PHYSICAL CULTURE IN ELEMENTARY SCHOOLS.*

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A BAD family history from the tuberculous standpoint had determined him to devote his attention to the subject of physical development, and he had come to the conclusion that what was required in his predecessors was that they should increase the factor of personal resistance. In the way of hunting the bacillus everything appeared to have been done, except to increase the personal resistance of those liable to be affected—the resistance produced by the general better working of the organs.

The question as related to the children in the schools, a question to which he had devoted some attention, seemed to increase in its interest the more one had to do with it. Its importance consisted in the fact that the educational people alone were not capable of dealing with it. They had called for assistance from the War Office in order to improve the physique of the nation, and the infantry drill book had been the model for the physical training in the elementary schools, giving altogether unsuitable, if not harmful, exercises. Now, taking the alleged physical deterioration as proved, he thought that the medical profession were alone the proper people to advise the education authorities, and he wanted to submit to that meeting that the Medical Officers should be the proper people to supervise the physical education and culture. To physical education they would have to look for a remedy for physical deterioration, which has been going on for a long while.

Many influences were now at work, but he contended that the educational authorities did not possess the requisite technical knowledge to enable them to carry out this important work to advantage. By physical culture he meant the development of the body as a whole, so that each part might reach as nearly as possible to the highest perfection. Anyone having a great deal to do with examinations of people could not help being struck by the general want of condition and good physique among the people. It was rare to see a really well-set-up man.

Various systems of physical culture had been devised of recent years—some good, some bad. He was opposed altogether to the drill sergeant, whose exercises were, first of all, intended for the

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grown-up man, and not for tender children. Military instructors might implant a military spirit in the young, but they were not, for many obvious reasons, the best people to carry out the physical instruction of children.

Another system had come into vogue, viz., the Sandow system. If one could dissociate music-hall exhibitions from the idea, no doubt that system would be more generally accepted. The fact remained that, as a developing physical exercise, the system left little to be desired. The exercises were gradual, easy, and capable of being carried out by both sexes, and elaborate or expensive apparatus was quite unnecessary. The object aimed at was to concentrate the will upon the work to be done.

Now, he did not wish to suggest that the Educational Department was blind, but he urged that they should seek assistance in the shape of medical advice. In small rural schools throughout the country the physical education being carried on was a farce. A few minutes once a week were devoted to almost useless exercises in many cases. The absence of adequate playgrounds led to the use of schoolrooms, in which the air was vitiated and possibly infected from school or other gatherings. Of course, the teachers themselves would have to be properly taught. The proper physical exercises were as different from the work of the drill sergeant as could well be imagined.

He contended that the people best able to advise the educational authorities were the Medical Officers of Health, and he urged the Society to take the matter up in this light. He wanted to put the subject before them on the grounds that they accept physical deterioration as a fact ; that the most important means of combating that deterioration is physical culture ; that physical culture should be carried on through the Education Department, advised by medical men, and especially Medical Officers of Health ; that the present scheme drawn up by the Department on the War Office model, is not the best possible for the purpose intended.

DISCUSSION.

The PRESIDENT observed that the subject had been before the Council, which had sent copies of the resolutions passed to the Board of Education. The Council had considered the subject to be one of the utmost importance, and had resolved : (1) That in the opinion of the Council of the Incorporated Society of Medical Officers of Health all public elementary school teachers should be taught the principles of personal hygiene, domestic hygiene, and physical training ; and (2) That in every public elementary school personal hygiene, domestic hygiene, and physical training should be taught to the children. The British Medical Association had passed similar resolutions, viz., that it should be compulsory that every child in public elementary schools should be taught personal hygiene, including

temperance and domestic hygiene. Dr. Newsholme had suggested that something further might be done that evening, and the matter could be discussed with advantage.

