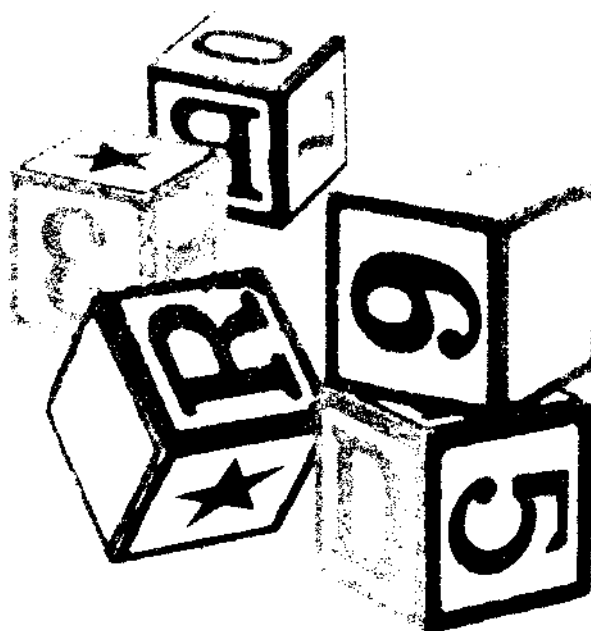


Helping Mentally Retarded Infants Learn

A Resource Guide for Parents



P R E F A C E

An infant's first teachers are his parents. His school is the crib, the floor, the nursery or anywhere else that he spends most of his time. Familiar objects like spoon and cup, soap and wash cloths are the instructional materials, and the time for learning is almost any time.

Learning does not occur as spontaneously as it may appear, and parents can take an active part in encouraging and shaping its direction. They can begin teaching their children during the first weeks of life. That is what this resource guide is about.

THE NEW BABY

Most parents eagerly await the arrival of their new baby and begin planning the child's future before he is born. After coming home from the hospital, every sign of movement or distress is carefully noted by family members. The infant's day-to-day progress generates obvious expressions of parental pride, or sometimes even relief. But as the weeks and months go by, there may be no encouraging signs of growth and development. Instead, the infant may lie in his crib expressionless, giving little indication that he is aware of his surroundings. The parents justifiably begin wondering if their baby is all right. Their initial feelings of concern and helplessness can give way to a full gamut of emotions including despair, guilt, denial and rejection. Possibly the worst thing that can happen at such times is that parents do not take steps which will encourage the infant to learn during these important first years.

LIFE MEANS ACTIVITY

Constant activity and movement are basic characteristics of life. Activity refers to the fundamental chemical and electrical changes that occur within the body, as well as to the more obvious movements in the large muscles associated with walking, running or playing.

Although some babies appear to be born more active than others, they all show daily cycles of activity that can range from relaxed sleep to wakeful excitement. Their activity levels are influenced by bodily states such as hunger and fatigue, or by external factors like bright lights, noises and temperature extremes, to name only a few. However, the way that activity is expressed and its intensity are definitely affected by learning.

Simply stated, learning means that a child's behavior changes over time as a result of his experiences. The

movements and vocalizations of the infant stimulate consequences in the form of reactions by other people and things in the environment. For example, if the baby smiles and coos, the parents may react in various ways. They may smile in return, talk to him or pick him up affectionately. On the other hand, the rejecting parent may ignore the infant. Under the first set of conditions it is highly likely that smiling and cooing will increase. The child who is ignored will smile and vocalize less and less as the days pass. Thus, it is this correspondence between infant activity and the reactions he experiences which are at the heart of all learning.

Young children need a responsive environment which encourages and rewards their behavior if they are to continue to develop optimally. Research studies concerned with children reared in environments devoid of the usual forms of interpersonal attention and stimulation have shown that such children may become extremely passive and fail to thrive physically. These are extreme circumstances that would not be found in the typical home! However, the lesson from this research is that the behavior of children can be drastically affected by their surroundings.

