



# THE ROYAL BANK OF CANADA

## MONTHLY LETTER

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### SCHOOL CHILDREN'S HEALTH

**B**ECAUSE it is generally recognized that ill-health is largely the result of mistakes which could have been avoided had there been fuller knowledge and greater care, this article is designed to look into the place of health education and practice in the school. It is at the school that for the first time every child's health can be assessed, and deficiencies corrected. There, if anywhere, is our golden opportunity for constructive work in building a healthy Canada.

The only limitations on health progress in any age are the bounds set by the growth of scientific knowledge, the willingness of those in authority to introduce advanced ideas, and the readiness of people to pay the cost — a price which is low relative to the resulting good.

Persons with vision will aim at much more than the prevention of this or that disorder of childhood. It is no longer satisfactory merely to detect measles, chickenpox, mumps and other "children's diseases" and isolate the victims. The new idea implies the promotion of bodily and mental vigour, strength and alertness, a target worthy of our best attention.

#### *We Have New Standards*

Children born around the beginning of this century had prospect of an average length of life of only 49¼ years; babies born in 1947 may look for an average life of 66½ years.

Life has become safer for children, but it is hardly correct to refer to the death rate in this and that disease as having "dropped" or "declined." It was pushed down under the feet of advancing science, the outstanding victories achieved by medical research men, and the active co-operation of parents and schools.

Our improved standards of living, too, have taken as their chief beneficiary the infant and the child. This year's baby will have more baths in his first twelve months than Frederick the Great had in all his life. If the baby grows up into an admirer of Chippendale furniture he will be horrified, equipped as he is with a three-piece bathroom, to learn that the great Master seldom was called upon to design a

wash-stand. Today, we have abandoned the 19th Century's mystical absorption with "Survival of the fittest," and we are trying to do something about the unfitness of some survivors.

There are, of course, fussbudgets who make this a point of argument. They suggest that the saving in infant life has preserved the unfit, and somehow suggest that this is a bad thing. But they are not right. In addition to the reduction in mortality there has been a great advance in protective measures which save children from diseases likely to prove injurious in later years.

Progress has been made, but our achievements and practice fall far short of our ideals and knowledge. Dr. Griffith Binning, Medical Director of Schools in Saskatoon, wrote an article in the *Canadian Journal of Public Health*, reporting on a comparison of Saskatoon children with army volunteers on the basis of the Pulhems test. Whereas only 41.8 per cent of the army candidates graded "A", there were 82.5 per cent of Saskatoon children in this class. Dr. Binning makes this striking statement: "A physical standard for children should be evolved, since in their case the present Army standard is too low an objective to be satisfactory."

What we need today is a gripping sense of the possibilities of healthful living, and to get away from dependence for satisfaction upon the reduction of death rates. Lowness of mortality, and even absence of disease, are not satisfactory standards for this age.

#### *The C. E. A. Survey*

As part of the constructive activity of the Canadian Education Association and the Canadian Public Health Association, there was set up in the summer of 1945 a National Committee for School Health Research provided with financial assistance by the Canadian Life Insurance Officers Association.

Data have been gathered from 26,101 elementary schools, about 90 per cent of all in Canada, and 8,000 secondary school classrooms, about 70 per cent of the total. The conditions covered in the two reports

already published show an average across the country, and there are wide differences between provinces. Most of the material in this article, applying to Canadian schools, is drawn from the committee's reports, but the comment and interpretation are our own.

### *Teaching Health in School*

Health instruction is a positive duty of the teacher. It cannot be left to occasional talks by the school physician or advice from a physical training instructor.

The aims of health education should be practical: (1) to bring about correct bodily development through physical activities such as games, corrective exercises and dances; (2) to make the physical constitution stronger through development of sanitary and health habits; (3) to detect, and thus take the first steps toward preventing or stopping physical upsets such as are caused by dental defects, eye, heart and stomach disturbances.

Explanations for health habits should be given. It is no longer sufficient to say "Do this" and "Don't do that." Even children in elementary classes look for the why and wherefore. The child should be led to believe that his best health habits are his normal health habits, and anything less is unworthy.