Dr. H. BEALE COLLINS (Kingston-on-Thames) said that he had done his best to bring the subject before his authority. The Education Committee had sought his advice in connection with the taking over of the provided schools, and as a result of his report considerable improvements had been effected in what were the voluntary schools of the town. The question was a difficult one to deal with, because it involved considerable expense. Training of teachers meant larger demands upon the ratepayers, and therefore the matter must be approached with a considerable amount of caution. It must not be pushed too far. As time and opportunity offer they could all bring the subject before their various authorities. In his last two or three annual reports he had given certain advice, and interest had been created. The Society might approach the Government with advantage with a strong pronouncement in favour of the careful physical training of the teachers. The great thing was first to get the teachers trained, for, as Dr. Stephens had suggested, it was impossible for the children to be properly trained unless the teachers are themselves trained in the necessary exercises. The training of the children would naturally follow the training of the teachers. They had to remember, however, that a large number of the children for whom such physical training is designed are both under-fed and badly fed. Perhaps the present ills were due not so much to under-feeding as to bad feeding. Parents had to be taught how to feed their children properly. The ignorance on the subject of children's food was appalling. The whole process would be a gradual one, and the medical profession would have to do a lot of pegging away. Of course, the matter was important, and it was a deplorable thing that the reports submitted on the condition of recruits should be possible at this period of the world's civilization; it seemed astonishing that this country should not have taken more interest in the subject. He laid particular stress upon the question of food for children, and opined that young children are fed too much upon meat. A great deal more could be done with cheaper vegetable food if the poorer classes could be taught to use it properly. If reform could be effected in this direction he felt certain that good results would follow, not the least in providing the children with the stamina necessary to bear the strain of physical exercise that is indispensable for their general improvement bodily. If the meeting could pass some resolution unanimously, it might have weight with persons in authority.

Dr. J. KERR (Medical Officer to the London School Board) thought they had to thank Dr. Lockhart Stephens for bringing forward this subject, which was one that no one, as it were, knew anything about, because, like the snakes in Ireland, physical culture did not exist in most schools. He did not think they would agree with the suggestion as to the progressive physical deterioration of the country. Undoubtedly the present enquiry was bringing to light the existence of degraded conditions, but he did not think they would agree with Dr. Stephens that a general downward course was being followed by the nation. This, however, did not really affect the argument, and that aspect of the question could be left to those who are now enquiring into it. But the physical training of children was an exceedingly important matter, because hitherto educational ideals have paid very little attention to the physical condition of the children at all. The ideal of school was moulded on ancient and

out-of-date lines, and practically has not come up to modern standards. School takes the children away for many hours daily, and puts them in what is an unnatural condition. The natural condition is activity of muscles and nerves, and to a great extent children are deprived of these natural conditions by school attendance. The purpose of school should therefore be to replace artificially these natural conditions, and should supply the natural method of training muscles and nerves by movement. Physical culture is the only way by which this can be done. They could not justifiably say that any system of physical culture is the best and must be followed. Possibly the Sandow system would be very good, but it was to be remembered that children came to school at the age of three and could hardly walk. Many of them had to be taught to walk properly. For them physical training was a very different thing to similar training for the child of thirteen or fourteen. A young child was incapable of prolonged effort, or of slow and complicated movement. Exhaustion was very harmful to a child who had to grow and develop. To attempt to get out of it premature function would disturb the natural development, and probably retard some later development, preventing it from attaining due symmetrical growth. Regarded in this aspect, physical culture was twofold : There was the educational effect in training muscles and nerves, and also what Dr. Stephens had referred to, the benefit to be obtained from training the personal resistance and nutritive vigour of the child. There are certain movements which the young baby makes, which at very early stages become automatic and unconscious. The aim of physical training should be to train the movements which are used for nutritional development, and make them at an early stage as automatic as possible. In young children movement ought to be produced as unconsciously as possible, and it was useful that such movements should be designed to promote circulation, respiration, and organic functions. This should be continued through the whole life of the child, stimulating its various functions, and so developing its reserve powers, which constitute personal resistance. Any physical training which does not take this into account, and a required part worked almost every hour in the school, would be a failure, because it would fail to develop the personal resistance of the child's tissues, which is one of the most important things in its life's history. Then with regard to the other movements, the training of the nerve centres to control muscular movement ; as the child gets on these become more complicated ; each age must have a progressive course. The whole course should be co-ordinated movement, intended to help to develop the child's vitality and natural movements, of which it is deprived by school. Before long he thought it would be found that some such course would be adopted. The present model course referred to by Dr. Stephens has been unanimously condemned. He did not know whether it had been formally withdrawn, but he believed it was a dead letter now. The circumstances of small rural schools was an important point to be remembered by anyone establishing a system of physical culture, and there was the difficulty about the area of the schoolroom. Recently breathing exercises have been introduced. Such exercises were generally advocated by voice-trainers and people who used them empirically. Practically these exercises amount to teaching a child to breathe through its nose, deeply, correctly, and to expand the chest. These have a nutritive value in developing the circulation and chest, and as such are good. He could not see why people should say these exercises must be done out of doors ; if in-door air was good enough to live in it was surely good enough to

