them with some old subjective observations on block. To quote one case; Goldschneider[2] found that the order in which skin sensations disappear, when the innervation is blocked by pressure, is cold, contact, heat and pain. Therefore a comparison of the changes in the action potential wave with such a series of observations gives an indication of the relative sizes of the fibers carrying the different modalities; and it, together with similar comparisons using data obtained by other methods of blocking nerves, should aid, when compared with the corresponding losses of function, in the analysis of a nerve trunk for the functions of its various fibers.

[1] Meek, W. J., and Leaper, W. E., *Am. J. Physiol.*, 1911, xxvii, 308.
[2] Goldschneider, *Pfluger's Arch.*, 1886, xil, 115.

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Skin Reactions to Scarlatinal Streptococcus Filtrate in New-Born Infants and Their Mothers.

JEAN COOKE.

From the Department of Pediatrics, Washington University School of Medicine, and the St. Louis Children's Hospital.

Observations on over 150 infants during the first 2 weeks of life, and their mothers, were made by noting (1) the reaction of the skin to 2, 20 and 50 standard skin test doses of scarlatinal toxin, (2) the occurrence of antitoxin in the blood of a number of these infants and their mothers, and (3) later skin tests on a number of the same infants between the ages of 6 weeks and 2 months.

It was found that the skin of infants in the first 2 weeks of life does not react to small amounts (2 S. T. D.) of toxin, only one instance of a positive reaction having been observed. With larger amounts (20 and 50 S. T. D.) only a small proportion (about one-eighth) show positive reactions, and the mothers of these babies in practically every instance have positive reactions to two skin test doses. It was quite exceptional for an infant to give a positive reaction to 20 or 50 S. T. D. if the mother was negative to 2 S. T. D. The presence of antitoxin in infant's serum had no relation to the infant's skin test, but is associated with the presence of antitoxin in the mother's blood. No antitoxin was demonstrated in infants of mothers who reacted to 2 S. T. D., but it was rather constantly present in infants whose mothers gave negative reactions to 2 S. T. D., even though skin tests with larger amounts were positive.

On later examination of the infants at the age of 6 weeks to 2 months, the skin reaction had become positive in certain babies, to the larger amounts (20 to 50 S. T. D.) of toxin and occasionally to 2 S. T. D. This tendency was most marked in those whose mothers reacted to 2 S. T. D., less marked in those who required 20 S. T. D. to give a reaction, and still less in those who required 50 S. T. D. None of the infants whose mothers were negative to 50 S. T. D. became positive with 50 S. T. D. or less during the first two months of life.

Apparently, the skin of new born infants does not react to small amounts of scarlatinal toxin, and reacts to larger amounts in only a small proportion of cases. If, later, the baby's skin develops a positive reaction, the test is positive first with larger amounts of toxin and later with small amounts. The skin reactivity develops earlier in infants with no antitoxin in the blood, at birth, than in those whose blood contains antitoxin.

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Relation of Skin Reactions to Scarlatinal Streptococcus Filtrate in Children, to Antitoxin in Blood.

JEAN COOKE.

From the Department of Pediatrics, Washington University School of Medicine, and the St. Louis Children's Hospital.

A large number of children over 3 years of age have been given skin tests with varying amounts of a standard scarlatina streptococcus filtrate toxin. In a group giving a positive Dick test with 1 or 2 S. T. D., no antitoxin was demonstrable in the blood. In a few children who were negative to 2 S. T. D., but positive to 5 S. T. D., the antitoxin determinations were somewhat irregular, although when 10 or 20 S. T. D. of toxin or more was necessary to obtain a skin reaction, antitoxin was readily demonstrable, and in those children who gave negative skin tests to 100 or 400 S. T. D., antitoxin was present in the blood in rather large amount.

In tests on younger children a similar association of antitoxin with negative skin tests was found. A certain number of infants, more commonly in the first year, but occasionally later, who gave negative skin reactions to 20 or 50 S. T. D. of toxin, had no antitoxin demonstrable in the blood.