

others are attached, insoluble or endotoxins. (See a little discussion of this matter in December issue of KNOW.) It is possible for an organism to make both kinds. In diphtheria, it does. The exotoxin seems necessary for the general growth and activity of the organism. It can be neutralized by antitoxin and the disease causing organisms thus, as it were, starved out. However, the other two or more toxins made by this organism are not influenced by diphtheria antitoxin and if the one that paralyzes nerves has done its work before the antitoxin was given, the patient may show a paralysis, but live and if the one that attacks muscle cells has done its work on the heart muscle the patient may die, though, in a way, he would "die cured". Thus from any viewpoint, the antitoxin should be given as early as possible.

Apparently, young babies do not have diphtheria because of the influence of the antitoxin with which they are born, and adults do not have it because of the antitoxin they make for themselves. When one recovers, he seems to do so because of the antitoxin he has made in response to the stimulus of the disease.

If one has the disease, he is usually treated by giving him 10000 or more units of antitoxin. How much is a unit? It is the smallest amount that will protect a standard guinea pig against a hundred times the deadly dose of the toxin.

If one is exposed, he may be protected for 2 weeks or more by a preventive dose of 1000 units of antitoxin. The material is made in a horse that has been stimulated by injections of toxin to make as much as he can. The horse is bled and the antitoxin is recovered from the now useful parts of the blood. Each bleeding must be separately standardized before its strength may be determined.

Several modes for producing active immunity have been developed and abandoned. We now use two doses of diphtheria toxoid with a time interval of two weeks or more. It takes around ninety days for the immunity to develop.

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LAST MONTH a little girl in Lawrence died of Diphtheria. Aside from the doctrine of fatalism, there is every reason to believe the death was avoidable. An immunization three years ago, followed by a check up would almost certainly have prevented it. Large scale immunizations were not done where this little girl lived and she did not get hers. It cost her life.

They are done here. There is no money cost to the patient. The public offers it to him with its good wishes. Call 462 and arrange for all you need.

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