The baby and small child are not able to perform consciously any adequate manoeuvres which will contribute positively to the correction of a disability. Thus the treatment of this age group is essentially passive or assistive active. Treatment attempting to achieve normal patterns of development is not a single "half hour period a day" approach but a "24 hour a day" plan of care and management. It is thus fundamental that success in treating the young child will depend on the child's parents and family. Since any child would be likely to spend most of the time with its mother, that child's future development is mostly in her hands, and any treatment of a child must be delegated very largely to the mother.

A general aim of treatment for a disabled child is to achieve emotional stability, with ultimate personal and social independence. Parents of a child with a disability are often scared, emotionally distressed, and all-too-eager to hand the child over to trained staff. To arrive at our goal a child is best living at home, taking as normal as possible a place in the family group. If the child is to progress, the parents must play an active part in the total treatment plan.

The normal baby is helpless and totally dependent, at first. The achievement of the normal pattern of development is linked closely with a parallel chronological age. With the abnormal baby, the pattern of development is retarded or even stopped. Parents can hinder it further if they are not helped, educated, and guided in the correct emotional and physical handling of their child so that the rate of development is as close to normal as possible.

**Assessment And Explanation**

The problems of the child must be clearly understood by the parents. The child is theirs and it is important that they be fully informed on all treatment planning at every stage. The methods chosen to overcome the problems and the reason for their choice must be made clear. It is of importance that there is no promise of a miracle cure which cannot be substantiated by medical fact. The aim at all times should be to achieve a normal rate of development but with full awareness of the limits indicated by the child's problems, the effort involved, and the need for continued care. There is rapid development both mentally and physically in the early life of a child. The need for extraordinary care in management at this crucial time needs to be understood early by the parents to ensure the best possible results. Demonstration and clearly written simple instructions are basic in the early practical education for parents. To overcome the mother's fear of moving her baby, practical encouragement is needed to nurse and show affection, to cuddle, to move arms and legs, turn the baby and to handle it as normally as possible. Specific problems must be faced early for the baby's safety. For example, with the Spina Bifida baby it is not uncommon to find that the mother does not know of the total lack of sensation in the skin of the feet and legs and the need of care at all times to prevent damage.

There is a definite tendency for parents to overprotect a disabled child. The child must take its proper place in the family, his best must be developed without neglect of the rest of the family. The other children quickly sense special and privileged treatment; they should not be given the chance to grow up resenting the "different" child.

With problems of insecurity, inadequacy and frustration, the handicapped child can be contrary, unpredictable, aggressive, easily excited, and can sometimes demonstrate impressive tantrums. All of this is bewildering.
to the parents. The physiotherapist's prolonged and intimate association with parent and child often provides the time, opportunity and climate for parents to confide experiences of unusual behaviour and their difficulties with the child. This sort of evidence, together with such things as suspected sight or hearing abnormalities, can be of considerable help to the doctor. It is not unusual for casual conversation in a physiotherapy treatment session to bring to light obviously epileptic episodes. The parents should be instructed to report such information to the doctor immediately and fully.

A positive approach in handling a child is best. Praise, encouragement and providing activities to keep the child occupied are the basis of reasonable management. Outrageous outbursts can be treated by leaving the child completely alone, or by the usual family chastisement for the offence. Completely ignoring abnormal attention-seeking behaviour is sound and effective. For a handicapped child there is an increased requirement that he "gets on" with people. He will be judged more severely than a normal child. It is important that he be polite, well mannered, well spoken, punctual and aware at the earliest age of what is socially acceptable in each of his functions and activities.

Dressing

There are many hints in clothing to help the busy mother and to make the child more able to assist at an early age. Cardigans instead of jumpers, dresses with front fastening, zip or "velcro" fastening instead of buttons, are worth suggesting. A normal baby starts to help with dressing at 12 months, becoming far more helpful at 18 months. At 4-5 years he can cope with all but the difficult buttons and ties. With the abnormal child, dressing provides an excellent opportunity to teach by normal handling with explanatory conversation, the various parts of the body. A spina bifida, with no feeling, needs to learn by sight and feel that he has toes, feet and legs. With this child, care must be taken not to interfere with circulation to the lower limbs by tight clothing while providing sufficient protection for skin of the active infant. Care must be taken that flail toes are not doubled under in the shoe. Boots or shoes which lace, opening down onto the toes, are a help. Sometimes the upper of the boot needs to be cut away over the toes to ensure that they are kept straight. Socks must be long enough and made of wool or cotton. Nylon has the disadvantage that it is inclined to restrict the foot and does not absorb sweat and may thus be a contributing factor in problems of skin care of the feet.