Health education should be spread through the whole curriculum, instead of being tacked on as an appendix to a course in physiology and hygiene. One of the dullest books we know is one on hygiene, which teaches about physiology instead of telling how the functioning of the human organism enters into providing the abundant energy we need if we are to do the things we want to do.

### *Physical Examinations*

It is said by qualified authorities that school health service should place its main emphasis on positive action rather than upon the construction of charts and tabulations. At the same time, the tabulation arising out of regular medical examination is needed to find out what defects are threatened. These records frequently reveal changes in health factors which enable problems to be tackled in time to prevent lasting trouble.

One of the latest devices is the Wetzel Grid, referred to in the *Annual Report* of the Child and Maternal Health Division of the Department of National Health and Welfare. This chart, which helps to evaluate the physical status and growth of children from birth to the age of eighteen years, was distributed to authorities throughout Canada. It was being used, according to the 1947 report, in the study of some 6,000 children in British Columbia, and Saskatoon was co-operating in a study of emotional factors which may influence growth, a preliminary report on which appeared in this spring's issue of *Health*.

It is pointed out, very properly, that neither the Wetzel Grid nor any other contrivance is designed to try to fit every child into a preconceived "ideal" weight, height and degree of development. There are many differences between children, due to race, family

habits, and conditions of living. The test is: does the child progress? If records of physical examinations show a halted or stumbling progress, then the child cannot be looked upon as a satisfactory example of good health.

It will appear very sensible to the business man, accustomed as he is to the use of flow charts and other devices to keep business moving smoothly, that there should be a continuous record kept of every child's health progress. This might start in pre-natal days, and continue with the family doctor until school age, then be handed over to the school health authorities. At graduation, the record should be available for the employer's physician, and should then follow the subject to whatever doctor he chooses as his personal adviser.

### *Prevention of Disease*

It is a good thing to cure illness, and great skill is shown in treatment of those smitten by disease, but it is better and shows more wisdom to prevent illness.

The policy of tuberculin tests for school children is steadily gaining favour, and travelling clinics bring the campaign for early detection of tuberculosis within reach of a substantial proportion of the school population and the young adult group. Means of protection against diphtheria and whooping cough, available to the public free of charge, have done marvellous things in prevention of these diseases. Smallpox has ceased to be a serious menace in communities where vaccination is required. The incidence of goitre among Prairie children was radically reduced by the administration of iodine in various forms.

Typical of the work being done in this field is that of the National Immunization Division of the Health League of Canada, whose Sixth National Immunization Week was scheduled this year from September 12 to 18. A truly remarkable reduction in both number of cases and deaths is recorded by the Division.

### *Dental Health*

The condition of the teeth of our children is still shockingly bad, said an article in the *Statistical Bulletin* of the Metropolitan Life Insurance Company, a publication which reports monthly on health matters in the United States and Canada. "Surveys show that more than 95 per cent of the children reaching 15 have already experienced some decay in their permanent teeth." An inspection in Montreal in 1946 showed that some 73 per cent of the children examined had dental defects.

Dental decay is largely the result of defective nutrition. Dr. Alan Brown of the Hospital for Sick Children, Toronto, said in a radio address: "If children are fed meals that contain sufficient milk, fruit, vegetables, eggs and meat, and if they are given a daily dose of fish liver oil during the eight colder months of the year, they will have much less dental decay." From the age of three onward, he warned, children should have their teeth checked every six months. Cleaning is important, too. It is surely less significant that children should be taught at school how many teeth they have,

and their names, than that they should learn to brush them daily and eat the proper foods to build and preserve them.

### *Nutrition*

At the beginning of this century much was made of the theory that the prevalence of undernutrition was primarily, if not wholly, an evidence of insufficient food due to widespread poverty. It is now known that malnutrition may be prevalent in the homes of the wealthy as well as among the poor, as a result of faulty selection of food, insufficient rest, and the aftermath of general infections or other causes.

