

paralyzed the action. In all of these cases the protective action of the protein of the intestinal extract must be borne in mind.

The inhibition by Ca precipitants may aid in explaining the toxicity of these agents for nucleated cells. The fact that while small amounts of Ca seem to be necessary for the action, larger amounts inhibit is of interest in connection with Ca metabolism. Nor can we disregard the fact that many of these substances (oxalate, tartrate, fluoride, uranium salts) produce a tubular nephritis in animals. It would appear that this was associated with a disturbed nuclein metabolism of the epithelial cells, and through this of the secretion of Ca and P, and as other evidence would indicate, of sugar and uric acid also; so that the excretion of Ca for example should be a good index of this function. This view is intimately bound up with the regulation of the blood reaction through phosphate excretion, and probably also to the related secretion of CO₂ by the lungs, which, as well as the kidneys, are high in phospho-nuclease. The intertransformation of Ca carbonate and phosphate in the bodies of higher and lower animals is a striking phenomenon in this connection.

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Studies on so-called protective ferments. VI. On the action of anesthesia in anaphylaxis.

By **J. BRONFENBRENNER** and **M. J. SCHLESINGER**.

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It is assumed by Besredka,¹ that the shock in anaphylaxis is due to the direct toxic action of protein split products upon the cells of the central nervous system. Such a view of shock would most satisfactorily explain why anesthesia prevents the shock. The experiments of different authors however have definitely shown that the central nervous system is not primarily, but only secondarily involved in the anaphylactic symptom-complex. They failed however to explain the action of certain anesthetics as preventing shock.

¹ C. R. Soc. Biol., 1907, T. 62.

In studying this question we found that certain anesthetics increase the antitryptic action of the blood sometimes as high as 100 per cent. and more. Although there might be some other relation, this increase of antitrypsin in the blood alone is sufficient to stop the activity of proteolytic enzyme and thus to avert the shock. As the animal recovers, the amount of antitrypsin is gradually coming down to normal and accordingly proteolytic enzyme is able to exert its action only in part, thus extending the process in duration at the expense of severity.

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The experimental plant of the New York State Commission on Ventilation.

By C.-E. A. WINSLOW.

[From the New York State Commission on Ventilation.]

The physiological investigations of the last twenty years have indicated that the ordinarily observed results produced by the air of crowded unventilated rooms are due to thermal rather than chemical conditions, high room temperatures producing serious physiological derangements, while the chemical constituents of the air of such rooms appear not to exert any measurable effects. For the further study of the reactions of the body to moderately high room temperatures, and for a more exhaustive investigation of possibly undetected chemical influences, the New York State Commission on Ventilation has equipped an experimental plant in rooms courteously placed at its disposal by the trustees of the College of the City of New York.

Since the effects to be observed would naturally be slight, it was necessary to provide a plant on a large enough scale for the observation of a number of subjects over considerable periods of time. On the other hand, since we were dealing not with calorimeter experiments but merely with the effects of ordinary atmospheric conditions upon the human body, it was not essential that these atmospheric conditions should be regulated within closer limits than those attainable under the best practical conditions.

The observation room of the plant is ten feet by fourteen feet