breathe in. Anyhow, it was no reason why the respiratory powers should not be developed. The question of dust was an important one, but he did not think the contagion was a great or a serious question. The schools were not such dreadful dens as had been pictured, and he thought the question was more one of personal contagion. The mere exercising of the children in the schools would not add materially to the risks. The breathing exercises would lead to the opening of windows, and attract attention to the condition of the school generally. A great deal of the work could be done through the teachers, under expert direction, and it would be done if the inspectors required it. Unfortunately, the Education Department seemed to be like other Government Departments, managed by experts who know next to nothing of what they should have to deal with. Inspectors would speedily be brought up to the line if the Board of Education had at headquarters those who could give them medical and sanitary advice. One could only wonder under present circumstances that things are not very much worse than they are. The way to get the required training of teachers was to put pressure on the Board of Education to insist on hygienic knowledge and training in the teachers. Teachers should have direct training in physical culture; they must know what is to be obtained from the exercises. In London there were superintendents of physical exercises who visited the schools regularly, but in country schools neither teachers or children have the faintest idea why they do certain movements, some of which are perfectly wrong. All that would be remedied by having hygienic education required of the teachers, and by school inspectors who know what the subjects are that they should inspect. For this reason the Society would do very well if they did nothing else than move the Board of Education in the direction of having properly-trained, scientific inspection.

Dr. P. CALDWELL SMITH (Wandsworth) considered that the problem was not to be solved only by physical culture. They must get to the root of the whole thing. Physical deterioration exists only among a certain class—among the children of the working classes, and not among the children of the well-to-do. One of the contributory causes was unsuitable and irregular feeding. Another cause, he believed, was want of sufficient sleep, without which it was impossible for the children to grow properly. Thousands of working-class children were up early and late. These two points ought to be impressed upon parents, while many young mothers badly needed educating as to how to feed their children. He thought it was a disgrace to civilization that children as young as three should be sent to school. It ought to be made a penal offence to send a child before it was five years old, before which age it was neither physically nor mentally fit to bear the strain of school. In Scotland the percentage of children attending school before five was very small, yet the percentage of children who did well was higher there than in England. The physical condition of children in Scotland was better than in England. He thought that if Dr. Newsholme had been present he would have supported the points which had been raised.

Dr. W. BUTLER said there was no question of more importance to Medical Officers of Health than this, and no time more opportune for discussion now that the Education Act required the reorganization of the schools altogether. Education had come upon us with a rush, and society had not been able to adapt itself to the new conditions. That the last half century has brought physical deterioration was a fact, and no one more than Medical Officers could appreciate the reasons why. The wonder was the deterioration was not greater than it is. The

