

experimental observation. The book comprises eleven Chapters. In the first chapter the morphology and innervation of the sweat glands are described. Chapter II contains a clear account of the methods which Prof. Kuno and his collaborators have employed in the laboratory for the measurement of "perspiration" and a simple but acknowledged yet to be imperfect portable apparatus for use by the Physicians is also described. Chapter III deals with a discussion of the descriptive terms employed and of various factors influencing "sensible" and "insensible" perspiration. Chapter IV contains an account of thermal sweating, a subject on which there appears to be no previous description of authentic nature. This chapter is of considerable importance. In the fifth chapter an interesting account of the features of mental sweating with special reference to the causes of such sweating is given. Further the special characteristics of the perspiration of the palm and the sole on the one hand and the other of the axilla are described. In the sixth chapter the effect of mental stress on the perspiration at varying temperatures is discussed and the question concerning the intrinsic causes of variation in the "palmar sweating" and suppression of general sweating is declared to be obscure at present. The results of a systematic investigation of the features of the sweating due to muscular exercise are embodied in chapter VII and the conclusion that "no process other than the effort necessary for performing muscular exercise can therefore be considered as the cause of this sweating" is reached. The asphyxial conditions during very strenuous muscular exercise would however be an additional cause of the sweating on the general surface of the body. In chapter VIII the physiological necessity for supplying in time water and sodium chloride lost by perspiration is described. The importance of adding minute quantities of salt to the water that workers in over-heated

places drink is discussed. Chapter IX is concerned with an account of variations in the ability to perspire due to alterations in the surrounding temperature and to abnormal conditions of the body itself. Individual variations in the ability to perspire with reference to mountain climbing, forced marches of soldiers, etc., are observed. Further the possibility of "training of the sweat glands" is noted. The influence exerted by the osmotic pressure of blood in regulating the sweating process is impressively dealt with, and the injection of hypertonic salt solution has been suggested as worthy of trial in cases of hyperhidrosis. In chapter X a systematic account of the processes involved in the production and inhibition of sweating is offered. Besides noting the variations in the excitability of the individual sweat glands and the periodic discharge of sweat from individual glands, the oxygen consumption of actively secreting glands is dealt with. Chapter XI details the physiological significance of sweating. According to the author, in the human individual the sweat gland of the general body surface plays a very important rôle in temperature regulation, whilst those on the sole and the palm assist by their perpetual secretion in protecting the skin and by sweating facilitate physical work. The sweat from the human axilla disseminates the axillary scent which seems to have a sexual significance. Further, the function of the sweat glands in the elimination of lactic acid during muscular exercise, and the consequent regulation of the H-ion concentration of the blood is discussed. There is an extensive and useful bibliography, and the book is well indexed. The general get-up of the volume is excellent like all other books published by J. and A. Churchill Ltd. The volume deserves a place on the book shelf of every advanced student, teacher and researcher engaged in the study of Physiology.

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Errata.

* 1935, 3, 347-348 (Of. The Theory of Liquids).

(1) In every instance for the suffix ' $m\mu$ ' read ($m.p.$)

* Through oversight the proofs were not sent to the author.

(2) In equations (4), (6) and (8) for ' γ ' read ' ν '

(3) In equation (6) and (7) for ' M ' read ' \bar{m} '.

(4) Foot-note 2, for 477, read 497.

(5) In equation (10) for $\sigma \frac{m-1}{m.\mu}$ read $(\sigma_{m.p})^{m-1}$