

off, and the diphtheria bacilli rapidly disappear from the throat. An urticaria-like rash appears usually within two weeks of the injection ; this is apparently due to the action of the foreign blood serum, and not to the antitoxine.

In the Berlin report there are records of three relapses, which makes it probable that the immunity produced by the serum injections only lasts for a few weeks. The Paris results given in Roun's paper before the International Congress are equally as favorable as those given above. Of 300 cases where the diagnosis was confirmed by bacteriological examination there were 78 deaths, a mortality of 26 per cent. Roun also gives a careful analysis of his statistics, and compares them with the results in the same hospitals under other methods of treatment, but it is not necessary to repeat them here. Suffice it to say that his results agree throughout with those obtained in Germany, not only in the lessened mortality, but also in the curtailment of the duration of the disease, and the rarity of complications following.

It would seem, then, that we have in the blood-serum treatment of diphtheria something much more efficacious than anything that has yet been discovered. But we must not look for progress to stop here, because we have every reason to expect that, in the near future, a method will be found by means of which the antitoxine may be isolated from the serum, and so concentrated that smaller doses will be required, and still better results produced. This has been done, to a certain extent, for the tetanus antitoxine, and it will surely be done for diphtheria also.

[Since writing the above a method has been published (*Zeitschrift für Hygiene und Infectious krankheiten*, Bd. xviii.), which is briefly as follows : The goats are strongly immunized, when it is found that a certain quantity of antitoxine passes over into the milk ; this milk is collected, and, after separation of the fat and casein, the antitoxine is precipitated and dried. In this manner a continuous supply of the antitoxine is obtained without the serious drain upon the animal's health which the monthly bleeding necessitates.]