

condition are discussed. In all four aviators, compression to pressures greater than atmospheric produced immediate relief and theories of the etiology of post-decompression collapse are discussed in relation to this effect. The success of compression in these four cases and in two treated elsewhere by this method suggests that this form of treatment should be generally adopted for these cases; and a scheme of treatment is outlined. -- J. Am. Med. Assn. References & Reviews

- 487 Effects of High Environmental Temperature on Sweating and Skin Resistance.
R.C. Wilcott. *J. Comp. and Physiol. Psychol.* 56, 778-782 (Aug. 1963).

Contrary to observations of Kuno and Neuman results of this study show that, while rise in environmental temperature has greater effects on chest sweating and resistance basal levels than at the palm, effects at the palm are of considerable magnitude. Both areas show thermoregulatory sweating. Because of the complex anatomical structures in the hand, cooling of the hand by thermoregulatory sweating would be expected to be nearly as important as cooling of other body areas. In addition, contrary to Kuno's results, stimuli administered prior to elevation of room temperature evoked increased sweating and reduced skin resistance at both palm and chest, indicating that with some subjects arousal sweating can occur in both areas at normal room temperature. -- Aerospace Med. Absts.

- 488 Response to Cold of Eskimos of the Eastern Canadian Arctic. G.M. Brown, et al.
J. Appl. Physiol. 18, 970-974 (Sept. 1963).

Skin, muscle, and rectal temperatures and oxygen consumption of Eskimos and Caucasians were compared during an acute cold exposure involving immersion of one hand and forearm in a 5° C. (41° F.) water bath. The Eskimos consumed less oxygen, maintained their rectal temperatures at a higher level, and gave up less heat from the muscles of the limbs. Though the Eskimos had significantly more adipose tissue, average skin temperatures were the same in the two groups. The pattern of temperatures noted now and the previously observed higher blood flow in the hand and forearm of Eskimos point to increased cooling of arterial blood by returning venous blood in the extremities with resultant preservation of heat in the body core. -- Aerospace Med. Absts.

- 489 Effect of Ultrasound on the Brain of Rabbits: A Histological Study.
J. Jankowiak, C. Majewski, and E. Kubiak. *Am. J. Phys. Med.* 42, 109-112 (June, 1963).

The brains of two groups of rabbits were irradiated with ultrasound at a frequency of 1 megacycle for 5 treatments on alternate days with a power of either 2 watts per sq. cm. for 10 minutes, or 4 watts per sq. cm. for 5 minutes. Macroscopic examination showed only intense passive cerebral hyperemia. Histologic examination revealed small foci of cortical demyelination on the ninth day following cessation of treatment. Necrotic foci occurred on the twelfth day, and white areas of softening with cavities filled with necrotic masses were found on the fourteenth day, both in the cortex and in the underlying white matter. -- Aerospace Med. Absts.

- 490 Some Effects of Ultrasonic Radiation on Normal Tissues. J.W. Cowden and M. R. Abell.
Experimental and Molecular Pathol. 2, 367-383 (Aug. 1963).

Lesions could be produced in many different tissues with ultrasonic irradiation at intensities varying from 1 to 3 watts per square centimeter for periods of 1 to 15 minutes. The higher the intensity and the longer the duration of treatment, the more severe were the lesions. Focused ultrasound waves of 37.5 total watts for 5 to 15 minutes produced localized areas of necrosis in liver. Other histologic lesions produced by various intensities and durations of treatment included necrosis, inflammation and edema of skin, subcutaneum, and muscle; degeneration, necrosis,

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