

THE NEUMANN-NEURODE BABY GYMNASTICS

By A. PAPPENHEIM, M.C.S.P.

REMEDIAL exercises, massage and manipulations can do a lot for the body (and soul) of adults and children. They achieve more for babies, toddlers and nursery-school ages. It is, indeed, in our smallest children that we have our greatest chance to improve and cure. Their bones are still soft enough to respond comparatively quickly to repeated manual pressure or to the pull of their own trained muscles.

That is, in short, why we should lose no time in seeing to it that infant gymnastics, and all that belongs to it, comes within the reach of our smallest children—before their possible weaknesses have engrained themselves and made themselves felt beyond the original fault.

It is fortunate that in the Neuman-Neurode Baby Gymnastics we have a system at hand that has proved its value for over thirty years in many countries.

The exercises are calculated to assist normal physical (and mental) development of the growing infant. The work is directed towards the prevention and cure of physical defects at the earliest SUITABLE moment. In his book *Baby Gymnastics (Saeuglingsgymnastik)*, Detlef Neumann-Neurode has described and fully illustrated twenty-two basic exercises. The twenty-third and latest edition of this booklet was revised and brought out in 1956 by the late Neumann-Neurode's daughter, Mrs. G. Kaiser. The publishers are: Messrs. Quelle & Meyer, Heidelberg, Germany.

The exercises in this system are designed to encourage the baby's spontaneous movements. All parts of the body are moved in a way that is natural and pleasurable to the child.



Six months old normal baby performing high back arching with the author in Johannesburg, 1956.



The late Detlef Neumann-Neurode working at his State Registered School between the two World Wars in Berlin, Germany.

It is interesting to realize that the baby gymnastics are the result of Neumann-Neurode's observations of physical defects, not in babies, but in adults—to be precise, in recruits of the German cavalry whom he had to train during the first World War! The frequent faults he noticed in the make-up of those recruits must have been as staggering to him as it was to those who made a survey of health conditions of the soldiers of the last war. (I remember reading that as many as 60% of the soldiers in various countries suffered from flat feet). To improve matters, to bring strength and endurance where he noticed weakness and complaints, must have been a hard job. The unending supply of new sufferers from each new batch of soldiers must have been baffling to him—not to mention the amount and duration of intensive work that had to be done to achieve anything like a sufficient amount of improvement. (I have been informed that, during the last war, it was six hours intensive remedial exercises daily, for a maximum period of six weeks, which was required in the South African Army). No wonder, then, that Neumann-Neurode began to look for the physical education of youth as a means to prevent the faulty growth in the adult. Therefore, as soon as peace was declared, Neumann-Neurode turned his energies to the development of physical training for children of school age. They became the object of much enthusiastic activity on gymnastic and therapeutic lines, (with an interesting booklet on the subject emerging from it). Again, Neumann-Neurode struggled hard with all the common defects he encountered in these children. The realisation forced itself upon him that his good influence on the child's growing body came—to put it mildly—rather late, namely, at a time, when faulty modes of development had already been fully established, and bad habits had joined forces with them. So it became clear that he had to start still earlier to achieve the good results he so ardently was working for. It was then that Neumann-Neurode began to look to the

toddler and young baby for any signs of similar weaknesses to those of the older child. He did not need to search long:

Contrary to the wide-spread view that babies do not, as a rule, show typical weaknesses of structure, he discovered the clear beginning of many common faults in the small limbs and bodies of babies and toddlers alike. (Today, detailed studies on this age group on many thousands of American children have shown that, as far as the foot is concerned it's characteristic position in standing and walking is fully established by the fourth year of life—and does not tend to alter after that). In consequence, his idea of designing corrective and preventive exercises for the baby and young child was born. To start with, Neumann-Neurode spared no effort to learn as much as possible about pediatrics from eminent doctors. Starting with his own baby daughter, and bringing in more and more babies, he gradually developed his series of baby exercises, carefully adapted to the body of the baby. The cautious and discriminating way in which he applied his new skill won the confidence of doctors and mothers alike. His work and prestige grew and made it necessary to train others to help him. He then applied for permission to open a training school for baby-gymnasts in Berlin. The condition was made, however, that he had first to prove the good results of his infant gymnastics at the famous children's clinic in Berlin-Scharlottenburg. He succeeded and founded his school, giving his pupils a two years training with a State supervised examination in such subjects as Anatomy, Physiology, Pathology, Baby-Gymnastics, Baby-Care, etc. When Neumann-Neurode died in 1945, his pupils were engaged in his work in Municipal Children's hospitals and baby-clinics, as well as in private practices. Many of them went abroad.

It must be said from the start that the exercises are beneficial to all babies—and not reserved to those with a pathological condition. In the ordinary baby they encourage and ensure correct development—giving the child, there and then, the strong back it needs for life and the good arches of the foot that will stand up to weight-bearing from the start. The baby's expressions of contentment and joy when performing the exercises point to the fact that he is treated to something satisfying. Without words the exercises attempt at "speaking the child's language." In the place of verbal suggestions positions and sensations are used to invite the baby to bend and stretch, to help or resist exactly where it is needed. All the time the infant responds to an appropriate stimulus. It may be the stroking of the foot or perhaps his being securely held in a horizontal position. For instance:—

Held in side-lying, at a distance from the table he will immediately begin to struggle upwards with head and trunk in a decided effort to right himself. If he is not tired he will love to achieve such a strong movement several times over thus giving a good training to his lateral trunk muscles.

