

With a solitary exception all those examined were at work on the day of examination.

*The Clinical Examination and Standards adopted.*—The nature and purpose of the inquiry were explained to each worker whom it was proposed to examine, individually, and his or her co-operation obtained. Each individual's previous industrial history, subsequent to leaving school, was noted in detail. This was essential in order to exclude, especially, the effect of previous work in any of the numerous processes involving exposure to free silica dust, and, to a less extent, the effect of other dusts. Similarly, the individual's medical history was scrutinised from childhood onwards, to determine the physical level on entry into the industry and any subsequent changes. Particular attention was paid to accounts of pulmonary ailments, some of which, like asthma and bronchitis, are common enough amongst the general population, yet are also non-specific signs of irritation caused by the inhalation of dust, whilst others, like influenza and pneumonia, are occasionally followed by a degree of pulmonary fibrosis. War service, if any, was gone into, especially as to whether there was any history of the worker having been a gas casualty at any time. The family and personal history in respect of pulmonary tuberculosis was enquired into, and also as to any close association with known cases of this disease in friends or relatives. In approaching the pertinent subject of symptoms, great care was taken to avoid leading questions, especially in eliciting information as to the existence of any undue shortness of breath.

The actual details of the physical examination do not call for comment, inasmuch as they followed the usual lines of a detailed examination of the chest, with observations of the general health and of the condition of the upper air passages.

Reference must be made, however, to the standard of normality adopted in assessing the state of the lungs. The appraisement of any departure from the normal necessarily pre-supposes the existence of such a standard. Every clinician has attained, as the result of experience, his own clear conception of the normal chest, but it is not often that he finds it necessary to define this state in so many words, in fact it seems scarcely possible to do so, and this for several reasons; the heart and lungs function efficiently within wide limits of applied strain, and, although vestiges of past disease may be present and apparent on examination, they will be unimportant if they will never tax the organism beyond these limits, are non-progressive and do not predispose to other disease. Age itself has recognisable effects, but for this reason alone, the chest cannot be considered abnormal.

There is obvious disparity between the standard of physical fitness required for an air pilot and that required for life insurance at ordinary rates; individuals reaching either standard can be classed as "normal," yet many attaining the latter standard have never approached the former.

Thus, within limits, various gradations of normality may be distinguished, and corresponding standards constituted without inaccuracy, the precise status of any standard being determined by the purpose for which it is established. For the purpose of this enquiry the standard adopted has been that evinced in any large group of persons living under similar environmental conditions, apart from work in dusty occupations, as those of the group being considered. This is neither a high standard nor a very low standard, but the average standard of normality displayed amongst the industrial population of this country.

*Radiographic Examination of the Lungs.*—In addition a careful radiographic examination of the chest was made in many (133) cases, the necessity for which in investigations into the effects of dust upon the lungs has been emphasised repeatedly by various authorities. It was not, of course, feasible to obtain technically sufficient radiograms of all the workers examined, derived as they were from factories scattered over the country, some in districts remote from a radiological centre. The mode of selection was dictated by the needs of the situation, with the object of elucidating material points germane to the investigation, e.g., the elucidation of complicating affections, in measuring the