RUBICON FOUNDATION

Please use this identifier to cite or link to this item:
http://archive.rubicon-foundation.org/2747

Title: Xe133 elimination from human fat during negative- and positive-pressure breathing

Authors: Balldin, UI
Liner, MH

Keywords: human
Xe133 elimination
pressure breathing
Adipose Tissue
respiration
work of breathing

Issue Date: 1976

Citation: Undersea Biomed Res. 1976 Jun;3(2):163-9.

Abstract: The elimination of Xe133 from a deposit in the subcutaneous adipose tissue outside the anterior tibial muscle was recorded by an external scintillation detector in 16 human subjects during normal breathing, negative-pressure breathing (-20 cm H2o), and positive-pressure breathing (+20 cm H2O). The ambient temperature was kept at 28.0 degrees C +/- 0.1 degrees, which can be considered a neutral temperature. The xenon clearance rate was increased during negative-pressure breathing by a mean of 68 percent and decreased during positive-pressure breathing by a mean of 73 percent when compared to normal breathing. The xenon-elimination rates during the different conditions may reflect corresponding changes in adipose-tissue blood flow. Because both negative- and positive-pressure breathing may occur during diving, the uptake and elimination of inert gases in adipose tissue of a diver may be influenced; thus, the risk of decompression sickness might also be affected. The results may therefore be of importance in diving routines and in the construction of breathing apparatus for divers. Adipose Tissue/blood supply/*metabolism Blood Circulation *Diving Human Inert Gas Narcosis/prevention & control Male Masks/standards Naval Medicine Positive-Pressure Respiration Radioisotopes/*metabolism *Respiration, Artificial Ventilators, Mechanical Xenon/*metabolism

Description: Undersea and Hyperbaric Medical Society, Inc.

(http://www.uhms.org)

URI: PMID: 781973
http://archive.rubicon-foundation.org/2747

Appears in Collections: Undersea Biomedical Research Journal

Files in This Item:

File	Size	Format	
781973.pdf	1076Kb	Adobe PDF	View/Open

Show full item record