Practical tips, such as putting the affected arm into a garment first are useful for the hemiplegic. Zip fasteners up the inside seams of long trousers save their complete removal to check calipers and urinals.

The position of the child for dressing is important. The child must be able to see and reach with his hands to help. He should be sitting, supported from behind. The cerebral palsy child needs special care that the hips are fully flexed, the shoulders forward, with support for the head if required, given near the base of the skull. This prevents any triggering of extensor spasm and causes tone to be normalised. The improved tone facilitates dressing and allows the child the best opportunity to control his hands in attempting to help. Patience and slowly executed movements will encourage and improve the child's efforts to dress himself.

Bathing

There are useful general suggestions for safety with the handicapped child. A wide bench or table with a safety rail makes un-dressing and dressing easier and safer. The hot water tap with its burning drips is a real danger to the child with lack of sensation. A rubber mat in the bath stops dangerous slipping. The position in the bath is important for the cerebral palsied child. The prone position over the mother's arm while the child is small, or the forward sitting, hip flexed position, are the most controlled and leave one of the mother's hands free for the actual washing. Toys in the bath are a normal tension-reducing addition. A sponge mit is useful to teach the child to help with bathing. As the child grows, bars
on the wall, adjusted to his special needs, enable him to get into and out of the bath safely and more independently. A shower with safety hand rails, or a shower seat and hand spray, allow increased self-dependence, and save the mother lifting a heavy child into and out of a low bath.

**TOILET TRAINING**

The normal child has fairly well-defined chronological limits with toilet training. The mother of a handicapped child should be aware of the normal development pattern and attempt to keep to it as far as is possible. Training in the normal way is often difficult. Any child needs time, and is upset by change of environment, sudden excitement, or change of routine. The abnormal child will have all of these difficulties to contend with as well as his own particular problems.

Regularity, time, use of the flexed position in a safe “potty chair”, and the use, as early as possible, of a specially secure normal toilet with hand rails, side supports, a foot support and safety straps, are broad principles in training.

The child with spina bifida sometimes requires manual help to empty the bladder completely. An added complication is that the nappy bulk is a danger to the hips of such a child. The tendency of his hips to dislocate is enhanced by continual external rotation and abduction caused by a bulky napkin.

The urinal has its own special problems. There is need for care to prevent damage to skin in application and wearing, and for meticulous cleanliness of skin and urinal at all times. Rubs from urinal straps or plastic pantyees, together with poor hygiene, are the most usual cause of skin breakdown in this area. Breakdown can be serious, since the area is frequently wet and at risk of infection. A period in the sun with clothes and nappies off is a sound practice in the toughening up and general care of skin.

**FEEDING**

Feeding problems with most handicapped children are small. Certain specific problems must be watched, for example, the mother of a child with fibrocystis must be sure to follow the diet instructions and add the special Viokase Pancreatic Powder to the child’s food, but eating is a very basic instinct, and even the severely retarded will attempt to feed himself in a fashion. However, this is perhaps the most important field to encourage socially acceptable habits. It is impossible for the child or adult, with extremely unattractive eating habits, to be tolerated easily by those required to eat with or to watch him.

In the cerebral palsied child, there can be difficulty in development of normal and acceptable eating patterns. First the child’s physical problem should be analysed and the position for feeding the child clearly demonstrated to the mother. In the baby, until head control is developed, feeding is best undertaken with the baby sitting with hips flexed, the mother’s arm around the base of the skull, his shoulders and arms forward. The baby is then fed from the level of his mouth. It is impossible to teach a baby to develop the ability to control lips, tongue and swallowing mechanisms, if the food is poured in from above, with the baby lying flat in the mother’s arms, giving full rein to extensor spasm, tongue thrust, jaw lag, and startle reflexes from the sudden unseen attack with bottle or spoon. Mouthfuls should be small and a gradual introduction of increasingly solid diet is advisable. A child with limited feeling in the mouth will continue to have difficulty with sloppy consistency in food. It may be necessary to demonstrate techniques of feeding into the side of the mouth if there is the problem of jaw lag or tongue thrust, and of helping with the fingers of the mother’s supporting arm to close the upper lip on the spoon to draw food off it and up into the mouth.

