

alcoholic habit, and this in turn acts detrimentally upon the amount of lost time. Investigations carried out establish the fact that a day of recreation is frequently more fatiguing to the labourer than a day of work, and that this unfortunate result of recreation is most pronounced among the class who are habitual drinkers.

Another cause of impaired efficiency is labour turnover; while no evidence is forthcoming from England as to how labour turnover is influenced by alcoholism, evidence from many firms in the States is to the effect that since prohibition became law their labour turnover has been greatly reduced. The true test, however, of industrial efficiency must be the amount and quality of the work done, and here for lack of evidence from other sources, appeal must be made again to America; reports made by many firms representing different industries affirm that the work done has been much increased; many companies maintaining that their men are worth 20 to 50 per cent. more on account of their ability to give better service.

Alcoholism affects industrial efficiency indirectly through another channel. The energy needed for industrial efficiency is obtained from food, and in those in whom the alcoholic habit prevails, the appetite is interfered with and wages are spent on drink which should be spent on food. Interest therefore attaches to the relative expenditure in the United Kingdom on food and on alcohol. The comparative figures in 1919 were as follows: Sixteen pounds sixteen shillings per head on food, and eight pounds on

beer and spirits; almost half as much on alcoholic drinks as on food. Manual labourers who expend energy and need more food unfortunately spend proportionally more on alcohol than do non-manual workers, and the efficiency of their work suffers. Alcohol, however, undoubtedly possesses a great charm for removing the irritating effects of industrial fatigue, but it is a charm purchased at a great cost to efficiency.

In the discussion which ensued Sir Thomas Oliver claimed that during the last fifty years all classes of society in England had been marching towards sobriety. There were certain occupations, however, in which manual labourers were tempted to drink more heavily. Occupations which had to be carried on at high temperatures or in humid or dusty atmospheres tend to increase thirst, and thus induce a desire for drink. In some persons, alcoholic drinks induced degenerative changes more rapidly than in others, but it must be remembered that from these degenerative changes total abstainers were not altogether exempt. Experiments on animals also prove that alcohol acts as a racial poison, adversely affecting both the ovum and the sperm; although from the nature of the case it is more difficult to adduce direct proof of a similar effect in the human subject. At the close of a long discussion a motion was passed unanimously "That the Council of the British Medical Association be requested to assist in the promotion of further inquiry into the effect of alcohol taken as a beverage on the individual and on the community."

REFLEX COUGH IN BRONCHOSCOPIC WORK

AT the present season of the year, no symptom is more frequent and more irritating than cough, which has been defined as an involuntary act reinforced by volition. James Mackenzie in his work on Symptoms and their Interpretation, states that in affections of the

lung, cough arises only when the secretion has been carried by the contractions of the bronchial muscles and by the cilia of the respiratory tract so far upward as to reach the sensitive region about the larynx. Unquestionably the cause of cough is an irritation in the

area of the distribution of the glosso-pharyngeal, the trigeminal and perhaps some other sensory nerves. In the purely reflex cough local irritation develops nerve impulses, which may be transmitted by the vagus nerve. Both physiologists and clinicians appear to have overlooked the fact that a condition of tolerance may under certain circumstances be quickly established, which lessens and sometimes entirely obliterates temporarily the reflex excitability of the mucous membrane of the respiratory tract. In certain toxic conditions, notably that of influenza in children, the cough reflex may be entirely absent. In some cases the absence of this cough reflex according to Dr. Jackson, has led to the patient drowning in his own secretion. Dr. Jackson adds to our knowledge facts regarding the reflexes from this respiratory tract which he has discovered by the use of the bronchoscope. An interesting observation regarding deep bronchoscopic work in the lung is that in some cases it can be carried on without sedatives and without anaesthesia, local or general, as tolerance is acquired by the mucous membrane after a few minutes contact of the tube with the mucosa; the cough present at the first introduction is not re-excited except the tube is passed on to a new area of the mucosa. Dr. Jackson states that so far as he is aware no distinction has hitherto been drawn between the cough made by the mere presence of a foreign body in the bronchus and that produced by the secondary pathological changes set up by the foreign body. Such a distinction is important when it is recalled that with normally active reflexes, the presence of secretion in excess of the normal mucosal moisture will excite the cough reflex for purpose of expectoration. There is, however, a great variation in the extent of the pathological irritation and amount of secretion produced by foreign bodies, due to the nature of the foreign body, and to the amount of obstruction and to drainage and aeration resulting from the

size, shape and location of the foreign body. In the case of a foreign body in one of the air passages its first contact with the tracheal bronchial mucosa sets up violent coughing. The cough in the case of foreign bodies not derived from the vegetable kingdom quickly subsides if the foreign body remains fixed in one place, but if it is moved about either by movements of respiration or coughing, severe spasmodic coughing will again ensue. If the foreign body is non-obstructive and of a metallic nature little or no cough may develop for weeks or months until secondary inflammatory changes have resulted in pus formation. Vegetable substances, however, even when not moveable quickly excite severe and frequent coughing attacks, and a muco-purulent or purulent secretion, necessitating cough for expectoration purposes. While the entrance of a crumb of bread into the larynx may bring on a severe strangling cough it is often amazing to note the tolerance that ensues on the prolonged presence of a foreign body, and Dr. Jackson quotes a case in which a cockleburr was lodged in the larynx of a man for twenty-four hours, the spasm associated with severe coughing and vomiting lasted fifteen minutes after which there was no cough, only loss of voice, and a desire to clear the throat. In the case of foreign bodies in the oesophagus a cough frequently ensues, due to a secondary laryngo-tracheo-bronchitis, from overflow into the larynx of secretions which should have passed down the oesophagus.

Dr. Jackson insists that there is no bronchoscopic evidence to show that the respiratory mucosa is more sensitive in some places than in others. On the other hand the finer subdivisions of the bronchial tree which can be entered only with a slender instrument appear distinctly less sensitive and the peripheral areas show no cough reflex unless the proximity of the visceral pleura is irritated.