Most authorities agree that the period of greatest learning for young children is during the first years of life. If there is damage to the infant's central nervous system, however, the usual forms of learning during this critical period may be seriously jeopardized. Damaged infants may have muscles that are rigid or limp. When touched they may show exaggerated movements. Certain body positions or posture may be practically inflexible.

Even when central nervous system damage is not so evident, some infants just do not respond as actively as they should. They do not smile or reach

for attractive toys. Some seem to cry all of the time while others hardly make any sounds.

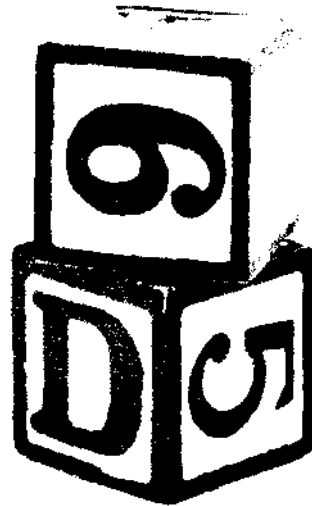
All infants experience an initial phase of being helpless. However, handicapped infants may show an unusual period of dependency. They may be treated as infants much too long or not be expected to learn, grow and develop. The problem is that handicapped children may become worse as they grow older if corrective steps are not taken early. Unusual movement patterns and posture may become permanent disabilities.

Thus, if something is not done early in the lives of mentally retarded and other handicapped infants, they will likely develop along a course which is increasingly abnormal. This is where parents must intervene. They should not wait until the child is older to start a special program.

RECOGNIZING THE PROBLEM

Some children have distinctive physical features which tell the pediatrician or physician that a handicap is present. Others who are severely or profoundly retarded may be recognized within the first weeks or months of life because of extreme feeding problems, lack of mobility or other abnormal patterns of response. However, if mental retardation is only moderate or mild, it is very likely that the child's handicap will not be readily apparent at an early age. How then is a parent to know if special teaching procedures should be started early?

The answer is that all infants, whether handicapped or not, should be provided a program of daily activities which will develop their learning ability. When the handicap is clearly obvious, special procedures and techniques may be needed. In most cases, however, the type of infant learning program will be highly similar for han-



dicapped and non-handicapped children alike.

READINESS TO LEARN

Readiness to learn a particular skill is best understood on the basis of the way that infant development and learning normally proceed.

A first principle of development is that it occurs in a sequence over time, with each new skill being based on those that went before. For example, the infant will learn to sit unsupported after he has learned to balance his head in an upright position, extend his spine and bear weight on his arms in front of the body. Although the rate that children acquire this skill progression may vary, the sequence for all children remains fairly constant.

Secondly, development proceeds from gross movement patterns to finer ones. This would be the case when a child learns to move his fingers to manipulate a toy without moving his entire arm. Another example would be moving the head without moving the rest of the body.

A third principle of development is that movements are coordinated first in the upper regions of the body before they are coordinated in the lower regions (e.g., head control is achieved before control of the legs).

A final characteristic is that development proceeds from areas of the body close to the middle toward those at the extremities. For example, control of shoulder movements occurs before control of the fingers.

The following are illustrative of some of the major developmental milestones which are achieved at various time periods by most children:

First Weeks of Life

The infant's extremities are held close to the body with knees, hips and elbows bent. His movements are gross

and random. He follows objects with his eyes briefly and clasps an object placed in his hand momentarily. Vocalizations are limited to cries and throaty sounds.

Two to Four Months

At this stage of development, the child lifts his head while lying in a prone position. He soon learns to raise his upper trunk also by supporting himself on his forearms. Although wobbly at first, he rapidly learns to balance his head in a supported sitting position. When placed on his side he rolls to his stomach. His head and eyes move in the direction of sounds, and he coos and makes other vocalizations when talked to by familiar persons.

Four to Six Months

During this period the child can sit unsupported, roll over and pull up on objects suspended above him. While in a sitting position, he reaches for and picks up objects just beyond his reach. He occupies himself by waving and banging toys or by transferring objects from hand to hand. Squealing, smiling and laughing are common.

