

# Movement Shiatsu & Cerebral Palsy

by Bill Palmer

This report describes the ways in which Movement Shiatsu and other complementary therapies are being used to help children with cerebral palsy. The families involved in this research have been referred privately and we now have enough experience to envisage bringing this work into the public health domain and, in particular, to encourage families with babies who might have brain damage to take part in our education system before diagnostic signs occur in their babies movement development.

We are setting up a project, with the collaboration of local doctors in two areas, whose aim is to teach parents to use aspects of complementary therapy to help their children find alternate ways of developing life and motor skills when certain normal motor patterns are unavailable.

In fact, we hope that this project will not be limited to families at risk since our view is that movement and postural patterns in 'normal' children which later result in vulnerability to back injury, clumsiness, chronic tension and possibly certain forms of learning difficulty<sup>1</sup> can be also helped at a very early stage by sensitive education of new parents.

We emphasise the words 'sensitive education' because our aim is to facilitate the warm, intuitive relationship between parents and baby rather than to cast the baby into the role of an 'achiever' who is getting it right or wrong. Education about child development can often cause more stress for the family when a child does not develop 'by the book'. By working with what we call *developmental themes* we find that this goal oriented view is bypassed and parents and babies become collaborators in exploration.



## What is Movement Shiatsu

Movement Shiatsu is a synthesis of Oriental Body therapies and western styles of Physical Movement Therapy such as Body Mind Centering and Feldenkrais' Method. It is based on the premise that a major cause of suffering is a conflict between *intention* and *action* and aims to help people find more ease in their lives by helping mind and body to work in harmony.

Chinese medicine describes archetypal themes which facilitate the connection between intention and action by unifying all parts of the organism in the theme. Examples of these are the 'Earth' Theme (relating to the ground, relaxing, trusting, digesting, being etc.) the 'Water' Theme (spontaneity, moving through space, curiosity, action and doing). These are named poetically after basic elements but each is also related to specific functions and structures of the physical body. In Traditional Chinese Medicine (TCM), these themes are described as connecting different aspects of the body through channels of 'energy' flow, the meridians. Therapies such as Acupuncture and Shiatsu treat disharmony by working with these channels.

In Movement Shiatsu we relate these themes to developmental

processes. Babies are continuously learning about their body and the world through developing movement skills and interpreting sensory experience. At each stage they seem to be focusing on one or more *developmental themes*. This is a collection of motor and sensory skills, which all collaborate in a higher order function of the organism such as relating to the ground, reaching outside the kinesphere, moving through space.

These developmental themes are strongly related to the energy themes of TCM. Our research<sup>7</sup> has so far shown how the Six Divisions of TCM each orchestrate one such theme during the developmental process and connect the parts of the body involved in this theme. This allows us to help a baby experience a developmental theme in a part of the body to which he has access and to transfer the skill to another part of the body through the appropriate meridian.

For instance, many babies with cerebral palsy stiffen when picked up and touched on the back. A lack of flexor tone means that the extensor muscles dominate both pathologically and as a compensatory mechanism. This means that the baby cannot cuddle into the mother and the developmental theme of bonding with the mother and with the ground is not being accessed. We see this developmental theme as being identical to the Earth Theme in TCM which also includes the ability to be nourished, to send blood to the internal organs and digest food. This ability is governed by the parasympathetic autonomic nervous system and is often accessible to such babies even when the associated movements in the developmental theme are not.

By using specific movements of wobbling and rocking and certain modes of handling the child which stimulate the parasympathetic nervous system we can help the baby enter this theme. By stimulating the

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associated meridian (the Stomach Meridian) this internal organ tone often transfers to increased flexor tone even when the primitive reflexes which initiate flexor movement are not available. (See reference 7)

### **The philosophy of the project**

Most therapists working with brain damaged children nowadays work with both parent and child but the emphasis during a session is often on the therapist treating the child expertly and the parent trying to absorb what the therapist is doing so as to take it home and do it there. This means that parents are prone to only learn techniques which may not be useful at another time and which can increase their own feelings of failure and impotence.

It is now becoming clear, as Dorothy Seglow<sup>3</sup> points out, that it is as important to support the parents and the familial relationships as to treat the child. The creation of warm and flexible environment for the child to grow within is widely believed to be just as important as expert therapy.

Our approach follows this belief. Our aim is to help the parent to understand the developmental theme that the child is struggling with and to use the holistic approach of Oriental therapies to support that theme even when the motor patterns associated with it are unavailable. Developmental themes are not motor goals but are explorations of relationship (self to other, self to ground, upper body to lower body, reach to push etc). This makes them easily incorporated into play which is a normal activity between parent and child, rather than the parent 'treating' the child, which can alienate the relationship.

### **Factors influencing the success of paediatric developmental therapy**

**1. Continuity:** It is well recognised that parents are the best teachers for the brain damaged child if only because they have the most contact with them. Conductive Education<sup>2,3</sup>, developed by Professor Peto in the Institute for Motor Disabled in Budapest emphasises the importance of continuous teaching, giving the children an

intensive repatterning programme throughout each day. They also conduct a 'School for Mothers' teaching the mothers to facilitate the so called Basic Motor Pattern. This has had some remarkable results, such as helping wheelchair bound children to walk. However, in general these improvements in mobility are hard to sustain once the extreme programme stops and the child returns to normal home life. The repatterning requires continual conscious effort on the part of the family to maintain. It seems that the conductively taught patterns do not replace the pathological movements but only exist in unstable competition with them.

