

Dr. Park,⁴ however, of the New York Health Department, states that the inspectors of this department immunised from January 1st, 1895 to January 1st, 1900, 6,506 cases with diphtheria antitoxin, of which cases 55 developed the disease without fatal results. Among these 6,506 persons—mostly children and most directly exposed to diphtheria, no fatal cases developed within thirty days, with the single exception of one patient who had scarlet fever as well. He says "Let me also recommend its use in all suitable cases for immunisation. It gives us a guarantee of at least two weeks of safety and this can be lengthened at will by repeating the dose."

Dr. Shurly¹⁰ of Detroit goes even further. After deploring the ravages of diphtheria, especially amongst the poor of our large cities, he recommends the general adoption of a prophylactic dose of antitoxin to every child of croup age, viz.: under ten years exposed to diphtheria. He believes this is the chief remedy to diminish the mortality. The use of this preventive is especially indicated in the presence of adenoids and enlarged tonsils. He advises the early administration of the serum, without waiting for bacteriologic diagnosis. Antitoxin employed twelve hours or more prior to operative interference, will reduce the mortality of intubated cases at least 50 per cent.

These are the advantages that certainly ought to enhance its value, but, does it cause any injurious effects?

Dr. Washbourn³ claims that several cases are recorded in which fatal collapse has occurred immediately after the injection of the antitoxin. He says that similar results have followed the subcutaneous injection of morphia. This, however, is most uncommon and not by any means the difficulty met with in its use. Writing five years ago, he remarked that the injection of antitoxin frequently caused an eruption, and sometimes pain in the vicinity of joints. These symptoms usually appeared a week after injection. The eruption was generally erythematous or urticarial and might be uniformly distributed, or, confined to a particular part, *e.g.*, extensor surfaces of the limbs. The eruption was accompanied by pyrexia—the temperature sometimes reaching 104° Fahr. The pains in the joints were less common, while at times there was effusion into the latter. These complications passed off after a few days, and while none proved fatal, still naturally they were most undesirable. They were thought to be due to something else in the serum besides the specific therapeutic body.

In fact Klein² had a serum dried by evaporation for him, which kept indefinitely its antitoxic and immunising action; this he diluted with a definite amount of water and used for injection. He found that the rash, as a rule, did not appear with this, and so thought that the