

## OUR PRIZE COMPETITION.

### WHAT DO YOU KNOW OF THE MODES OF DIFFUSION OF TUBERCULOSIS THROUGHOUT THE RACES OF THE WORLD?

We have pleasure in awarding the prize this week to Miss C. Wright, 2, Dryden Road, Bush Hill Park, Enfield.

#### PRIZE PAPER.

The origin of the disease of tuberculosis lies in antiquity, but its diffusion throughout the races of the world seems to have increased and developed with the progress of civilisation and the development of agricultural and industrial activities. Tuberculosis was under observation by scientific experts in the seventeenth century, and between this period and the nineteenth century, definite information on the subject was given; the disease was known to exist in animals and in man, the domestic animals, such as the cow, pig, and goat, being especially predisposed to it. In 1881, Professor Koch discovered that if animals were injected with the germs of tuberculosis they developed the disease, and from this point of discovery, serious studies were made as to the mode of diffusion amongst the population in every country. It was found that various trades and industries, both agricultural and industrial, were predisposed to this disease, and in communities of crowded areas, the disease spread and became a menace to the national life, and scientific knowledge was brought to bear on the subject.

It was found that tuberculosis was caused by a definite germ, communicable from man to man, and circulated by means of the blood by way of the mucous membranes, diffusing itself in various organs of the body, or localising itself in the lungs. The tissues of the lungs were destroyed, irritation set up, and expectoration unavoidable; this, on examination, was found to contain the tubercle bacillus and was a direct mode of diffusion. Trade and industries were examined. The sedentary trades were found to foster the tendency to tuberculosis. Tailors, seamstresses and hatters, owing to the cramped position necessary for their work, which prevented them inhaling freely, were found to be susceptible, added to which their work was often carried on under very adverse hygienic conditions.

Other trades and industries had also their victims, particles of fabric or foreign bodies being liberated in the process of manufacture, and being drawn into the lungs, caused irritation to the mucous membranes. Long hours

and insufficient food were a prolific cause of diffusion. The question of hereditary disease arose, and it was proved conclusively that children born of infected parents had a predisposition to the disease, and much lessened powers of resistance, which menaced their future, both physically and mentally.

Environment was proved to play an important part in the diffusion of tuberculosis. Those living on the hills or in an elevated position, were more immune from the disease than those living in the valleys or in the districts of a damp and humid climate.

Those whose work was on the high seas were often quite immune. Hovels and slums were a fruitful source of diffusion, and the prisons of the earlier centuries, where prisoners were herded together for indefinite periods, caused a very high mortality. The cow-sheds and byres, and the housing of the animals known to be tuberculous, received no special attention for many years. They existed in a most insanitary and filthy condition; both the animals and their stalling were undoubtedly a fruitful source of many infections, that of tuberculosis being the chief.

Many of the patients attacked by tuberculosis succumbed, and there was a period of helplessness, when the lack of knowledge of nursing hygiene was responsible for great diffusion, as the patients lived and slept with their families, tended only by ignorant relations, or treated by inadequate simples, the germs of tuberculosis being thus allowed to spread in every possible direction, contaminating foods, and poisoning the atmosphere for those who lived in the same surroundings.

Science and legislation now work together from the curative point of view. Municipalities, Sanitary Authorities, Queen's Nurses, Health Visitors are ever ready to give of their best, theoretically and practically, to teach the importance of simple hygiene with its beneficent results to the community. Medical practitioners who have made a special study of the question from the scientific point of view, are ever ready to impart expert knowledge on the subject and to teach all who will listen.

#### HONOURABLE MENTION.

The following competitors receive honourable mention:—Miss P. Thomson, Miss Dunn, Miss E. James.

#### QUESTION FOR NEXT WEEK.

Describe a case of typical small-pox, the nursing points, and the precautions to be observed.

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