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Title: Nitrogen elimination in man during decompression

Authors: Kindwall, EP

Baz, A

Lightfoot, EN

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Keywords: human

Issue Date: 1975

Abstract: The effect of ambient pressure on inert gas elimination during decompression was investigated using human subjects breathing air in a dry hyperbaric chamber. This was done by measuring nitrogen recovery during three different decompression schedules following identical simulated dives. Five subjects were used, each with normal pulmonary function. In each case the simulated dives consisted of exposure for 40 min to air at 4 ATA corresponding to a depth of about 100 fsw and 28 degrees C. Following these exposures each subject was decompressed in different experiments to 50 fsw (2.515 ATA) and to 10 fsw (1.303 ATA) while breathing a mixture of 80:20 helium-oxygen. In addition, two of these subjects were denitrogenated isobarically, at 100 fsw, breathing 80:20 helium-oxygen. Significant differences in nitrogen-elimination rate were observed, with nitrogen removed most effectively at 50 fsw and least at 100 fsw. To explained these unexpected results it is tentatively suggested asymptomatic bubble formation occurred at both 10 and 50 fsw. *Decompression *Diving Helium Human *Nitrogen Oxygen *Pressure *Respiration Support, U.S. Gov't, Non-P.H.S.

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

URI: [PMID: 1226586](#)

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