

and in the clothing during previous subjection to hot and humid outside conditions. While studies²¹ have shown that for healthy individuals this shock is not harmful under some conditions it may be unpleasant or even harmful. People entering and remaining in cooled spaces for short periods, 15 min or less, may be satisfied with less cooling. For long occupancy very little deviation from the optimum effective temperature is indicated.

An exit shock upon re-entering a warm atmosphere is equally plausible. Experiments at the A.S.H.V.E. Research Laboratory²² indicated no demonstrable harm to a healthy individual. Acclimatization occurred

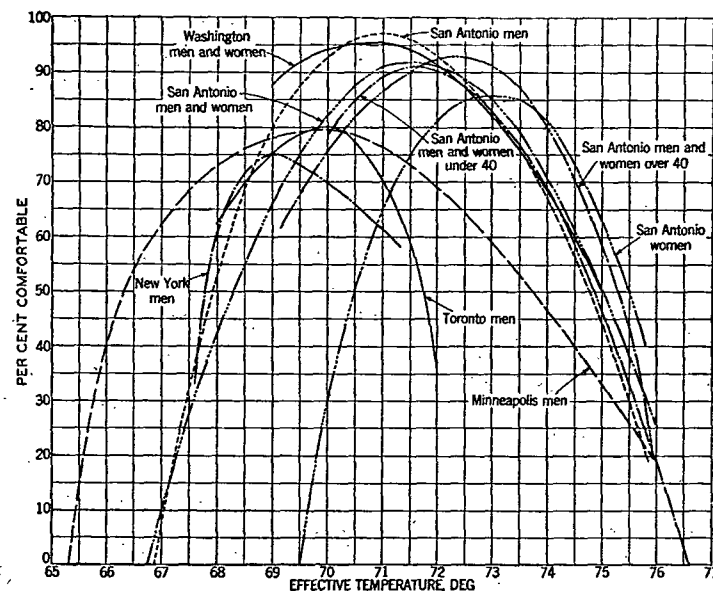


FIG. 11. RELATION BETWEEN EFFECTIVE TEMPERATURE AND PERCENTAGE OBSERVATIONS INDICATING COMFORT

as soon as normal perspiration was established. Mild exercise shortened the adaptation time.

A great number of persons seem to be fairly content in summer with a higher plane of indoor temperature. Studies by the University of Illinois²³ in cooperation with the A.S.H.V.E. Committee on Research indicate that effective temperatures as high as 74.5 deg are acceptable in the living quarters of a residence, and while this condition is not representative of optimum comfort it provides sufficient relief in hot weather to be acceptable to the majority of users, in the interest of economy. Individual differences of comfort among the minority should be counteracted by suitable clothing.

Satisfactory comfort conditions for persons at work²⁴ vary depending upon the rate of work and the amount of clothing worn. In general, the

greater the degree of activity, the lower the effective temperature necessary for comfort.

For prematurely born infants, the optimum temperature varies from 100 to 75 F, depending upon the stage of development. The optimum relative humidity for these infants is placed at 65 per cent²⁵. No data are yet available on the optimum air conditions for full term infants and young children up to school age. Satisfactory air conditions for these age groups are assumed to vary from 75 to 68 F with natural indoor humidities. For children (having high metabolism) at school, in winter clothes, 70 F has been considered correct, while in a gymnasium 55 F has been recommended.

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