As there is an improvement in head control, the position of the child progresses to sitting facing the mother either on her knee still or in a special high chair to keep the child in forward sitting. There must be no support from the back of the chair high on the head to trigger total extension, jaw lag and tongue thrust. A specially built-up

handle will allow a child to use the spoon more easily and to make an earlier attempt to feed himself.

Exercises to train the mechanisms of eating, and the child’s awareness of cheeks, lips, tongue are best carried out at a time away from the main meal hour. The mother needs time and a relaxed atmosphere to be successful in teaching sessions. Mealtimes should be a family time, with no undue tension or special attention for the handicapped child. Sufficient fluids and an adequate diet are most important and should not be overlooked in the problems of the child’s difficulty in feeding.

Speech

Good speech patterns are based on good feeding and breathing patterns. The work of the physiotherapist who has to cope with a brain damaged child is made more difficult unless there is parallel care in speech therapy and occupational therapy. The speech therapist should see the child at the start of any treatment programme, to lay down guide lines on how that particular child’s speech is to be developed. Feeding patterns should conform to the needs in this plan for speech training. The normal baby makes noises to indicate hunger, annoyance, discomfort and happiness. The abnormal baby will do the same. A happy relaxed family mealtime provides the stimulus for the child to participate in and contribute to the general chatter, and to name his needs at the table.

The baby must be encouraged to develop a normal vocabulary. Baby talk should not persist beyond normal age limits. Adequate speech is often difficult to achieve, but must be given special priority in the mother’s programme. Inability to communicate tends to give the impression that the child is dull, and leads to his being ignored. It is hard for family and friends to converse with a child at his correct level of mental development. It is not unusual for a casual acquaintance to talk in preschool jargon to a 10-12 year old child who has a severe speech problem but who may have a well-developed interest in the local football ratings and the latest space venture.

General Positioning

In the planning of the management of a handicapped child, two basic considerations must be made. The first is the actual treatment, handling, and active training of the child. The second is the position in which he is to spend the rest of the day and night. The section of the twenty-four hours in which the child is left alone is much greater than the time in which he is handled. Various positions must be chosen because they are constructive to the overall plan of development. In general, the posture must allow the child the chance of voluntary controlled movement, that is, abnormal reflex patterns must be guarded against and tone normalised as far as possible. The child’s placement in the home or garden must stimulate interest, allow participation in family activity, and provide experience in a variety of everyday happenings. Mental development can be uneven because of lack of experience and stimulation, and care of where and how the child spends his free time can prevent some of the expected lag.

Position during sleep must be chosen to benefit the child physically, and at the same time to allow him and his family to have the correct amount of sleep. With spina bifida, some thought must be given to the hips, to the height of the lesion of the spine and to the deformity of the spine. Upon these considerations the choice of supine, prone, or side lying will become clear. With cerebral palsy, the prone position has the advantage of reducing extensor spasm, and of being the basic position from which the normal baby begins to develop head control and movement and balance.

If there is evidence of asymmetry, the child should be placed so that the door, window or other points of interest will stimulate him to move, under voluntary control, to correct an abnormal reflex or habit pattern. For example, with right symmetrical tonic neck reflex the child should be prone, with a rolled-up towel across the shoulders to keep the arms forward and up. He should then be required to turn his head to the left to see the main stimulating features of the room.
Company in the room is very acceptable to a little child. The usual family practice can be single rooms or two or more children to a room. This practice need be varied only when there is some indication that there would be an advantage or disadvantage to either the normal or to the handicapped child.

The habit of tipping the bed of a child with a difficult chest problem is frowned upon in a practical situation as it can cause severe headache. Active postural drainage, vibration, breathing and coughing early in the morning will provide adequate opportunity to clear mucus.

Corrective plasters can cause a skin problem on the other good limb through activity in the night. An old sock pulled up over the plaster can help prevent this difficulty. If the muscles of one limb are affected for any reason, circulation is restricted in that limb, and growth is inhibited unless extra warmth can be used to improve circulation. Sheepskin stockings or woollen “football” socks have been used to improve warmth, with success.

