

are given in Table 3 and in Figs. 2, 3 and 4. It should be noted that metabolism and heat dissipation values are proportional to the body surface areas of the persons considered, and that the data referred to are only for persons having an average surface area of 19.5 sq ft or that of the average adult American male, 5 ft 8 in. in height and weighing 150 lb, and will therefore not apply to many audiences made up largely of women or younger persons. Fig. 5, taken from the work of Du Bois²⁶, gives the relation of body surface area to height and weight, and may serve to

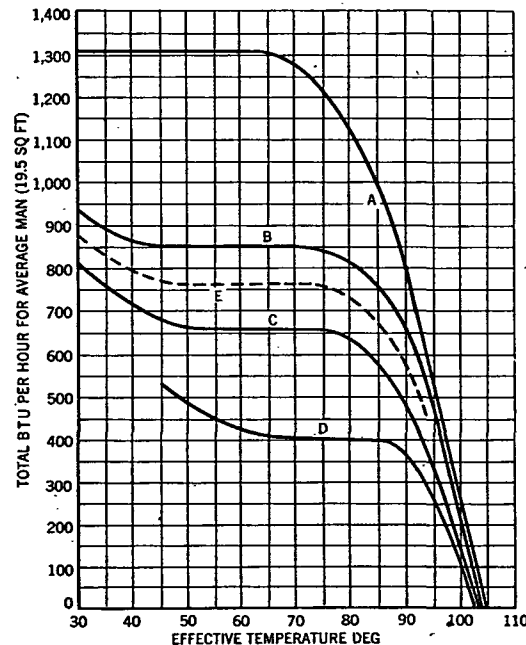


FIG. 2. RELATION BETWEEN TOTAL HEAT LOSS FROM THE HUMAN BODY AND EFFECTIVE TEMPERATURE FOR STILL AIR^a

^aCurve A—Persons working so as to have a metabolic rate of 1310 Btu per hour. Curve B—Persons working so as to have a metabolic rate of 850 Btu per hour. Curve C—Persons working so as to have a metabolic rate of 660 Btu per hour. Curve D—Persons seated at rest, or with a metabolic rate of 400 Btu per hour. Curves B and D based on test data covering a wide temperature range. Curves A and C based on test data at an Effective Temperature of 70 deg and extrapolation of Curves B and D. All curves are averages of values for high and low relative humidities which apply with satisfactory accuracy for most considerations. For special problems requiring a higher degree of accuracy see more detailed A.S.H.V.E. Research Laboratory reports.

correct the data for audiences other than adult men. The curves in the figures are based on certain averages of test results with different humidities, and are sufficiently accurate for most practical applications. Where greater precision in the applications of the results is required, or for extreme variations in temperature and humidity, the reports²⁷ covering the A.S.H.V.E. Laboratory work may be consulted.

The curves in Figs. 2, 3 and 4, and proper interpolation between these

²⁶DuBois, D. and E. F. (*Archives of Internal Medicine*, 1916, Vol. 18, p. 865).

²⁷Loc. Cit. Note 13.

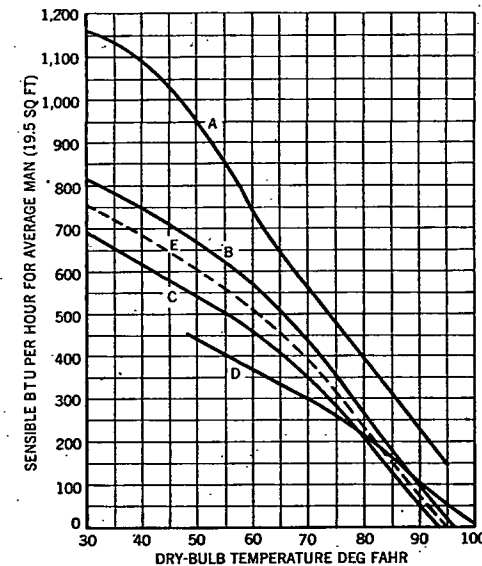


FIG. 3. RELATION BETWEEN SENSIBLE HEAT LOSS FROM THE HUMAN BODY AND DRY-BULB TEMPERATURE FOR STILL AIR^a

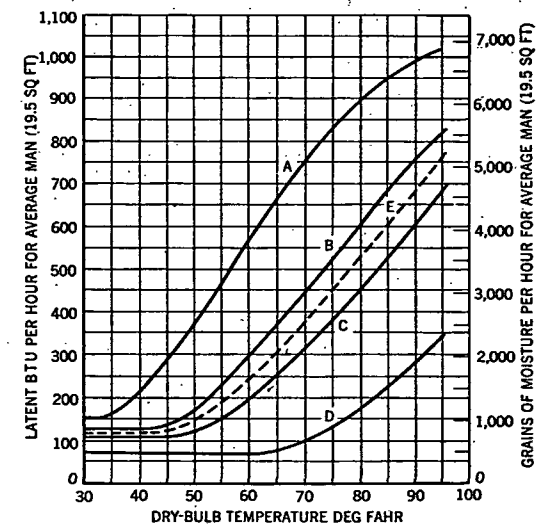


FIG. 4. LATENT HEAT AND MOISTURE LOSS FROM THE HUMAN BODY BY EVAPORATION, IN RELATION TO DRY-BULB TEMPERATURE FOR STILL AIR CONDITIONS^a

^aLoc. Cit. See footnote a, Fig. 2.