

THE NURSE AND HER RELATION TO IMMUNOLOGY ANTIGENS AND ANTIBODIES.*

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Even a cursory glance at the history of the development of medicine will disclose a constant tendency towards measures aimed at the prevention of disease. Even in the primitive days when diseases were looked upon as manifestations of the disapproval or anger of the gods, or as resulting from the machinations of demons and evil spirits, we find, in the early writings, much prominence given to directions for propitiating and appeasing the various influences held responsible, with the idea of warding off the diseases thought to result from their evil influence.

With the discovery of bacteria and protozoa and the gradual evolution of an understanding of the mechanism whereby they produce pathological effects, the efforts to counteract and prevent their activities became more systematized and intelligent, so that the present century finds preventive medicine securely placed upon a sound and scientific footing and ever advancing in its warfare for the eradication of disease.

The history of nursing likewise shows a constant trend in the same direction, the more marked because it has taken place in a relatively short time. It is not so very many years since the days of Sairey Gamp, whose attention was focussed less upon the patient than upon the brown bottle on the mantelpiece; or from the days of Florence Nightingale, the first to realise that nursing involved, not only the care of the sick, but the prevention of the further ills which might befall them, to the nurse of to-day whose greatest endeavours are directed not only to care of the sick but to the safeguarding of the well—in a word, preventive medicine.

It is not enough, however, to rely upon the education of doctors and nurses alone. A most potent weapon in the fight against disease lies in the education of the public, and it is in this connection that the nurse stands in a most important and strategic position arising from her close and intimate relation to the public whom she serves, for often a clear and simple

explanation from her, an intelligent answer to the question of some "doubting Thomas," will be of more value than a host of public lectures or articles in popular magazines which often fail to reach those for whom they are most intended.

It is evident, therefore, that if the true nurse is to act as a medium for the dissemination of information to the public, she must be well grounded in the subject which she is to teach, and it is the purpose of this paper to consider from this standpoint the practical relations of the problems of immunology to the prevention of disease.

The use of serums and vaccines has become so common as to cease to arouse much interest and to be looked upon as a matter-of-fact procedure by the nurse, surrounded and harassed by a multitude of duties, and her curriculum is, as a rule, so crowded as to leave neither room nor time for a consideration of the principles upon which their use is based—and yet, if she were able to express those principles in simple language there would, oftentimes, be a heavy mortality in the ranks of the various "antis" and of those who object to the use of serum "because it is such a strain on the heart."

The principles of immunity may be briefly expressed. Immunity may be looked upon as a term expressing the power of an individual to resist disease, or, if amplified, to resist the effects of micro-organisms or their products, which are pathogenic, for other individuals of the same species.

It had long been known as a matter of common observation that individuals who had suffered from an attack of certain diseases seldom, if ever, again contracted the same disease; and, moreover, that certain individuals under the same circumstances of exposure, apparently were not susceptible to the disease at all. Two things were obvious: in the first instance, something must have been produced in the body of those recovering from these diseases whereby they were thereafter protected; and in the second instance, something of a protective nature must have been present in the bodies of those who were not susceptible.

To find out what these substances were, how they were produced, and whether they could be produced at will and transferred from one to another, were the objects of studies culminating in our present knowledge and application of the principles of immunity in the prevention and treatment of disease in general.

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