

reformatory effort. Perhaps the thing which embitters the prisoner against society most is long periods of inactivity. This should be overcome on Saturdays, Sundays and holidays by supervised community events, as well as by provision for reading, drawing, hobbies and ear-phone radio broadcasts.

But this modern type of prison care will not succeed unless the human element has been wisely selected and as wisely trained. That the officials should be qualified for farm management and trade instruction goes without saying. It is particularly important that they should be men who have not only an acquaintance with the newer penology but who in addition have had some practical experience in handling the misfits of society. To a wide knowledge of human nature, they should add a keen interest in the welfare of those committed to their care. Firmness to secure discipline, and kindness and understanding in dealing with individuals, are further essential characteristics. Punishment there must be, especially with the incorrigible types, but prisoners should be led to better things by rewards and privileges rather than be terrorized by severity.

Perhaps the greatest aid to constructive discipline is the development of a *classification system* based on the "Triple Division" model as used in England. The youthful and young prisoners, those not over 23 years of age are set apart as "star" class offenders. Those under 30 who have been previously convicted, and who are therefore ineligible for the "star" class, are grouped as "specials", and all others as "ordinary". With this foundation, a grades and merit system properly carried out will furnish the most effective motive towards improvement. Provision whereby satisfactory conduct may earn remission is fundamental in modern prison discipline.

All these are not new ideals in the treatment of delinquency in Nova Scotia. They are on the other hand well-tested principles already in effect in the successful institutions for children, youths and women offenders, as exemplified at Truro, Coverdale and Halifax. The new prison farm means merely an extension of the same general practices to the treatment of men, particularly of first offenders, thus bringing all the correctional institutions in harmony with modern principles of penal reform.

The Care of Crippled Children

By D. E. ROBERTSON.

THE care of crippled children is a problem that calls for an intelligent understanding of the individual case. It demands a knowledge of the physical disability as well as a true appraisal of the mentality present. Before treatment of any sort is initiated there must be some hope, based upon critical studies of similar cases, of improvement. It is not justifiable in these days casually to accept advice from ignorant and untrained and inexperienced sources, to

initiate a treatment, frequently expensive, and to find it after some time useless. Too often this occurs, and the parents in some cases impoverish themselves in moving from place to place in search of a physician who can cure their child, as if the first honest well trained physician they had seen had not suggested to them a temporal court of last medical appeal where they could get for a relatively small fee, or for no fee at all, an expert opinion as to the probability of reasonable results from any treatment. In this day when "news" is assumed to be a primary demand of the public, and

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even individual or private rights may be violated for its satisfaction, medical information is to be found in the daily press. Not that one can accept at its face value these medical news items, but they do tend to keep the medical men and laymen at large sensitive and inquiring as to medical advances. Medicine being what it is, a universal system having its own non-secret practices and treatment, there is every opportunity for any doctor to acquaint himself with the practices of the past and present, and any good library will give him the experience of time in the knowledge of disease and its treatment. There is no need, therefore, to accept the advice or ministrations of the ignorant and unqualified. Any system of medicine that seems reasonable is given very quickly an enormous practical test in the great hospitals of the world, and its efficiency is very soon appraised and a true value established. There are no secret remedies or systems that are worth a trial. The basis of a secret remedy is a desire to sell a commodity, not a desire to give a humanitarian service.

Crippled children come from many causes, the earliest being the congenital anomaly or deformity. The imperfectly developed child is imperfectly developed because of the tendency in his cells; and an intimate and accurate history of his progenitors would establish the fact. Any intelligent breeder of stock knows that certain strains have inherent characteristics, and when the strains are not desirable, they may be bred out. Is it too much to ask humans to pay some attention to these eugenic laws?

Of the congenital incomplete or maldevelopments the commonest that live are spina bifida, hare lip and cleft palate. The former, a lump on the back varying in size, may be attended with no physical disability, or it may be a dreadful condition with paralysis and weakness of the lower extremities together with an incontinence of urine and faeces, a truly wretched condition. No surgical operation has yet been devised or performed that gives a reasonable or a satisfactory result in this type of case.