conditions of life in towns were such that no one could reasonably expect the rising generation to grow into healthy men and women. Both home and school conditions were opposed to progress in this direction. If Dr. Stephens had erred, it had been in placing too great an importance upon physical culture in schools as a remedy for these conditions. The question was a broader one—that we had not been able to organize to meet new conditions. The food question resolved itself into domestic inefficiency. The utter incapacity of wives to be mothers of families was the cause more than anything else of the low condition in which the children are brought up. Food, cleanliness, sleep, air space, and other things in the homes of the working classes constituted the problem, and how were these defects to be remedied? He thought that in the school the rising generation must be educated in these matters. Working-class women got no domestic training nowadays, and the girls must be taught the elements of domestic hygiene. Mr. Rowntree, at York, and Mr. Charles Booth, in London, had shown that 30 per cent of the people are under the poverty line. How was it possible under such conditions for children to be reared by healthy growth. He believed that it would come to giving proper conditions and proper food at school. His authority had placed the hygienic control of the schools under his supervision, and shortly he hoped to have a system of weighing and measuring which would give some data to act upon. Children came to school dirty, and the washing had to be discouraged because it took up too much time that should be given to learning. Considerations of this nature put physical training as advocated by Dr. Stephens in a secondary position, and the subject had to be looked at in relation to other factors in school life. They must not rush to conclusions that physical training is to be urged primarily upon the education authorities, but the larger questions indicated must be taken seriously into consideration, and medical authorities should be consulted in a way they had not been consulted in the past.

Mr. WOLF DEFRIES pointed out that one inference from the discussion was that, as the question was a highly complicated one, the solution of the problem was not likely to be simple or rapid. He also gathered that the opinion was that the function of Medical Officers of Health was not confined to the administration of the Public Health Acts, but extended to the whole scope of public health generally. There might, therefore, be some propriety in considering whether the Society was not in a position to invite its Council to consider whether something in the nature of a Standing Committee might not be appointed to consider these various questions in detail, and at greater leisure than was possible at a general meeting. They might then approach the Board of Education with more weight in their representations, and with steady and increasing pressure, persistently applied as the result of systematic study and enquiry, they might hope for some definite result in the future.

Dr. W. G. WILLOUGHBY pointed out that the immediate question before them was physical culture in schools under present conditions, and Dr. Stephens' object was not to put the other subjects in the background. He desired to deal with the children as they were brought to school to-day. As Medical Officer to a small education authority, he found that there was a report before the members at the last meeting consisting of a scheme of a drill (to be given by a sergeant holding military rank), and which was most unsuited for delicate children. He would be glad to know from Dr. Stephens if there was any particular book on the subject which could be advantageously used by Medical Officers in

his position, for not only did teachers require education on the subject, but also medical men needed some instruction.

The PRESIDENT said he understood the suggestion was that a committee should gather information in order to impress the Board of Education. They all could appreciate the difference between the physical culture suggested by Dr. Stephens and military drill practised in different parts of the country. The whole subject was a wide one. In America the elements of domestic and personal hygiene were being taught, and in British Colonies; yet in England, although there were many voluntary subjects connected with domestic hygiene, the Board of Education did not define what they meant by domestic hygiene. There were only forty schools in this country where the subject was taken. But the Board of Education did not want further information; they only did not see their way to include it among the compulsory subjects of the Code, because there were so many other subjects to be taught. The difficulty was that the matter seemed settled in the mind of the Education Board.

Dr. SIDNEY DAVIES (Woolwich) said he would be prepared to second Mr. Defries' suggestion. The chief object of the proposed committee would be to collect facts. It was doubtful whether there was a progressive physical deterioration. This might be so in the case of recruits, who used to be drawn largely from the agricultural labouring class. The collection of facts as to chest measurement, weight, and height of school children in different parts of the country would give useful information in determining the questions raised.

Dr. MEREDITH RICHARDS reminded the meeting that a Departmental Committee had been sitting for some months with regard to the alleged physical deterioration in this country. He thought, therefore, it was rather inopportune to appoint another committee with practically identical objects. It seemed to be prudent to wait for the suggested code of physical exercises to be published, and then to appoint a committee to consider those proposals. It was rather a large question for that Society to attempt to investigate. It would be a mistake to base their suggestions on the assumption that physical degeneration had taken place. They should base their recommendations upon more general principles. He was inclined to agree that the schoolroom is not the place for physical exercises.