In the case of the foot one makes use of the usual reflexes and touches the inner side of the sole. The foot will turn inwards—towards the spot that was touched—and, with practice, this response will grow faster and so much stronger that you can exert considerable resistance each time to it. Thus by "reflex-stroking" only you can effectively strengthen the muscles that form the arch of the foot. Further more, you can alter a poor habitual position of the foot, often seen on a baby in a cradle, namely from the arch-weakening constant outward turning to the arch-forming constant inward turning. Particularly in the case of a flat-footed parent (or two!) the signs of a poorly developed arch or



Mrs. H. Schutt, now in Johannesburg, training Neumann-Neurode Gymnasts at the Training School in Pahl near Munich in 1948.

ankle should not be over-looked. They should be shown to a doctor and, with his consent, the parents should be shown how to fortify the arch-forming muscles of their offspring, before weight-bearing completely destroys an often insipient arch.

Passive movements form still another mode of inviting muscle activity. Such manipulations evoke in the baby the wish to help or to hinder—either of which being of benefit to his working muscles.

Finally there are the movements caused "by invitation." The baby is placed into a position favourable to a typical baby performance. Offering two fingers to the baby lying in the cot is a well known one. In this situation every baby has an obvious or latent tendency to grasp the fingers. According to his age and state of health he will attempt or succeed in pulling himself to the sitting position.

The reason why we can use all these different ways of inviting a baby to move during his daily ten to fifteen minutes Neumann-Neurode exercises, lies in the fact that all healthy babies have a love for movement and for being securely handled. In fact, apart from mouth activity, body movements are his main source for gaining pleasure. On these factors the baby gymnast is based. Their application enable the skilled physiotherapist to make a baby work hard and enthusiastically in all directions—thus laying the foundation to healthy and symmetrical development of all his structures.

What is the best age for baby to begin exercises? The answer is from four to nine months. Before that time, the baby's need for peace and sleep is, or should be, paramount. There is, a more or less pronounced tendency to remain in positions of predilection. The knees and hips, for example, tend to be held flexed and are unwilling to extend fully. All this is physiological and must not be disturbed



In Johannesburg, 1956: Mrs. G. Russel giving Neumann-Neurode Baby-exercise to her six months old son Michael.

unnecessarily. Beyond the age of nine months, on the other hand, the infant awakes to the wish to stand on his own legs. He no longer delights in being handled. He much prefers now to be helped into a situation where he can exclusively practice standing and walking, for nothing else interests him quite as much at this stage. So, where possible, he should be left to it.

Of course, there are many conditions in babyhood which must be treated before and beyond the four to nine months stage. With sufficient skill and insight this presents no difficulty—neither to infant nor to physiotherapist. Torticollis, Erb's palsy and mild club-foot, for example, are treated after the first days of life. Severe valgus ankles and pronounced bow legs cannot be left untreated whilst

the child learns to walk and stand. But the child suffering from general weakness after, let us say, long periods of diarrhoea or malnutrition is best to treat at the favourable time from four to nine months, when we can expect the quickest and happiest response. Polio-myelitis, chest conditions, mild rickets, scoliosis, constipation, lack of appetite, lethargic and effortless behaviour must be treated whenever the condition is diagnosed and presented for treatment by the doctor.

Naturally, no treatment must be given to children who run a temperature or suffer from an infection or from some acute digestive disturbance. Other contra-indications are congenital dislocation of hip, true club foot and other severe talipes conditions. Here treatment with baby exercises only begins after immobilisation in plaster of Paris has been discontinued. Mild club feet, however are well amenable to manual stretches and, most of all, reflex activities.

Mothers can learn to give their infants baby gymnastics. A condition to this is that they learn the correct procedure first. The right choice of exercise, the amount, the sequence

in which they are performed and, most important of all, the correct and secure grip, all matter immensely for good and safe results. A hollow back can easily be invited instead of prevented! Such a mistake is likely to be made by the uninformed, and the result would only become apparent years afterwards. Parents and gymnasts alike must learn to refrain from trying to push the baby's performance beyond his own individual rate of growth. Neither must they show off his gymnastic ability to relatives and friends, as this, so Neumann-Neurode tells us, might incite a performance too daring and too long to be safe. In his own words:—"Experiments must not be made with infants."

Most parents can come to understand the underlying principals of the work. The physiotherapist trained in baby work would explain to them that, where ever possible, active exercise treatment, frequently performed, is preferable to passive treatment in immobilising splints; that correction comes best about by the establishment of correct and strong muscle pull; that treatment should not be forced upon a child. With patient perseverance, understanding and a little resourcefulness babies do come to perform every exercise without objection. If the child's personality is respected, if an occasional refusal is overlooked and self-expression invited—baby gymnastics will spell pleasure sessions. Only as such can they bring all the benefits they are capable of.

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