Six to Eight Months

By this point in time the child can turn his body in a circle and creep about on the floor. He begins using one hand to reach for objects and examines them with sustained attention. He tries to take a second object while holding the first. His reflection in the mirror evokes smiles and vocalizations.

Eight to Ten Months

The child's coordination progresses to finer movements such as grasping objects with thumb and fingers. Sitting balance is well established, and he can creep about on the floor at will. He begins imitating sounds such as coughing, lip smacking or grunting. He plays patty cake and waves "bye-bye."

Ten to Twelve Months

It is during this time period that the child usually begins pulling himself to a standing position. He learns to walk while holding on with one hand. He cooperates in dressing, drinks from a cup and feeds himself food like crackers or cookies. Gestured requests by other persons are increasingly understood, and the child starts using one or two single syllable words appropriately.

The foregoing are suggestive of the ways that most children develop during the first year of life. Knowledge of developmental sequences is important when deciding which skills to emphasize at any given time in a program of planned activities for infants. More information about infant development may be found in the books reviewed later in this guide.

DEVELOPMENTAL DELAY

Because he is active and alert, the normal child is constantly faced with a variety of problem solving situations in his daily life. However, the extremely inactive child, as well as the one with central nervous system damage, does not readily explore his surroundings or he may be prevented from doing so by his handicaps.

Although all children need an interesting and stimulating environment in which to grow and develop, the parents of handicapped children must be doubly sure that their children have an opportunity and the encouragement to learn. The challenge is to awaken these children's interest in the world around them and take corrective measures early to prevent further disability. The remainder of this guide contains references to books which present techniques and procedures for achieving an optimal learning environment for infants.



RESOURCES FOR PARENTS

Parents sometimes do not know how to obtain books and other written materials in a special area of interest like infant learning. If they live in a large city, the problem can be resolved without great difficulty. Most public libraries have an information or reader's service which is designed to give assistance to persons in special topic areas. The library staff can use a recent edition of *Books in Print* or other reference sources to obtain price information and the addresses of book distributors. If the title and/or author of the book is known, a local bookstore can be requested to order a copy.

In sparsely populated sections of the country, locating and ordering books may be difficult. By calling directory-assistance, however, the telephone number of a public library in the nearest large city can be obtained. Another helpful resource in rural areas is the librarian at the local public school.

The following books were selected because they offer practical and helpful information that can be used by persons without special training. Parents should always make use of professional help and guidance when it is available. However, there are many activities and programs which parents can carry out themselves that will have a significant impact upon the lives of their children.

IS MY BABY ALL RIGHT by Dr. Virginia Apgar and Joan Beck. Published in 1972 by Trident Press, a division of Simon & Schuster, Inc., Rockefeller Center, 630 Fifth Avenue, New York, New York 10020; 942 pages, price \$9.95.

Although Dr. Apgar's book does not directly address the area of infant learning, it was selected for inclusion in this guide because the book provides parents with an authoritative basis for

understanding the causes of birth defects. The definition of birth defect that Dr. Apgar uses is broad, including abnormalities present at birth, as well as conditions immediately after birth which can affect infant survival and/or which require special attention from parents and physicians, teachers or other professionals.

The first chapters of the book deal with life before birth, explaining what can go wrong and why. Later sections discuss specific types of birth defects and describe methods of treatment and prevention. Simplified terminology and informative illustrations are used throughout the contents in order to make the book useful to the widest possible readership.

Dr. Apgar is the developer of the well-known Apgar test, which is used with newborn infants to evaluate the physical condition of the baby and call attention to any conditions needing emergency treatment. She has participated in the delivery of more than 17,000 infants and has worked closely with leading scientists throughout the world who are conducting investigations into the causes, prevention and treatment of birth defects.