The PRESIDENT said that he knew the Board of Education was much exercised upon the whole subject, and he gathered that the Board had been helped by the resolutions which had been submitted by that Society and the British Medical Association.

Prof. W. J. SIMPSON thought that any resolution which might be passed should contain something more definite in regard to the harmfulness of the military system which had been referred to, and of the evils of which he had early personal experience.

The PRESIDENT observed that the military system had been withdrawn by the Board of Education.

After some further discussion, it was resolved, on the motion of Mr. W. Defries, seconded by Mr. S. Davies, "That it be referred to the Council to appoint, if they think it practicable and expedient, a Standing Committee of the Society, charged with the study of questions of school hygiene, such as those raised by Dr. Lockhart Stephens' paper, and with the duty of presenting to the Society from time to time such reports as may be suggested by such material as they may obtain."

Dr. LOCKHART STEPHENS, replying to some of the points raised, said that he was very glad to hear that the military system had been abandoned,

as this showed some sort of conscience on the part of the Board of Education. He did not think that Dr. Kerr would think a schoolroom the proper place in which to carry out physical exercises if he could have known the state of some of these places after an evening's smoking concert. Voluntary school buildings and playgrounds were particularly defective. He quite agreed that there were a number of factors contributing to physical deterioration, but physical exercise such as he suggested was one means of combating the defects. He had endeavoured to bring before the Society one point, a most important point, viz., that Medical Officers of Health should come in as advisers, and not as mere administrators of the Public Health Acts. Hitherto their position had been that of one armed with an Act of Parliament. He thought they were entitled to a more honoured and confidential position—they must be taken into the national council. He thanked the members for the courtesy with which they had listened to him, for he was hardly worthy to come where so many distinguished men had preceded him, and put forward his views and experience.

The PRESIDENT observed that the rural Medical Officer of Health had perhaps more than anyone else problems of public health to solve. Incidentally he referred to the excellent arrangements at the Royal Naval School at Osborn, and suggested that these arrangements constituted a model for educational establishments.

EPIZOOTIC LYMPHANGITIS.—The Board of Agriculture calls attention to this disease, which has been imported from S. Africa. It affects horses, the symptoms being swelling and eruptions on the legs, generally the hind legs. Affected horses should be promptly isolated, and stables disinfected.

SOURCES OF INFECTION IN PHTHISIS.—Dr. B. Möllers (*Zeitsch. f. Hyg.*, xliv, 3) deals with the histories of 200 phthisical patients which were the subject of careful enquiry. In 114, or 57 per cent, the infection was acquired in the home from consumptive parents and relatives. This result agrees with the results obtained by Dr. Nivens (*vide Annual Report, Manchester*, 1902). In fifty, or 25 per cent, the source of infection appeared to be acquired in workshops from consumptive fellow-workers. In fourteen, or 7 per cent, the source of infection is put down as the "dwelling," i.e., places such as common lodging houses, infirmaries, etc., where the patient was in close contact with fellow-sufferers. In one, or .5 per cent, the source of infection was through inoculation from a tuberculous animal.

LIBRARY BOOKS AND PHTHISIS.—Dr. J. Mitutesen, of the Institute for Infectious Diseases, Berlin (*Zeitsch. f. Hyg.*, vol. xliv, part 3), has made careful bacteriological examinations in the case of ninety-seven books, 177 guinea-pigs being used for the inoculations. In those books which were in use two years and under, no tubercle bacilli could be discovered; but in those books which had been in use for from three to six years more than one-third contained tubercle bacilli, as evidenced by the inoculation on guinea-pigs. The bacilli were contained in the thick dirt of the edges of the leaves, and were no doubt due to coughing while reading, and wetting the fingers in the mouth to turn over the leaves. For prophylaxis he recommends fumigating the books with formalin for a whole day, and giving instruction to users of the books especially to avoid wetting the fingers in the mouth to turn over the leaves, since the person who does it may become himself infected or infect others.