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that you can give enough histaminase, and you note the large doses Dr. Fox mentioned, completely to destroy the histamine in the shocked tissue and do that irrespective of the other mechanisms in the body which will destroy histamine, then, I think you can with perfect intellectual honesty go right ahead and give your histaminase in the hope that you will get some help from it. Personally, I do not think these two things are true.

Recently there has been a report of the Council on Pharmacy and Chemistry of the American Medical Association on histaminase, which certainly gives a very complete evaluation of it. Let me quote just one sentence from that. Here is the quotation: "The use of histaminase in the treatment of allergic states, although perhaps ingenious and suggestive, has no real established scientific clinical basis."

In summary, and this is not a reference to Dr. Fox's paper at all, I should like to say that the whole subject of histaminase, is much like Macbeth's depressed summation of life: "Full of sound and fury, signifying nothing."

Dr. M. T. Van Studdiford, New Orleans, La.—Dr. Eustis of New Orleans, some years ago, used what we now know as histaminase in the treatment of asthma. Today, with the H substance spoken of as a cause of skin disorders, we find histaminase offered as a cure or relief agent in these kindred conditions. To my delight, four out of five of my patients with urticarias and rosacea, who were taking 120 units of histaminase daily, showed a marked improvement. Of course, I consider the therapy substitutional because two of the patients had a recurrence after stopping treatment but were cleared up when treatment was reinstituted. What the maintenance dose should be is still to be determined.

My patients reported an increased appetite and sense of well-being while taking the tablets.

Dr. Fox (closing).—Apparently allergists and others who have studied these phenomena have pretty well agreed that histamine itself is the trigger mechanism for the development of allergy, and that, of course, did develop from the triple response phenomenon which was described originally by Lewis.

Whether histaminase is the material, which is the enzyme that inactivates histamine, is still a moot question. Hardy and Brown reported protection of guinea pigs, which Best and McHenry have been unable to repeat. I think the question is not yet ended as far as histaminase is concerned. It is not useful to any great degree in a large variety of conditions for which it has been recommended, but with studies we are finding certain instances in which it is tremendously valuable, particularly serum sickness. Seventeen of twenty cases in our series and thirteen of sixteen in Foshay's series were definitely benefited. So if it is effective in no other condition, it is worth while to use it just in that disturbance.

I have not yet had an opportunity to use the material intramuscularly. Yesterday Dr. J. H. Black, an allergist, told me that he had seen better results from the intramuscular administration of large doses than from oral administration. This report does not include the intramuscular use of the drug.

THE PRACTICE OF INDUSTRIAL HEALTH*

By T. LYLE HAZLETT, M.D.

Pittsburgh, Pennsylvania

No application of medicine has shown such rapid growth and development in the past twenty-five years as that which has become a part of our complex industrial life. Its advances have kept abreast of the gradual transition of our industrial pattern from small companies with few employees to our present day vast industrial organizations of many employees and complex management.

This transition was accompanied by the development of the so-called welfare activities, either from an economic or humanitarian standpoint. And in this general picture there appeared the large contributions of the physicians either on a part-time or a full-time basis.

At the beginning of this twenty-five-year period, emphasis was placed almost entirely on the surgical care of injured employees. But gradually there has been a trend to the field of preventive medicine, until now the practice of industrial health is definitely becoming a specialized field in the prevention of both sickness and accidents among our industrial groups.

Intensive accident prevention work has been a notable achievement in our industrial life, largely without the active participation of physicians, since the interest and training of our medical school curricula emphasized curative rather than preventive medicine. Consequently, we have today a challenge to provide additional training in present day industrial health practices to the undergraduate of our medical schools, to all physicians who may have industrial contacts, and especially to those who may be engaged by industrial organizations to assume responsibility for health conservation among their workers.

When it is remembered that less than 25 per cent of an individual's time is spent at his industrial occupation, we have both an intra-industrial and an extra-industrial interest in any program for the conservation of health among our industrial population. Hence, the practice of industrial health may well be divided into these two distinct divisions.

Frequently home conditions are a contributing

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WH-721

factor to the cause of accidents, and sickness often is closely associated in the mind of the industrial worker, with environmental working conditions; hence, the wide public health vision that management as well as physicians must possess in the practice of industrial health.

Holy Writ says:

"And why beholdest the mote that is in thy brother's eye, but perceivest not the beam that is in thine own eye."

And it has always seemed that we should afford our workers safe and healthful working environment before attempting to influence community health, although unquestionably the two go hand in hand.

Our intra-industrial responsibility requires us to provide adequate and complete surgical care for injured workers. The manner and extent of this care depend largely upon the size of the group, the geographical location and the type of industry. These factors also determine the need for personnel and equipment. This applies also to the medical cases which ordinarily are given only first aid medication and then referred to the family physician. The exceptions are those of occupational disease. Here again the geographical location has a very definite bearing on the extent of medical care.

