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### Key passages

## CLINICAL RESULTS WITH MEASLES STREPTOCOCCUS TOXIN AND ANTITOXIN

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### TESTS CONDUCTED AT THE CHILDREN'S HOSPITAL

At the time the work was started at the Children's Hospital by Dr. Munro, an epidemic of measles was well under way and the children in every ward had been directly exposed to one or more active cases of measles. Histories, as definite as possible, were obtained at once. Half of the patients with negative histories to measles were immunized with 20 cc. of measles antitoxin, the remaining half being left untreated as controls. Fifty-two children, varying in ages from 3 to 12 years, were under observation (table 1). Twenty-six children with negative histories to measles were given prophylactic doses of measles antitoxin and twenty-six with negative histories were left as controls. The cases for treatment were picked according to their location in the wards and all children were as equally exposed as the usual hospital conditions with small wards would allow. In alternate negative cases, injections were made with the antitoxin and about the usual number with negative histories contracted the disease among the controls. It has been our experience and the experience of others in hospital practice that measles histories obtained from hospital patients in general are unreliable and that a larger number of children with negative histories have had the disease than would be expected. This, of course, necessitates, in a clinical test of this sort, at least an equal number of controls in the same wards and under

like conditions receiving no treatment, in order to aid in determining the expectancy among the treated cases. If a proper control is not carried out the resulting figures are of no value whatever.

TABLE 1.—*Munro's Series at Children's Hospital (Dose, 20 Cc. of Measles Antitoxin)*

Cases with negative histories..... 52	
Received measles antitoxin..... 26	Did not receive antitoxin..... 26
Contracted measles.... 1 (3.8%)	Contracted measles..... 8 (30.7%)
Remained well..... 25 (96.2%)	
Expectancy = 30.7% of 26 = 8	
Real protection = 7 out of 8 = 88%	

Of the twenty-six patients receiving the prophylactic dose of antitoxin, one (3.8 per cent) developed typical symptoms of the disease. All other treated patients (96.2 per cent) remained well. Of the twenty-six controls with negative histories to measles, receiving no antitoxin, eight (30.7 per cent) contracted the disease.

As 30.7 per cent of the controls contracted measles, it should be expected that 30.7 per cent of the treated patients were susceptible and, therefore, that eight instead of twenty-six should be considered the expectancy. In other words the corrected real protection afforded by the measles antitoxin was seven out of eight, or 88 per cent instead of twenty-five out of twenty-six (96.2 per cent).