The truth is that even when a community has advanced to the point where it has a wide *choice* of foods, there is nothing to prevent its people from eating the wrong *kind* of food.

In every survey conducted in Canada it has been found that one child in three could be expected to benefit by eating a better diet.

The school lunch should be mentioned as one agency which is operating as a health influence in many schools. The mere provision of one suitable meal a day results in nutritional betterment of many children, and when this is accompanied by an educational programme the results are more outstanding.

Eating places in the school afford a wonderful opportunity for instruction in good nutrition and development of good eating habits. By relieving mothers of some of their work, to the ultimate benefit of the children, school lunches may prove to be a substantial contribution to better family life.

### *Physical Training*

The purpose of physical training is to promote a strong body in which all the muscles, because in daily use, perform their functions properly, giving necessary support to the vital organs.

More than exercise is involved. Knowledge must be given of respiration, circulation, glandular action, rest and diet. When the "why" is explained, the pupil will better understand the demand made that athletes must be temperate in their way of living as well as submissive to training.

In a report of the Quebec Protestant Education Survey over the signature of W. A. F. Hepburn, physical education was carried into even the one-room school, where the floor is taken up with nailed-down desks and an immovable stove. These features, plus the fact that pupils range in age from five or six to fifteen, present obstacles which might seem impossible to surmount. But this committee made suggestions, and if it has found a way of providing indoor physical training under such circumstances there is no excuse for any school anywhere to fail.

The committee emphasized the undesirability of stressing the kind of competition which results from inter-school leagues. It is all right in its place, but the training of a few selected athletes should never be done at the expense of the majority of the pupils.

### *Mental Health*

The subject of mental health merits treatment in a separate article, but its mention here is necessary because in many respects it is part and parcel of physical health. Many more children relieve their emotional tensions by getting sick than do so by becoming behaviour problems.

It is not sufficiently realized that mental achievement tests will show a marked drop in the presence of emotional stresses. The child's I. Q. may appear to be lower than it really is. Because of worries, which may be of home origin, he may stay a second year in the same grade, without teacher, parent or child realizing that the cause is illness.

Ideally, the child would be properly diagnosed, even at considerable expense. Among the treatments used should be rest from mental and physical stress. Instead of this, unfortunately, a child mentally sick because of his emotional problems is likely to be loaded with pressures from home and school. In an effort to push him ahead he may be given extra home work and special lessons. Is it any wonder that the child so often protests against the mental upset by developing body illness or relapsing into the more comfortable dream world of mental disease?

Our schools cannot disregard this emotional side of the child's life in favour of concentration on his intellectual development, any more than they can ignore the physical health side. Intellectual fitness, physical well-being and mental health are so interdependent that the wholeness of an individual cannot be achieved if any one is neglected.

While the home is necessarily the most important factor in mental hygiene, the school and the community have their responsibilities, particularly in the early unbiased detection of abnormalities which, if neglected in childhood, develop into personality maladjustments of adult life.

Twenty years ago it was pointed out in an article in the *Annals* of the American Academy of Political and Social Science: "If the youngster was fairly born, with a good prospect, and if now, at the age of seven he is developing tantrums, or if at 16 he has become delinquent, or if at 19 he has developed a neurosis, or if at 25 he has developed a psychosis not of an accidental type, or an organic type, then, not having been born with these defects, where did he get them? If it were the measles we would ask, 'whom has he been with?' It is a good question to ask here; and the answer is — mostly with his parents and teachers."

The National Committee tackles this problem head-on, and presents this report: "Mental health problems will be reduced to a secondary position if we strive for: (a) smaller classes with teachers better trained in at least the elementary principles and techniques of mental health; (b) a release from the 'lock-step' system of education in which we attempt to have forty-odd children of widely varying abilities all learn the same things at the same rate of progress; (c) the

satisfying of the basic psychological needs of the child; (d) better liaison between school and home; (e) education of the parents in the rearing of children."