**2. Early diagnosis:** It is widely accepted that helping a baby explore a developmental theme at the stage that they would normally learn the relevant movement skill can have a more stable result than re-patterning a child who has already developed pathological and compensatory movements. Bonnie Cohen<sup>4</sup> and others have showed that, with very intensive help, very young babies with severe brain damage can, in this way, develop normal movements which would naturally be unavailable to them. The essential factor in this process would seem to be the very early diagnosis of a baby's difficulty in exploring a theme. However, babies are often not diagnosed as brain damaged until the pathological movements have established themselves; that is, expert therapists are often not involved with the baby until it is too late.

We are attempting to optimise both of these factors by working with parents of newborn babies, whether the child has been diagnosed as being brain damaged or not. By educating parents about basic developmental themes they can become aware of what theme their baby is already entering and to encourage that process through play. If a child seems to be having difficulty with a theme in one part of their body then they can often learn the theme in another part. The techniques of Movement Shiatsu can then stimulate an associated development in the part that has difficulty.

This means that parents and child

are collaborating and relating in development rather than treating the child as a mass of problems. This opens up a warm and intuitive interaction between family members which is often problematic in these situations and provides, we believe, the optimal environment for the child's development of life and motor skills.

If very young babies have a high risk of having brain damage, for instance through breathing difficulty at birth, then parents can be educated to watch for missing developmental themes. The signs of missing patterns usually occur before the pathological or compensatory movements become entrenched so they can then be taught to stimulate alternative ways of accessing the missing skills in the baby. As mentioned above, there is the possibility then of avoiding the appearance or reducing the severity of any pathology.

### **What is the underlying neurological process?**

Recent research (8) into nervous system development suggests that neuronal connectivity evolves by a natural selection process. This means that connections to various reflexes are competing within the nervous system for dominance. A particular part of the lower brain, the value system, judges the 'success' of the resulting movement according to the sensory feedback produced. A 'successful' movement is rewarded by a chemical re-enforcement signal which strengthens the neuronal connections which produced it.

If the part of the lower brain that emits these rewards is not itself damaged, then the movements learnt through external patterning can compete on an equal basis to the movements produced by the surviving primitive reflexes. This will encourage more normal automatic learnt-patterns to develop in the cerebellum and motor cortex because movements which incorporate them are more successful than those produced purely by the incomplete set of primitive reflexes.

This is only true if the externally stimulated movement is happening almost as regularly as the internally stimulated reflex movements. Otherwise, the value system will re-

enforce the movements produced by the incomplete set of reflexes, since they are dominant most of the time.

An analogy might be that an inefficient worker who turns up at office regularly might be promoted to a position of power while a far more efficient worker might be sacked for not being there when he is needed.

Furthermore, movements produced by manipulation of the child's body will not be reflected in motor neuron connectivity because it is not the child's nervous system that is producing the movement but the external mover. So guided movements will not be easily integrated into the child's unconscious movement repertoire. Movements produced in response to sensory stimulation, however, will be reflected in connectivity because it is the child's own motor nerves that are 'doing' the movement. This means that they can be integrated by the reward signals of the value system.

The orthodox view is that the only early movements that can be produced by sensory stimulation are the reflexes (primitive and spinal), righting reactions and equilibrium responses. The last two depend on primitive reflexes for their development so it would seem, in this view, that reflexes that are missing through brain damage will inevitably result in incomplete movement development.

We do not believe this to be true. As mentioned above, our research shows that the energy meridians of Traditional Chinese Medicine connect different parts of the body which are collectively involved in particular developmental themes. Our observations suggest that by stimulating a part of the body which *can* move reflexively at the same time as connecting along a meridian can produce 'missing' movements in the part effected by the brain damage. We hope that these meridian stimulated movements can take the place of the missing reflexes when stimulated often enough in young enough babies.

The neurological mechanism underlying meridian stimulated movements is unknown but we can suggest some lines of research. The digestive tube and the front of the body are both formed in the embryo

from the folding of one layer of cells. Possibly this early relationship is also reflected in a connectivity in the developing brain. This might mean that the motor connections relating to tonification of the flexor muscles might also be capable of stimulation by neurons connected to the digestive tract if the neurons which normally trigger the tonic flexor reflexes are damaged. This is guesswork but some such mechanism might explain our observations of flexor tone being produced by stimulating the tone of the digestive organs through the Spleen & Stomach Functions.

This style of work does not require specific developmental knowledge on the part of the parents and they do not need to learn detailed manipulation techniques. Instead, more generalised ways of handling the baby which stimulate specific meridians are learnt.

This means that we are also working with the way in which the parents and child relate. Inevitably this also means working with the difficulties that the parents themselves face. Developmental themes are processes in which the whole family takes part and the therapeutic value of this work to the parents is also important to the developing child.

Our main aim therefore is to regain the warm intuitive relationship that is the normal environment of healthy child development by involving the parents in ways of encouraging developmental themes rather than fighting against pathological movement patterns that have already become established. We believe that this not only optimises the child's potential development but also provides an alternative way in which movement skills can develop through meridian stimulation.

## References

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- <sup>6</sup> **Bonnie Bainbridge Cohen** - *The Evolutionary Origins of Movement* . Unpublished 1994
- <sup>7</sup> **Bill Palmer** - *Meridians & Patterns* JSOBT Issue 1 1994

*Bill Palmer is Director of the School for Experiential Education and a founder of the British Shiatsu Society. He is author of the Six Forms of Touch and of Movement Shiatsu.*