The feet need to be guarded in the prone position. A small roll of blanket or towel under the ankle can prevent bizarre foot positions and pressure on toes. Moving from the cot to a bed is an important stage in the life of any child. Side guards can allow the handicapped child to enjoy this step in growing older.

In the daytime positions can be varied. A reasonable plan of progression in day positions would be prone over a pillow, changing to side lying, supported, with toys placed in reach of the two hands. Then prone on a skid board on castors, followed by sitting in a special chair, fully supported, with toys on a tray in front. The next position could be standing in a standing box. Again the child is held forward. He is able to learn the feel of standing and balancing upright. Next he might be put in a walking machine, which must provide support at first. To guard tone changes, the machine should have to be pushed forward to move it along, to ensure the child leans forward. Brakes sometimes help to provide the resistance to stop the machine running unless pushed. The completely opposite design of a walker which gives minimum support and which does run easily could be useful finally to wean a child from the walker. A seat or canvas support under the child is lowered as he progresses, this stimulates him to stand up to walk. The tendency for the child to move backwards soon decreases if he is kept leaning forward in the walker.

Crutches are not used for cerebral palsey children because their use demands strong adduction and inward rotation at the shoulder. Elbow crutches require that the child stands up more and pushes on the handpiece. This thrust, through a straight elbow and the heel of the hand, is a positive pattern for the upper limb. It is the weight-bearing position and is a reverse of the usual spastic abnormal pattern of the upper limb.

Other walking aids, such as weighted prams, or animals on wheels, can help a child through the stage of perfecting his balance and gait.

The purely retarded child has no problem of inability to perform voluntary movement. He needs to be stimulated to want to move. Patient repetition in every stage of teaching anything must be the main plan of approach. A standing box, with calipers if necessary, will help the child experience the upright position. These children must be positioned so that they cannot fail to have the experience needed for their own physical advancement.

The Handicapped Child at Home

Play

Experience in weight, texture, shape and temperature can be gained by a wise choice of playthings. Normal play periods are times for learning and exploring new fields. The handicapped child can accomplish much on a skid board or the small low wheeled chairs so useful for children with spina bifida.

Exercise requirements can be part of play to a large extent. The father can give the child a fun rolling session on the carpet or play teaching of awareness of eyes, ears, nose, toes, etc. Television can be viewed inside sitting leaning on an affected arm.

walking races, or crawling competitions with other members of the family can be good fun.

**Transport**

Transporting the child needs careful instruction. Most handicapped children need to be carefully picked up and put down. Skin can be damaged in moving the child carelessly. Rolling the child to prone before picking up is a general requirement. A carrying position is recommended where the child is held upright against the front of the parent; flail legs will not fall apart, and problems of increased extensor tone are not so likely; the head, if not yet under control, rests on the mother's shoulder and is safe. Prams or wheelchairs should support the child so that he is safe from falling and skin damage, and so that tone is controlled by his position. A compromise has to be made between the aim to have the child propel himself and the possible interference in general voluntary control training. The continual use of the less severely affected arm to propel even a "hemiplegic" wheelchair can result in associated reactions with increased spasticity on the other side.

Concentration and length of attention span should be given some thought in the physiotherapist's early plan of management. Education becomes the first priority once the child is five or six years old. Physical care must begin early in life for this added reason. The emphasis cannot continue to be on the physical advancement of the child when education should start. In big well-endowed centres, the whole rehabilitation team is available, and the progress of the child into the correct educational facility is ensured. Away from such centres, it can fall to the physiotherapist to make sure that the mother takes steps through her doctor and the local education authorities to have the child placed in the educational area best suited to his ability. This may be an early step, since the child could well benefit from pre-school sessions or kindergarten.

A handicapped child may not be able to earn his living in a job which demands physical dexterity. Hence mental education must be given emphasis commensurate with this consideration.

**Summary**

Careful early assessment of the child, at birth if possible, is fundamental. This assessment becomes a guide to management both in treatment sessions in the physiotherapy department, and for instruction to the parents for a home approach.

The whole child and not one disconnected section is in the hands of each person who deals with him.

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