### *Training for Teachers*

While the school has accepted the duty of education in health as one of its responsibilities, there remains some degree of confusion both as to objective and means. This should be resolved by consultation and agreement on the highest levels, followed by proper and adequate training of those who will administer the school health programme.

Student teachers-in-training should acquire a thorough understanding of what is meant by positive health education and of its techniques. Teachers who are already in positions should be given in-service training.

Dr. Binning urges establishment in universities of a Chair of School Medicine as a means to assuring that school medical work shall be in the best possible hands and shall be conscientiously performed. In Great Britain the Central Advisory Council for Education recommended in 1947 that all medical officers entering the service should be required to hold special qualification in children's medicine, and that the school health service should be made to provide a satisfactory career for a medical officer.

### *School Environment*

As well as having fully qualified medical practitioners and specially trained teachers, the schools need a certain healthful environment. This includes attention to location, construction, size, ventilation, heating, lighting, acoustics, seating, adequacy of lavatories and handwashing facilities, physical training space with lockers and showers, health service rooms and health libraries. All these, said an article in *Canada's Health and Welfare*, are necessary for adequate health training.

Too often, in schools which emphasize health instruction, health practices do not keep pace with the lessons. Pupils cannot be expected to build and practise the health habits which are taught when conditions are the opposite of the teaching. "It would be ridiculous to think of functional health teaching in many schools where sanitary conditions are actually a menace to health," said the National Committee report.

In some provinces as high as 12 per cent of the secondary schools do not provide even a hand basin for washing; in six provinces at least 20 per cent have no soap and paper towels; only 28.5 per cent have the water supply tested periodically; only 43 per cent of secondary school classrooms have artificial lighting giving the minimum required intensity; the proportion of one-room schools with inadequate natural lighting ranges up to 43.5 per cent; and in most provinces more than 80 per cent of these schools have no artificial illumination of any kind; in one province all one-room schools have only outdoor toilet facilities and over all provinces the proportion is 71.4 per cent; in many schools drinking water is in an open pail, with a dipper for drinking, and slops go back into the pail.

In one province 100 per cent of the schools have first aid kits, but only 15 per cent of them test their drinking water supply annually.

These and hundreds of other facts regarding the environment in schools are given in the National Committee report, published in *Canadian Education*, Volume II, Number 2, 1947, and Volume III, Number 2, 1948. There is, on this evidence, more room for improvement than most people thought possible in an enlightened age, and the Committee makes constructive suggestions arising out of its findings.

### *A Combined Operation*

It is evident that the health of children calls for a combined operation in which school and home and community participate. In a very real sense, the limits of school health are the boundaries of the community, not the fence around the school yard.

Health education begins with pre-natal education and care, and continues with the sanitation of the community, the home hygiene of the pre-school child, the training of the adolescent in school, and the graduation of the student with sound knowledge upon which to base his own treatment of his own children. This is not a programme to be floated upon sentimental propaganda in fits and starts, but one to be laid out on a basis of facts found by trained investigators and carried out by technically qualified personnel.

There is needed, obviously, a new effort to win close co-operation between teachers, members of the school health service, and parents. The best kind of youngsters cannot be raised by guess and by hearsay. Good will and good intentions cannot be substituted for expert skill and knowledge. Some of the required knowledge can be had for the asking, either by talking with the school medical authorities or by writing to the provincial board of health for up-to-date booklets, which are freely available.

### *The Penalty of Neglect*

The penalty of neglect of health in childhood is very heavy. As Horace Mann said: "All through the life of a feeble-bodied man, his path is lined with memory's gravestones which mark the spots where noble enterprises perished for lack of physical vigour to embody them in deeds."

Those who take office on school boards have a special responsibility to appreciate their opportunity to improve the health of coming generations, and to that end to provide all practicable facilities for teaching and practising health in the schools of today.

There are problems of personnel and equipment and funds, but these should not be allowed to baffle people of good will and good sense. The objective is well worth striving for.

A good start, but merely a start, has been made. Only unremitting effort, intelligently directed by those responsible, supported by the resources of the community, can adequately fulfil the obligation.