

Science Notes.

NATURAL PROTECTION AGAINST DIPHTHERIA.

SINCE the discovery of the anti-toxin for diphtheria, a great deal of activity has been shown, especially in Germany, in the direction of further researches on diphtheria.

The method pursued in obtaining anti-toxin for curing diphtheria may now be said to be almost a matter of common knowledge; at all events it has been described in detail in these columns. A horse has a small amount of diphtheritic poison injected into his blood. The poison is freed from the bacilli which produced it, so that the operator has the disease under his control; a small dose of poison occasions a slight attack of the disease. The horse owes his recovery to the development in his blood of an antidote to the poison; this is the anti-toxin, and it is obtained in the serum of the blood after the formation of a clot. The presence of the anti-toxin in the blood may be proved, before obtaining it for medical purposes, by giving the horse a stronger dose of poison, which would cause his death if it were not for the possession of anti-toxin.

The question arises, in what way are persons who have never been attacked by diphtheria protected from it? It is incredible that any dweller in a large town has never been exposed to the infection of so widespread a disease. Moreover, diphtheria bacilli have been discovered in the mouths and throats of perfectly healthy persons.

Dr. Wasserman has examined the serum of a large number of persons of all ages who had never suffered from diphtheria, but who had, on other grounds, become patients at the Berlin Institute for Infectious Diseases. He found that the serum of such persons was in many cases competent to protect animals from diphtheritic poison. A little of the serum injected into the system of a guinea-pig, together with a dose of diphtheritic poison, which administered alone would certainly have killed the animal, enabled it to recover.

Serum obtained from 17 children, between the ages of 18 months and 11 years, gave the following results. In 11 cases the serum was so highly protective that the guinea-pigs showed no signs of illness from the diphtheria poison; in 2 cases the death of the animals was delayed by the anti-toxin, and in 4 others the serum had no anti-toxic property. In the case of the serum of older persons the percentage of successful inoculations was much higher. Out of 34 cases 28 were successful. All these persons, both children and adults, be it noted, had been *naturally* endowed with anti-diphtheritic serum.

The serum of animals possessed of a racial immunity from diphtheria has no protective properties whatever. White rats, for instance, inoculated with the toxin, suffer no evil consequences, but their serum does not protect animals who are susceptible to the disease. From this fact Wasserman argues that persons are not born with protective serum, but acquire it (presumably he means during an attack of diphtheria too slight to be recognised). We cannot see, however, why it is necessary to assume that if a person be born with anti-toxic serum, his serum must hence be similar to that of an animal which enjoys a race-immunity.

Experience tends to show that some persons must be protected by their serum, or in some other way, against not only diphtheria but other infectious diseases, since they escape them, while other persons, living under the same conditions, appear to have a special facility for acquiring such diseases.

The fortunate possessors of anti-toxic serum appear to be "born, not made," like the poet, and the practical lesson we have to learn with regard to them is to beware lest they carry infection to their weaker brethren, for we know that after their clothes, their hair, and the outside of their bodies generally have been disinfected, they may still carry in their mouths and throats virulent diphtheria bacilli.

Notes on Art.

THE SOCIETY OF PORTRAIT PAINTERS AT THE NEW GALLERY.

THIS is a disappointing Exhibition. Many of the good names are wholly absent, and one or two are represented only by very inadequate examples of their work. Mr. Whistler sends a study in his least intelligible manner, which can only be described as a portrait at all by a considerable stretch of the imagination. Many of the exhibitors, by copying his method without his genius, show conclusively what a dangerous man he is to imitate. In fact—*pace* the whole school of Impressionists—it seems as though he succeeded more in spite of his style than because of it; and his followers, however diligently they may smear and blur, and avoid detail, and leave out everything that would be difficult to draw, do not achieve the same effect by any means.

A case in point is by no less a person than Prince Pierre Troubezkoj—Lady Eden and her children, (No. 20). In this, all the six eyes in the picture are left entirely to the imagination, the place where the eyes ought to be being indicated merely by an indefinite shadow. It seems that, however valuable these things are as impressions, their worth as portraits is exceedingly questionable. The instinctive feeling is, that were the originals of these studies to appear, one could never recognise them from their resemblance to the picture.

Mr. Lavery, of Glasgow, is five times represented—by his Mrs. Park Lyle, from the Academy of this year, and four others. The creations of this artist would be known anywhere, by the fact that he sees all women exactly alike. They all have black eyebrows, drawn in a narrow, continuous line, and, by reason of being entirely without shadow beneath, conveying the idea of having been pencilled with a burnt cork. Their mouths are likewise entirely shadowless; the "play of shadow round her mouth," which Browning thought such an infinite feminine charm, is always lacking. These attributes give an invariable chalkiness and impression of untruth to his work, undeniably clever as his management of the most Philistine modern draperies frequently is.

Lehmann's refined and sympathetic portrait of Robert Browning is here, and also another portrait, too well-known to need description, Mr. Collier's "Professor Huxley." To look on this is almost to

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