

Blood pressure and pulse rate were determined every two hours on 279 healthy persons, 210 men and 69 women, between the ages of 35 and 45, who worked alternatively day and night. The change from day to night work and vice versa took place every eight days.

During the day the blood pressure and the pulse rate values of both men and women were within normal limits. In men the systolic blood pressure, the blood pressure amplitude and the pulse rate were significantly lower during night work than during day work; the diastolic pressure was not changed. In women who did light work, the systolic and diastolic blood pressure and blood pressure amplitude dropped during the night; the pulse rate did not change. In women who did heavy work, the blood pressure was not changed, but the pulse rate was significantly increased. Pulse rate and blood pressure were significantly highest in men who did heavy work during the hours from 2 p. m. to 10 p. m.

In the majority of the persons examined, the day rhythm of pulse and blood pressure was similar to that of persons who worked and slept during normal hours. That was demonstrated most clearly by a graphic presentation of the product of pressure amplitude and pulse rate. The fact that the day-night rhythm remains the same with alternative working and sleeping hours as with normal working and sleeping hours seems to be significant with respect to the mental efficiency and the activity of the digestive organs during the night. The well known day rhythm of the alimentary canal does not adapt itself any more to the inversed working and sleeping hours than does the circulation.

Therapeutic trials with various drugs showed that a compound of 0.04 theophylline and 0.036 ephedrine (peripherin 704 A d₁®) given in doses of 10 drops by mouth at 8 p. m. and at 1 a. m. seems to be best suited to bring the circulation during the night and during the day to one level with regard to blood pressure, pulse rate and specific weight of blood. Even the decrease in mental efficiency during the night may be prevented. The effectiveness of this drug should be tested on persons who are doing night work associated with great responsibilities.

OXYGEN POISONING IN MAN. K. W. DONALD, Brit. M. J. 1:667 and 712, 1947.

The relevant literature is reviewed. Experimental data are grouped under the following headings: (1) variation of oxygen tolerance in man on land and under water; (2) time-pressure relationship for men breathing oxygen under water, and maximum nontoxic depth under water at rest; (3) effect of work on oxygen tolerance; (4) effect of temperature on oxygen poisoning; (5) signs and symptoms of oxygen poisoning on land and under water, including an account of the off-effect, and (6) investigations to determine pulmonary damage in man, and cardiovascular, neurological, electroencephalographic effects, and the toxic effect of oxygen on brain metabolism. The relation of oxygen poisoning to epilepsy and the possibilities of further investigations are discussed. The danger of breathing oxygen at increased tensions is emphasized.

A. B. [CHEM. ABST.].

Occupational Diseases and Hazards

STANNIC OXIDE PNEUMOCONIOSIS. CARROLL C. DUNDON and JAMES P. HUGHES, Am. J. Roentgenol. 63:797, 1950.

Dundon and Hughes present the clinical, roentgenological and autopsy observations on a man of 72 whose working history indicated that for 18 years (ending in 1930) he had been exposed to stannic oxide fumes in detinning operations. An unusual chest roentgenogram shows uniform mottling of both lung fields. There were no respiratory symptoms, and vital capacity was 85 per cent of normal. The patient had a cancer of the prostate, which was presumably the cause of death. Permission to examine the thorax and abdomen was given. The result is a truly remarkable description of benign pneumoconiosis, with excellent cuts, and analytical data showing the distribution of the SnO₂, complete absence of fibrosis and no indication of harm to the patient from the dust inhalation.

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