

## T.N.T. POISONING.

### MEDICAL RESEARCH COMMITTEE'S REPORT.

A report issued by the Medical Research Committee (National Health Insurance Department) on "the causation and prevention of trinitro-toluene (T.N.T.) poisoning" gives an historical and scientific account of the valuable researches by the staff of their applied physiology department. "When once it is realised," they state, "that it is a low-grade chronic poison with which we have to deal, and the channel of entry to the body is known, and the earliest symptoms of its presence in toxic amount recognised, all the means are then at hand for practically sweeping out T.N.T. poisoning, and that goal we are now rapidly approaching."

It is pointed out that the first, and most obvious, result of T.N.T. absorption, whether through the skin or otherwise, is a chemical change in the hæmoglobin of the red blood corpuscles impairing the oxygen-carrying functions of the blood with the usual symptoms. From this condition the body, if the entry of more poison is prevented, can rapidly recover, the process being accelerated by access to abundant fresh air and cessation from work involving the handling of the substance. The fatal results which follow T.N.T. poisoning are due to two other pathological conditions, the one being a destruction of liver substance and the other a condition in which the blood-forming organs fail in function. A specialist, however, regards the two causes of fatal T.N.T. poisoning as secondary results of that action of the poison which, first, has the effect of impairing the oxygen-carrying function of the blood, and he takes the view that, if this primary evil is taken in hand promptly, the others are not likely to ensue.

Professor White points out that poisoning with nitro-derivatives may occur after the most careful attention to the use of respiration and ventilation of factories from dust and fume has been applied. The breathing of operatives, it was found, was incommoded by the use of respirators even in places where the air was almost guiltless of dust, and time, labour, and money were expended on elaborate systems of fan ventilation in factories situated in open country sites, where the natural air circulation seemed excellent. The essence of the problem is of keeping the skin, and especially the hands, clean, and attention has been turned to clean and mechanical methods of pouring and filling, to finding out how the numbers of hands neces-

sarily in contact can be diminished, to the introduction of impermeable preparations for keeping the skin clean, and to finding out methods for testing before their employment those individuals who have susceptible skins.

The Medical Research Committee state that the results already obtained must be regarded as a striking testimony to the value of close co-operation between research work and administrative action.

## OUR PRIZE COMPETITION.

### DESCRIBE THE NURSING OF A CASE OF OPTHALMIA NEONATORUM.

We have pleasure in awarding the prize this week to Miss S. A. Backhouse, Trained Nurses' Institute, St. Bartholomew's Hospital, E.C. 1.

#### PRIZE PAPER.

*Ophthalmia neonatorum* is inflammation of the eyes of a newly born infant; it is the commonest cause of blindness, and therefore a very serious disease.

*Causes.*—(1) Infection from a vaginal discharge in the mother (which, in 60 per cent. of cases, is the result of a previous attack of gonorrhœa).

(2) Introduction of microbes to the eyes, due to careless nursing.

When the disease is due to an infection at birth from a vaginal discharge, it appears, as a rule, on the second or third day; if towards the end of the first week, the cause is nearly always careless nursing.

*Symptoms.*—The disease commences on the inner surface of the eyelids; it may rapidly spread to the eyeball, and destroy or seriously damage the sight. The eyes are closed, because light causes pain. The eyelids are red, swollen, and glued together, and there is a purulent discharge. (The discharge may be so profuse as to collect under the eyelids and flow over the cheek.)

*Treatment* is both (1) *Local* and (2) *General*.

(1) *Local* consists of thoroughly cleansing and irrigating the eyes alternately with anti-septic and astringent lotions—those usually prescribed are perchloride of mercury 1-8,000 to 1-10,000, and boracic acid in solution gr. ii to ʒ i—and in instilling one drop of silver nitrate (gr. ii to ʒ i) into the eye twice in 24 hours.

The eyes must be cleansed and irrigated every hour until they respond to treatment, after which they should be done every two hours until recovery takes place. To irrigate the eyes the nurse should place the child on its

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