

- 471 Heatstroke. M. E. Barry and B. A. King.
S. African Med. J. 36, 455-461 (June 9, 1962).

During the past 7 years, 97 Africans have suffered heatstroke in the deep-level gold mines of the Orange Free State. Twelve have died. In the authors' experience, the risk of heatstroke begins when the wet bulb temperature exceeds 84°F. The main etiological factor, apart from the environment, was hard work. Most of the casualties occurred in workmen who were regarded as being acclimatized to the conditions. The clinical features which were observed reiterate the best descriptions of heatstroke: disorientation and aggressive behavior followed almost immediately by collapse and unconsciousness, a hot dry skin, high body temperature, coma, incontinence of watery feces, rapid pulse and respiration, and coarse tremors. Laboratory findings included neutrophil leucocytosis, low blood carbon dioxide content, a moderate rise in blood urea, and proteinuria with granular casts. Rare abnormalities included jaundice and renal failure. In fatal cases there were petechiae and chromatolysis of the neurones of the cerebellum and cerebral cortex. Patients who recovered had retrograde amnesia. Cooling was achieved by ice packs and bathing the skin with ice water in some patients, and by the Guthrie and McCracken method in others. Chlorpromazine was given intravenously to prevent shivering, and pressor agents were used to combat shock.

-- Cond. from Bull. Hyg.

- 472 The Practical Assessment and Control of Industrial Noise. H. J. Purkis.
Sanitarian (London) 71, 211-217, 221 (Dec. 1962).

This paper describes a comparatively simple procedure for noise assessment, using measurements made with a sound level meter, which may prove accurate enough to give guidance in such cases. Since remedial measures are often necessary, the paper also describes some of the principles of sound insulation and absorption used in noise control.

-- Public Health Eng. Absts.

RADIOACTIVITY AND X-RADIATION

- 473 Cancer Therapy: Evaluation of Supervoltage X-Ray—A Review of the Literature. L. G. Jacobs.
Calif. Med. 97, 163-165 (Sept. 1962).

Statistical evidence that indicates that cure rates achieved by supervoltage are not significantly different from those achieved by orthovoltage in carcinoma of the tonsil and ovary is presented. The higher depth dose of supervoltage therapy may produce severe damage to structures about the tumor, and the assumption that a greater number of cures will result because of dose increase must be balanced against the well documented fact that severe damage to the tumor bed lessens rather than increases the proportion of cures. To evaluate the relative benefits, two forms of cancer were selected for review. Cancer of the tonsil was chosen as an example of a relatively accessible tumor and cancer of the ovary as a deep seated tumor. A list was made of the number of cases treated, the number of 5-year survivals, and the voltage range. The survey showed that the increased cost of supervoltage is not associated with better cure rates.

-- Nuclear Sci. Absts.

- 474 An Installation to Avoid Direct Radiation Hazards in X-Ray Analysis. W. Hughes.
J. Sci. Instr. 39, 564-565 (Nov. 1962).

The International Commission for Radiological Protection has made recommendations which would give greater protection against accidental exposure to radiation in installations used for x-ray analysis. A system which embodies these recommendations has been developed and put into operation in this laboratory. It is based on the principle that, unless the x-ray tube ports are either closed or have a goniometer in position in the x-ray beam, x-rays cannot be produced.

-- Public Health Eng. Absts.