The operation for the cure of hare lip and cleft palate gives results that are brilliant, and the later types of operations are extending the favorable results. These operations are to be undertaken early in life, from the age of six weeks to a year.

Club feet, too, are deformities that can be cured. They can be cured, or at least be made so that an ordinary shoe can be worn, at any time of life. When treatment is begun within the first three weeks the result is good. Where there has been neglect, or where the condition persists on account of inadequate treatment, at any subsequent time an operation may be done on the feet that will place the foot in its proper position and result in a good normal looking foot.

Infants are sometimes born with congenital dislocation of the hips. This is also a familial tendency. These cases are seldom diagnosed during infancy. When the child begins to walk, it is seen to have a peculiar gait, waddles in walking when both hips are dislocated, limps when one side only is affected. Surgical treatment is relatively simple and successful when undertaken in the first year, very difficult and unsatisfactory after six years of age.

Many other congenital anomalies and imperfections are most difficult of treatment promising to give any improvement in the degree of disability. They should have no treatment.

Diseases produced by germs leave cripples in some instances. Encephalitis, inflammation of the brain, occurring in infants may leave a condition in the patient that may be mistaken for Little's disease, spastic diplegia. There is in this case, however, a history of the infant having been normal until it became ill of an acute infection. Following this the physical disability occurred and remained. For such a case training and reeducation of the involved physical movements is all one can do in the reasonable expectation of obtaining improvement.

In infectious disease there is always present the hope and possibility that

the germ producing the disease may be identified. Once identified there is hope of preventing the infection of humans by the particular germ. Typhoid is an outstanding example of what may be done in preventing the infestation of humans by these particular germs. It is a simple question of pure water and pure milk supply. Similarly, diphtheria and scarlet fever are preventable diseases and one does not expect to find them in intelligent communities, intelligent as to public health.

Tuberculosis is a disease due to a germ, and it is a disease that is rampant in Europe and the British Isles. It is disappearing from America. It is disappearing for two reasons. Infected persons are taught proper personal care, including measures to prevent the contamination of other persons and things, and milk supplies are pasteurized.

The care and treatment of milk has been a vexed question of governments, dairies and the general public. The whole problem has been retarded and confused by the certification of cows and their milk. The term "certified milk" does not include a guarantee that the milk does not contain living tuberculous germs. The tuberculin reaction in cattle is not a reliable test as to tuberculosis infection of the animal. To safeguard the purity of milk given to infants and children pasteurization is needed. It kills tuberculosis germs as well as many other disease producing ones.

Tuberculosis when it occurs in children has a tendency to involve bones and joints, and its treatment is a long, tedious, expensive affair, and it always ends in harm of a permanent nature having been done to the joint or bone involved. The treatment consists in hospitalization and rest in bed, surgical operations sometimes being indicated. Happily this disease is becoming less prevalent as public health measures become more generally understood and applied.

Infantile paralysis, a disease that has been so important to the individual though relatively rare, has been the subject of intensive study and experimentation. Yet there is little known as

to its method of infestation in the human. It is said to be due to a virus, a germ so small that no microscope has yet revealed it. The virus is found in the excreta from a patient, sewer water has been found to contain it, and milk is to be suspect. It has been said that the disease is due to a deficient amount of a certain vitamin. Yet such a theory does not explain why the disease goes in waves and districts, two thousand cases in Ontario in 1937 and very few in 1939 with practically no cases in the territory "burnt over" in 1937.

