

The Pasteur treatment is furnished to physicians in the United States by the Public Health and Marine Hospital Service, and several of the States and some cities have established laboratories and are prepared to administer the treatment. Laboratories other than these are maintained as private enterprises, and I believe that all within the United States are licensed after inspection by the federal government.

THE ACTION OF SOME REMEDIES ON THE HEART IN DISEASE.

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It is with some hesitation that one approaches the subject of disease of the heart from the standpoint of the therapist. The first cause of hesitation is the lack of much new matter and the difficulty of presenting the old in a new light. The second is that as yet the pharmacologists have not been allowed to carry out treatment under scientific conditions in a sufficient number of cases to have acquired any real knowledge of the underlying pathological physiology of the heart in disease. Our knowledge of the action of drug-stuffs upon the normal heart muscle is every day becoming more exact, and from what we know of the diseased conditions we can in many cases fairly infer what will occur when certain remedial means are adopted, and in many instances these inferences simply serve to confirm the empirical knowledge of the clinician.

It will perhaps enable the whole subject to be approached in a fresh manner if we follow the new physiological descriptions of the heart's action and consider the pathological conditions which affect rhythm, contractility, irritability, conductivity, and tone.

The pathological variations of rhythm, or more simply, rate with a normal heart beat, are of two types, a super-normal or a too fast rhythm and a sub-normal or too slow rhythm.

Supernormal rhythm.—A heart warmed artificially beats more rapidly but relaxation is equally good, its contractility also remains as before or increases; in other words its rhythmicity has altered positively. The heart in moderate fever beats rapidly, not owing, of course, to the increase in temperature alone but also to the action of the toxins, but its beat in many cases is efficient, contractility and tone being normal. If we judge from the action of drugs, it is still under the control of the vagus centre since its rate may be decreased by digitalis, for example. In severe toxæmia there is some experimental as well as pharmacological evidence that the