Much has been said and much is being said about pre-employment physical examinations. The statement,

"This examination is made not for the purpose of rejecting applicants, but for the proper placement of those whose defects might be hazardous to themselves or those about them,"

should be posted in all examining rooms, since it is most helpful in bringing the true interpretation of this procedure in industry.

The practice of maintaining simply one standard of physical fitness is a most wasteful loss of our man power, which was perhaps never appreciated before this time of need for its conservation in our national defense program.

A most practical plan for job placement is the classification of fitness according to the requirements of the occupation. Thus, it becomes necessary for the examining physician to know each job and process. This classification may be of four groups.

In group one are those occupations which are without health hazards. The examination for these occupations is that of a life insurance examination plus, perhaps, a Wassermann, fluoroscopic or an x-ray examination but dependent

largely upon the physical and mental requirements of the individual job.

Group two occupations are those in which definite health hazards exist, such as the "dusty occupations." The examination is that of group one plus an x-ray for permanent record. In these cases we are particularly interested in ruling out tuberculosis, for we know there seems to be a definite relation between silica exposure and tuberculous infection. The present trend of thought among our working population is that tuberculosis is more and more becoming a disease of occupation.

Group three may include occupations such as lead workers, or mercury. In addition to the type one examination, blood and special urine examinations are required for this group. We do not desire to place a man already carrying an over supply of lead in a lead exposure occupation even if the exposure is controlled within safe limits. Many other special tests may be made on these workers, depending upon the materials handled in the occupation.

Group four examinations could be group one examination plus special tests such as the "patch test" to determine those individuals susceptible to a specific material or process, in relation particularly to contact dermatosis, where it is known materials or processes of the job may cause skin irritations.

From records of the states having occupational disease acts, we find that from 60 to 70 per cent of the claims are for dermatosis. Thus, if we are to prevent these cases, the examinations are a most economical procedure. Protection involving these processes is often difficult, due to the fact that protective hand lotions are not always satisfactory; so we must provide the worker protection either with rubber gloves and special clothing or remove him from this type of work.

The same standards of classification may be used for the periodic physical examinations. The frequency of these examinations will depend upon the type of the work. Thus, the physician must know the materials, the processes and the resultant hazards, if any, of the job. To obtain this information, he must of necessity cooperate with the employment department, safety engineer, and the equipment and process engineer. If the organization is small, he may have to gather this information himself, but much of it can be procured from larger organizations having the same problems and from private and governmental agencies.

In large organizations it is becoming more and

more imperative for the physician to have at his disposal the services of a fully organized industrial hygiene laboratory, staffed by especially trained personnel to make special studies of environmental conditions so that the physician may evaluate their effect upon individual workers and if necessary make definite recommendations to management for correction. It is also the physician's responsibility to determine any health hazards of new processes and materials before they are put into production, thus effecting very often a great saving to management through elimination of changes after production.

As first impressions are often lasting, it is important that management provide suitable physical layouts for medical departments. This is just as important as the personality and training of the medical personnel. The physician should have the utmost privacy for making his examinations, and his attitude should be the same to the applicant and the workers as it would be to one consulting him in his private practice. The new employee especially will carry with him throughout his employment the impression of the company formed during his pre-employment examination. This examination can be a morale-builder for the entire organization.

We are constantly experiencing new problems in air-conditioning and ventilation. It is just as important that we provide pure air for our workers as it is to provide pure water.

The problem of fatigue is still open for much further research. There seems to be a definite relation between fatigue and the availability of food for the workers throughout the working day. And there is unquestionably a definite relation between fatigue and accidents. We see the accident curve go up before the noon lunch period, and then again in the mid-afternoon. Perhaps we should think more about rest periods, but as yet we have not sufficient clinical investigations of many occupations to determine the full value of an interval of rest.

Plant sanitation, bathing facilities for certain occupations, and education in personal hygiene must be a part of the practice of industrial health.

By-products are often the result of medical investigations. A large manufacturing company was experiencing heavy losses due to the non-matching of range parts after assembly. A careful examination of the workers' eyes disclosed a vitamin A deficiency. Upon its correction, errors in non-matching colors were practically

eliminated, with a resultant saving in production costs.

A study of all accidents will often reveal information which may be of great assistance to the safety supervisors. Machines slightly out of alignment may be checked and corrected as a result of a number of minor accidents involving the same cause. But such information cannot be made available if systematic records are not kept. Daily dispensary records of both surgical and first aid medical care rendered are most essential, as well as complete medical records of the employees' sicknesses. The latter can be accomplished only by having all employees clear through the medical department following absence from work. One large steel company has found it most worth while to have all employees losing one working shift report to the medical department. Other organizations require them to report after forty-eight hours or longer, but unquestionably the shorter time is preferable. Absenteeism is receiving more and more attention; and it should, since it is the cause of great economic losses.

