ment gave relief from headache at times and was accompanied by sensations of pleasure; there was also dilation of the pupil of the eye, which would lead one to observe that the relation of vasomotor constriction and the dilation of the pupil was present here. It is the opinion of the author that in this case an unusual inherited neuromuscular and dermal development was displayed in connection with voluntary control of the arrectores pilorum muscles. In the lower animals the power of the erection of the hair would seem to be accompanied by a high development of the panniculus structures. In order to find out whether the arrectores pilorum contained striated muscles or not a biopsy was performed, but only smooth muscle was revealed. This discovery proved that the former distinction between voluntary or striated and involuntary or unstriated muscles could no longer hold good, as it was an example of smooth muscle which was at the same time voluntary. Where immediate and rapid action is required it would appear that striated muscles occur.

JELLIFFE.

ACTION OF BATHS ON METABOLISM. H. WINTERNITZ (Deutsch. Arch. f. klin. Med., 1902, Vol. 72, Nos. 3 and 4).

The results of the studies of this author are stated by him as follows: (1) The sand-bath considerably increased the consumption of oxygen and caused a discharge of carbonic acid gas more than that occurring in fever, although there was no increase in temperature or change in the general conditions; (2) the mud-bath caused no especial change in oxidation; the application of irritants like mustard to the skin increased the production of heat and carbonic acid, and the consumption of oxygen; (3) the carbonic acid bath caused absorption of the gas; (4) the sulphur bath appeared to have no effect upon the exchange of gases.

JELLIFFE.

HYSTERIA AND THE LACRIMAL REFLEX. W. G. SPILLER (La. Sém. Méd., 1902, No. 23).

From the observation of two patients the author suggests systematic tests for the presence or absence of the tear reflex when there is a failure of touch sense about the face, as a sure means of distinguishing between true centric and peripheral nervous disease and hysteria. The two patients upon whom these observations were made had had the Gasserian ganglion taken from one side for obstinate neuralgia. On tickling the nasal mucous membrane on the side of the operation, he found that no tears could be made to flow from the eye on either side, but if the mucous membrane of the nares on the normal side was touched, an immediate reflex flow of tears followed. When bits of paper were placed between the upper lid and the ball of each eye no tears appeared on the side from which the ganglion had been taken, but there was a copious flow from the opposite eye. The important differential point demonstrated by these experiments is that, while the manifestations of hysteria attack the eye quite as much as the other organs, chiefly in the form of anesthesia of the conjunctiva, and the palpebro-ocular reflex may be totally abolished, the lacrimal reflex is not affected at all. By the use of Dr. Spiller's experiments hysterical bulbar anesthesia can be readily distinguished from that due to trigeminal partial or total paralysis.

JELLIFFE.