TEACH YOUR BABY by Dr. Genevieve Painter. Published in 1971 by Simon & Schuster, Inc., 630 Fifth Avenue, New York, New York 10020; 223 pages, price \$7.95.

Dr. Painter, an authority on infant and preschool education, believes that parents are the most effective teachers of their own babies. In this book she presents a comprehensive program of daily activities that are designed for every stage of development from infancy to four years of age.

The planned activities and practical steps which she describes make it possible for any parent to be a highly effective teacher even though the time required to carry out the activities each day is relatively short. Dr. Painter's

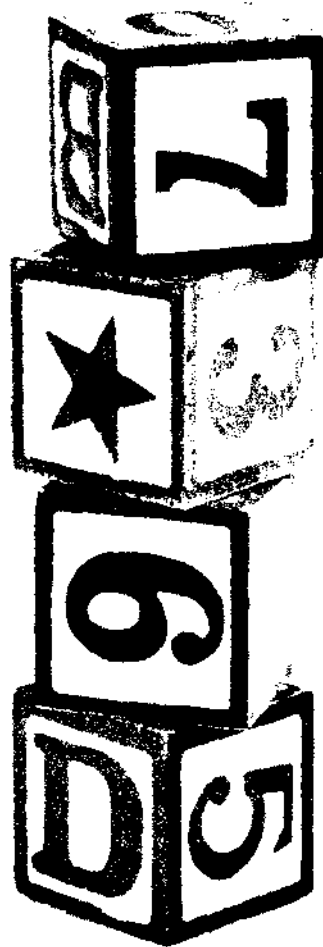
hook clearly shows that it is not the amount of time spent with the baby, but the types of activities that make a difference in infant learning. The book also helps mothers with several children to establish a daily routine wherein each child has an opportunity to learn within the family unit.

It should be clearly pointed out that Dr. Painter has written a book for parents of normal children and many of the complex problems presented by handicapped children are not covered. This does not mean, however, that the book would not be useful to parents of handicapped infants. Special training techniques and procedures for children with serious physical and other developmental disabilities may be found in the book which is presented next.

HANDLING THE YOUNG CEREBRAL PALS/ED CHILD AT HOME by Nancie R. Finnic Published in 1975 by E. P. Dutton and Company, 201 Park Avenue South, New York, New York 10003; 337 pages, paperback price \$4.95.

This enormously successful book, now in its second edition, was written primarily for parents of children with cerebral palsy. However, the information it contains would be helpful to the parents of any developmentally disabled child.

The first section of the book covers the problems faced by parents when they are confronted with the birth of a handicapped child. The author then quickly moves into a discussion of the role of the parent as teacher. Miss Finnic points out that the parents are the persons who are most intimately concerned in the care and training of their children, and that a successful program depends upon their participation. Moreover, they need to be taught and can learn the necessary skills to provide valuable assistance to therapists in the treatment of their own children.



Clear illustrations and descriptions are used frequently to depict a wide range of abnormal postures and movements, along with the ways that the mother may integrate training procedures into many aspects of daily care such as infant feeding, diapering, dressing and bathing. Another valuable part of the book is a unique guide to community resources and suppliers of accessories and equipment for use with handicapped children.

THE BABY EXERCISE BOOK by Dr. Janine Levy. Published in 1973 by Pantheon Books, a division of Random House, 201 E. 50th Street, New York, New York 10022; 113 pages, paperback price \$2.95.

This book was written to provide mothers with a method of helping babies to develop alertness through movement. It focuses upon the period of development from one to fifteen months.

The suggestions in Dr. Levy's book serve as a good guideline for parents who want to encourage optimal development on the part of infants. The author takes the position that the task of correcting and reinforcing a child's control of movement can no longer be left to chance.

The exercises are presented in four groups according to age. All the motor development procedures shown are based on the movements that young children would normally make while playing alone or with other persons. The book also contains specific advice such as the proper way to carry an infant.

The essentials of muscular relaxation, sitting, standing and independent walking are covered. Photographs and drawings make the series of exercises easy to follow, and all of the activities are accomplished without the aid of expensive or difficult to obtain equipment.

