Abstract: The physical performance of colonies of deer mice was studied in various inert gas environments at pressures up to 31 ATA. The mice were housed in habitats wherein their diurnal running activity and social interactions could be monitored. By transferring the portable habitats and mouse colonies to a high pressure chamber, the effects of elevated inert gas pressures were studied in socially and ecologically intact surroundings. Analysis of wheel-running performance showed that either 1.1 atm nitrous oxide, 7.2 atm argon, or 20.5 atm nitrogen reduced running activity to 50 percent of its control value. Behavioral observations revealed a deterioration of physical performance and social interaction with increasing inert gas pressures. A comparison was made between ED50 (the dose that will depress a particular response by 50 percent) values obtained by studying wheel-running activity and those published for single-reflex responses. Animals Argon/*toxicity Drinking Female Gait Inert Gas Narcosis/*physiopathology Male Mice *Motor Activity Nitrogen/*toxicity Nitrous Oxide/*toxicity *Pressure Support, U.S. Gov't, Non-P.H.S.

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

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