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Title: Effect of long-term hyperbaric He-O2 exposure on the weight and histology of endocrine organs in growing rats

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Abstract: The effects of long-term hyperbaric exposure on endocrine organ weight and histology and on epiphyseal-plate width were studied in growing male rats. Six groups of rats were exposed to 21 ATA He-O2 (200 mmHg O2), and six groups were maintained at 1 ATA as room-air controls. Each group contained eight rats. At intervals of of 2, 3, 5, 8, 10, and 12 weeks, one group was decompressed and studied along with a paired control group. Results indicated no changes in pituitary and adrenal gland weights. Testis weights were variable but histology and sperm content were normal. Only the accessory sex organs decreased significantly in weight; however, prostate and seminal vesicle histology were normal. Tibial epiphyseal-plate width was reduced in 21-ATA groups. These results suggest that long-term hyperbaric exposure has little effect on endocrine organs of the rat and observed weight changes are probably related to the reduced body weights. Adrenal Glands/drug effects Animals *Atmospheric Pressure Endocrine Glands/*drug effects Epiphyses/drug effects Growth/*drug effects Helium/*toxicity Male Organ Weight/drug effects Oxygen/*toxicity Pituitary Gland/drug effects Prostate/drug effects Rats Seminal Vesicles/drug effects Testis/drug effects Tibia/drug effects Time Factors

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