We know practically nothing of useful methods to prevent the disease. We do however realize that once the disease is present great physical disability may be present after the acute phases. It is known that cases of weakness and paralysis must be kept at rest with the paralysed or weakened muscles in a relaxed state. They, therefore, require splinting, and that as soon as weakness is discovered. The nature of the disease is to involve the nerves controlling and activating the muscles. The muscles themselves are never diseased in anterior poliomyelitis. The muscles can only act when the nerves recover. This recovery may take as long as a year and a half, and there is no way of ascertaining the extent of involvement of the nerve except to wait for its reappearance. This reappearance is only to be known by the muscles again beginning to show movement. Muscles that have not been splinted, are unlikely to be able to react when the nervous impulse reaches them. Therefore, the muscle must be kept in a neutral position. Fatigue in a recovering muscle is the factor that retards, stops, or causes retrogression of power. Recovery of muscle power in this disease bears no relation to a person's will to get well. As a matter of fact, those afflicted with weakness or paralysis always over-work the recovering muscles to their own disadvantage. Recovery is never complete. It may appear so, but the absolute power is not there and the "full throttle" is less than formerly.

Those who are severely paralysed have to replan their lives. Such cases

should be put in hospital when it has been found that the paralysis is present. There they may be taught their own proper care and a new philosophy. They will probably be in wards with similar cases, and with those they will be much happier and better able to readjust themselves to their new life. This point is of primary importance to the happiness of the cases and must not be overlooked by public health bodies and people at large.

Common boils or furuncles are small gangrenous infections in the skin. They are caused by a germ known as staphylococcus. This germ gets into the blood of people afflicted with this common and painful complaint. Boils occur in bones. Pasteur called osteomyelitis, this disease, "furunculosis of bone"; and it is a pity the termination was not retained. Boils and infected blisters, pus or matter in the skin, are to be suspect in children. They are the cause of the bone infection known as osteomyelitis, a disease that for crippling effects and chronicity is in the front rank. This dangerous and dreadful disease occurs in children and youths. It is probably preventable in a great majority of cases. Children and youths who have skin infection, infected blisters or boils, should not be allowed to play, during the period of infection, rough games or any game that would expose them to sprains, twists and similar injuries to joints. Injury of the growing bone near a joint may determine a local abscess. This is a disease that at first may be diagnosed rheumatism, and later an abscess forms. Rheumatism never produces abscesses. It is probable that the new drug, sulphapyridine, given early in the disease may control it. The history of an infection in the skin of a child who is complaining of pain in or near a joint is presumptive evidence that there is a beginning osteomyelitis. At this stage administration of the drug will probably be efficacious. Further experience will give a correct answer to this problem.

When the disease is full blown, the

patient is very ill and in a very critical condition. The death rate is high. In those that survive the crippling is often severe, and there is a tendency in later life for the lesion to become active again, especially in the individual who is subject to periods of heavy physical strain. Early operation is not, in my opinion, indicated in cases of osteomyelitis. Early administration of a bacteriostatic drug and admittance to hospital is essential to a successful treatment of the disease. Prevention is much more effective and simpler than treatment of disease.

Traumatic injuries are of a variety that beggars listing. The multitude of activities in which boys can indulge are as dangerous as they are unforeseen. From the use of firearms and explosives and fire to the accidents in domestic wringers there is a range of injuries that produce many cripples. In large wealthy centers where the newer conveniences are to be found, there is a steady stream of children who have a hand, and in some cases, an arm, seriously injured in a power wringer. There seems to be no safety device on power wringers yet equal to its task. In the Hospital for Sick Children, Toronto, there are an average of fifty-two cases such as this each year coming to hospital for treatment.

Every government or organized community should have a plan and scheme for guarding its public health. Education along health lines is productive of an economic saving that of itself pays the highest dividends. Disease in a community is unnecessary, and, besides being costly, is an outward sign of the ignorance and carelessness of the people. Cripples must have good care and good hospitals. Lack of money should never be a bar to the finest of treatment, and hospitals must be so organized that the best medical advice and care in the community is available for the indigent and for those without the funds to pay for the long and difficult treatment necessary in the treatment of crippled children.