

OUR PRIZE COMPETITION.

WHAT ARE THE PREDISPOSING FACTORS IN TUBERCULOSIS? HOW CAN ONE PREVENT THE SPREAD OF INFECTION FROM AN INFECTIOUS CONSUMPTIVE?

We have pleasure in awarding the prize this month to Miss Daisy Evelyn Lee, Romsley Hall Sanatorium, Halesowen, Worcestershire.

PRIZE PAPER.

Predisposing factors in tuberculosis, or phthisis as it was originally named by Hippocrates, are:—

Those causes and conditions which bring about a state of receptivity, *i.e.* a readiness on the part of the tissues to receive and harbour the tubercle bacillus.

1. *Feeble Physical Development.*—Malnutrition which may be caused by a deficiency of suitable food and lack of sunlight. The result of this may be the bovine type of tuberculosis, usually found in children, and may be transmitted in cow's milk, causing glandular tuberculosis; or the disease may be generalised, the child takes acute miliary tuberculosis and dies from tuberculous meningitis.

2. *Insanitary Occupations.*—Its prevalence in industrial as compared with agricultural localities, especially in dusty trades in which the particles are hard and gritty, such as gold, tin and lead mining and among cutters, potters and grinders.

Soft particles, such as coal dust and animal dust from bone, horn or ivory are less harmful.

The inhalation of irritating dusts damages the lung and so renders it more easily a prey to invasion by the tubercle bacillus.

Continual exposure to wet weather and the wearing of wet garments may lower the vitality and render the body susceptible to infection.

3. *Insanitary Conditions of Life.*—Debility ensuing upon acute illnesses or upon chronic diseases and all the depressing conditions of life, anxiety, mental strain, poverty.

Tuberculosis is essentially, therefore, a disease of the poorer classes; whilst it does occur among the rich, the soil is less fertile for the reception of the seed, owing to the more fortunate being able to provide more resisting factors for anti-bodies.

4. *Poor Housing Conditions,* such as overcrowding, lack of sunlight and bad ventilation.

The tubercle bacillus thrives in darkness, and houses in industrial areas are usually built so close to each other that very little light or sunshine may enter.

The odours from factories also provide an excuse for people to close their windows and doors against ventilation. Inadequate ventilation lowers the tone of the body and makes it a fertile ground for the seed.

Overcrowding in houses is a very predisposing factor in tuberculosis; there are no facilities to take precautions for protection.

5. *Hereditary Tendencies.*—Tuberculosis is not hereditary, but is usually due to infection from the mother at a very early age, either through feeding or from droplet infection. The disease may not show itself for some time, but lie dormant until such time as the vitality is lowered from some cause and the tubercle bacillus fights and overcomes the anti-bodies.

All patients suffering from tuberculosis, whether they are of the infectious type or not, should be treated in a

sanatorium. The non-infectious may be so one day and the next day the sputum may be full of the tubercle bacillus and become highly infectious, owing to the breaking down of a lesion which has been shutting off a cavity.

METHODS OF INFECTION.

1. *By Inhalation.*—The bacillus becomes inhaled through the respiratory tract; this is the main source of infection.

2. *By Inoculation.*—The tubercle bacillus enters the body through a scratch or a sore. This usually affects doctors who do post-mortem work.

3. *By Ingestion.*—The germ is swallowed and enters the alimentary tract usually through milk, hence abdominal tuberculosis is the form the germ takes by this method of infection.

The word consumption is usually used to denote the pulmonary form of tuberculosis, so the term infectious consumptive would chiefly apply to cases which have a positive sputum, or where the tubercle bacillus is found in the faeces.

The disinfection and disposal of sputum is of the utmost importance. In sanatoria the patients are given sputum mugs and sputum flasks. These contain about one ounce of carbolic acid (1 in 20). Each morning clean ones are given to them and these are collected up in the evening. They are then placed on trays and the whole is placed into an autoclave into which steam is forced under pressure at 15 lb. for 15 minutes. They are then taken out, washed and the carbolic acid put in ready for use again.

The flasks are made for cases who are up and walking so that they may be carried in the pocket. In private houses it is advisable to give the patient either old linen, or paper handkerchiefs made for the purpose for them to spit into, so that these may be burnt.

It is not necessary for faeces or urine to be sterilised if they are disposed of in the proper manner, but in such places where earth closets are used, the faeces should be mixed with 1 in 20 carbolic acid and allowed to stand for about two hours before being disposed of.

It is most important in nursing a case of infective consumption in a private house, that the patient should have a large, airy room with plenty of light.

All utensils must be kept separate and all the bed linen should be soaked in a disinfectant before being sent to the laundry.

Kissing the patient must not be allowed.

When a tuberculous patient is removed from his room it should be thoroughly disinfected, all the bed clothing should be spread out and all drawers and cupboards opened. All the outlets, such as the chimney, window sashes, etc., should be blocked up and a formalin lamp should be lit in the room and the room sealed up and left for several hours.

The crockery and cutlery should all be boiled for 20 minutes.

HONOURABLE MENTION.

The paper by Miss Amy Phipps is highly commended, but arrived a day too late for the competition.

QUESTION FOR NEXT MONTH.

What is a Dislocation? Its Causes and Varieties. Its Symptoms, Signs and Treatment.

[previous page](#)

[next page](#)