of sickness and lost time can be avoided if dental attention is available on the premises.

A nursing service is essential. Industrial nursing is now recognised as one of the most important branches of the profession, and special courses of training, leading to a Certificate of Industrial Nursing, are available at several centres. The industrial nurse requires initiative and the willingness to accept responsibility, since in small factories she is often left in sole charge of the medical department, and must decide when it is necessary to summon the part-time medical officer. She, like the medical officer, should be a person of character and tact, with the capacity for summing up a situation, and dealing with many personal problems in the factory. The nurse can make or mar an industrial medical service.

Physiotherapy also has an important part to play. In addition to her normal work, the physiotherapist will be of the greatest value in the rehabilitation of the sick and injured, especially where no full-scale rehabilitation service is available.

I cannot here embark on the question of suitable premises and equipment for a medical service. The extent of these will vary with the extent of the scheme itself. They should, however, be adequate according to modern standards, and no physician should agree to undertake the organisation and supervision of a medical service, however small, unless the facilities afforded to him by the management are up to these standards. Insistence on a high level of efficiency will do much to give this new branch of medical work its proper position and dignity.

PREVENTION AND CONTROL OF DISEASE IN INDUSTRY.*

By John F. Eustace.

At the outset I would like to stress the fact that in the time at my disposal I can do scant justice to a subject which might fill the agenda for a day's discussion and still leave much material unexplored.

The prevention and control of disease in industry is in essence the Industrial Medical Officer's job, and as a result of the changes inherent in industry new processes are being constantly introduced, each of which in its own peculiar way produces a problem to be faced and solved.

In Ireland Industrial Medicine legislation has been allowed to lag behind the rest of the world. This applies equally to toxic processes, occupational medical diseases, industrial dermatoses and Workmen's Compensation. The explanation of this is due to two factors, viz., (1) the control of Industrial Medicine by the Department of Industry and Commerce and not the Department of Health, and (2) the fact that on the whole industry in this country has not developed to such an extent as in many neighbouring lands.

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Since legislation has been neglected in Ireland, employers have mostly been left to their own devices in dealing with occupational diseases and accidents occurring in their industries, and in many cases have met the problem fairly, but in the majority of firms the problem has been ignored or at the least shelved. So it arises that if we take a man suffering from silicosis, produced from his work and unfit for further employment, he would receive no compensation in this country, whereas in Britain he would be entitled to a disability pension for total or partial incapacity.

**Occupational Diseases and Dermatoses**

**Toxic Processes.** Industrial development creates a demand for new substances which may be toxic to man. It is imperative therefore that wherever possible experiments should be carried out in advance to determine the degree of toxicity. Fairhall (1949) says: "Since no rational scheme is available to aid, except rather sketchily, in deciding upon the toxicity of a given substance, it is inevitably necessary to carry out experimental work with animals." When a new chemical process is introduced the Industrial Medical Officer should pay particular attention to all persons engaged in that job until such time as it has been shown to be harmless. This may require considerable patience, for in some cases many years elapse before the lesions develop. In the case of carcinoma of the ethmoid bone and the lung developing in men employed on the extraction of nickel from the ore by the Mond Nickel process (Amor, 1939), some of the cases appeared to be normal for as long as 10 years before neoplastic changes developed.

Acute or chronic poisoning may develop from the inhalation of toxic gases, dusts or fumes. Lead, mercury and benzene can be absorbed through the lungs and may in certain circumstances produce fatal results. Lung irritant gases such as the oxides of nitrogen, phosgene or cadmium oxide, may cause pulmonary edema after a delay of eight hours, and persons exposed to these gases should be rested for 24 hours until the danger of pulmonary edema has passed.

An interesting development has occurred since the danger of beryllium producing lung fibrosis in those engaged in the manufacture of fluorescent lamps, ceramics and the neon sign industry has been recognised. Research chemists set to work and in a comparatively short time produced phosphors to replace beryllium-containing coatings for fluorescent tubes, and these phosphors are harmless to man.

Replacement of harmful materials by non-toxic products is the ideal course, but is unfortunately not practicable in every case, and then it rests with the engineers and doctors to devise methods for the suppression of the dusts and fumes at the point of origin.

Some aromatic nitro and amino compounds, such as aniline, nitrobenzene and trinitrotoluene, are absorbed through the skin but inhalation and ingestion will also contribute to their toxic effects. In the petroleum industry elaborate precautions are taken to prevent poisoning by tetra-ethyl-lead, which can produce fatal results by absorption of very small amounts through the skin.

Some of the new selective weed killers, dinitro-ortho-cresol (D.N.O.C.), have produced fatal poisoning when used in warm weather, but have