BABY LEARNING THROUGH

BABY PLAY by Ira J. Gordon. Published in 1970 by St. Martin's Press, Inc., 175 Fifth Avenue, New York, New York 10010; 121 pages, price \$3.95.

This is a parents' guide for the first two years of life which describes a series of pleasurable games for babies. The games are designed to help the child develop basic skills such as focusing the eyes, coordinating the eye and hand, and distinguishing differences in objects. Since the activities are enjoyable for both parents and infants, a positive learning atmosphere is created through play, and the baby learns that the world can be an orderly place over which he can exercise an increasing degree of control.

HOME STIMULATION and *EXPLORING MATERIALS* published in 1973 by the Media Resource Center of the Massachusetts Department of Mental Health, Division of Mental Retardation. Available from the Commonwealth Mental Health Foundation, 4 Marlboro Road, Lexington, Massachusetts 02173; prices \$2.85 and \$2.65.

These two manuals for parents and other persons working with young children were produced by the Massachusetts Department of Mental Health in accordance with the Massachusetts State Plan for Services and Facilities for the Developmentally Disabled. Both are heavily illustrated with photographs of parents and their children, showing the materials and techniques which can be effectively used in programs of early infant and childhood stimulation.

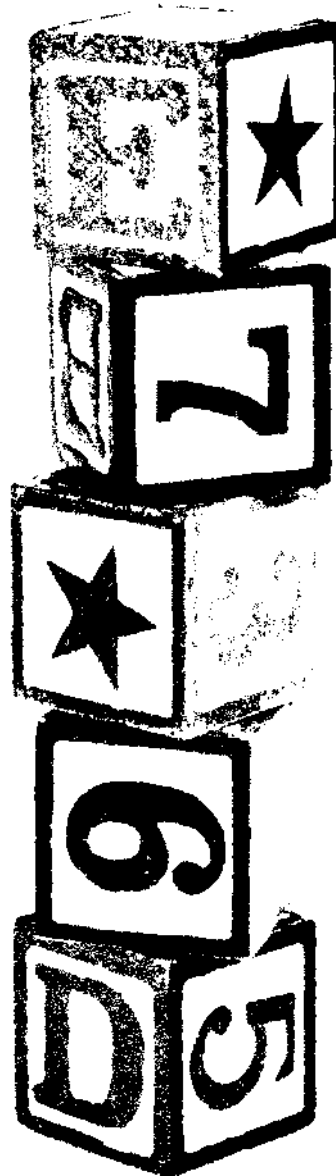
HOME STIMULATION describes the way children learn and grow, and discusses the value of early infant stimulation in the lives of young children. Recognizing that handicapped children learn at different rates, the information is organized according to developmental stages rather than age levels. Cues for determining at what level to begin a

program, as well as suggestions concerning materials and techniques are presented. The second half of the manual tells how language development proceeds and offers practical suggestions for encouraging the acquisition of communication skills.

EXPLORING MATERIALS discusses the importance of play and lists many ordinary household materials which can be used as learning tools. The intention of the manual is to provide ways for parents to help their children learn, using inexpensive materials found in almost every home.

A FINAL WORD

Learning must be viewed as an ongoing process which begins at birth and continues throughout the life cycle. Until recently, however, emphasis has been placed primarily upon the school-age years as the appropriate time for learning to occur. This disregards the fact that the best time to begin ameliorating a child's developmental disabilities is during the first years of life. Children must be taught how to learn and valuable time may be lost if parents wait until their children are enrolled in a school program. Moreover, if corrective steps are not taken early, handicapped children may develop secondary deformities or disabilities which will interfere with optimal learning at later life stages. The public schools in many states are beginning to respond to this need by extending their services downward to the age of three years. A few states have even begun serving children at birth. However, for the foreseeable future, parents must take the initiative in regard to infant learning activities and help ensure that their children have the greatest possible chance for success in later life.





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