From the purely intra-industrial phase of industrial health practice we have available health education by means of pamphlets, posters, talks by the medical personnel, and by individual contacts. The plant magazine is of particular value in printing health and safety facts. A health educational program may be set up to provide a specific topic for each month of the year, such as early diagnosis of tuberculosis, cancer, care of the teeth, and so on. No group is more receptive than an industrial group, and in our experience we have yet to find any literature on health subjects in waste receptacles.

From the foregoing intra-industrial activities one can easily discern our interest in extra-industrial health measures. We should aid in the work of establishing proper housing developments, providing safe water supplies, proper sewage disposal, tuberculosis campaigns, and so forth. The children of today are the industrial workers of tomorrow. Any endeavors to prevent disease in the community should be of particular interest to and a part of the practice of industrial health. This work should be undertaken largely through cooperation with the family physicians, local, state and national medical societies, and the city, state and national health organizations.

We as physicians should accept this responsibility to industry, since no other group is well

Hazlett 1941

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trained and well fitted for it. If we do not assume this responsibility, we shall not be fulfilling our obligation to the Oath of Hippocrates, and we shall be derelict in carrying out our conception of preventive medicine.

At no time in the history of our country does so much depend upon the conservation of man power in our industrial organizations as at this time in our program of national defense and the protection of our democratic form of government.

DISCUSSION (Abstract)

Dr. Harry C. Schmeisser, Memphis, Tenn.—There is no question in the minds of all of us that Dr. Hazlett's paper is quite a timely contribution in view of the present national preparedness. We are all thinking of industrial health just now. It will be a greater problem in the near future, and he has an unusual opportunity in his great industry, Westinghouse, to lead the way.

We at Memphis at the present time are also in a position to make some observations along these lines. A great industry, DuPont, has set up a branch powder manufacturing company at Memphis. It is the company's policy to give a thorough physical examination and to admit employees to their factories only if they are in perfect health.

Now, it happens that Dr. McGinnes, who is a member of the Department of Preventive Medicine at the University of Tennessee, of which I am a faculty member, has been made director of syphilis control in our community, and he has been holding a clinic at this powder factory and has been examining the applicants for admission. He finds that 40 per cent of the Negroes who make application are syphilitic. The tests are controlled by Kahn-trained technicians in DuPont's central laboratory at Wilmington. DuPont is so strict that under its rules 40 per cent would not be accepted. The non-employment of these individuals was carried out for some time until the mayor and the county commissioner came to the conclusion that Memphis would not be profiting very much from this great new industry if 40 per cent of the negro applications were turned down, so they plead with DuPont at Wilmington to reduce their requirements. They now permit some of these 40 per cent to be employed provided they take the rigid, prescribed syphilitic treatment.

My point is this: we have great industries that are handling this industrial health problem very efficiently, and yet it is important that they not set the same standards for all of their branch factories in various parts of the country. If DuPont should insist on its previous standards of not taking any syphilitic individuals, negro employment in Memphis would greatly suffer.

Dr. Hazlett (closing).—Another thing that influences very much in industry pre-employment examinations, is the labor market. We are often forced to bring down our standards a certain amount, but if we try to fit the man for an individual job, we can use a great many men whom we have not used in the past.

ATTEMPTS TO TEACH PRINCIPLES OF PSYCHIATRIC INTERVIEWING*

By JOHN C. WHITEHORN, M.D.†
St. Louis, Missouri

In the task of working out the program for the medical students at Washington University in the last two years, the principal aims have been to develop insight into personality functions and problems, as encountered in the general practice of medicine, and to give to all students some opportunity and assistance in acquiring and developing some skill in methods of personality study and treatment. This last aim is concerned principally with the interview as the main method, both for study and treatment of personality problems. I am glad to have the opportunity to discuss with you today some of the attempts which we have been making to teach certain of the more elementary principles of interviewing.

A brief statement of the present outline of our psychiatric program may help to orient this particular problem. We have time allotted for psychiatric instruction in each of the four years. In the first course, there is a brief review of pre-medical psychology and a series of lectures designed to inform the student about the enormous importance of emotional reactions in medical history and practice. For example, one lecture has dealt with the history of anatomy, as that has been influenced by the emotional reactions to cutting up the human body. Another has dealt with the public health problem of the control of syphilis, particularly as it has been handicapped by prejudice, prudery, guilt feelings, and so on. We found, however, that our medical students were not getting much out of these lectures, so this year we have, so to speak, lowered our aim so as to fire almost point blank into the students' faces. Starting from a consideration of the attitudes which characterize doctors and medical students, some lectures are given concerning the development of attitudes in the growth of personality, with particular emphasis upon the development of emotional security and poise. Then some case material is presented to illustrate the doctor's task of ministering to the distraught patient's need for security.

In the second period of instruction, in the sec-

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†Professor of Psychiatry, Washington University School of Medicine.