Conception, Birth and Development of Management of the Physical Condition in People with Significant Posture/Motor Deficit

Pauline M Pope FCSP MSc SRP
Consultant Physiotherapist
London UK

Where it all began!

Royal Hospital and Home Putney London 1980-1991
(Originally Royal Hospital and Home for Incurables!)

The new building

The old building

The facilities

10 wards + a Day Centre

Medical Consultants/Practitioners

Physical Therapy

Occupational Therapy

Speech Language Therapy

Psychology

Dietician

Technical/engineering dept.

Pharmacy

X Ray

The Population:
300 disabled people, adults, mostly resident.

Diagnoses:

- MS
- Brain Injury
- Stroke
- Parkinsons disease
- Huntingtons disease
- Cerebral palsy
- Spinal injury

Definition of Group

People who through disease, accident, metabolic malfunction or congenital abnormalities have lost or have minimal ability to:

- independently alter their position
- maintain an erect sitting posture
- stand or walk.

This limited ability predisposes to:

- Reduced functional ability.
- Tissue adaptation leading to established contracture and deformity.
- Tissue damage including pressure ulcers and possible septicaemia.
- Infections – respiratory and urinary.
- Osteoporosis.
- Constipation, impacted bowels.

and is frequently associated with:

- Nutritional deficiency.
- Incontinence.
- Heterotopic ossification.
- Uncontrolled neurological signs.

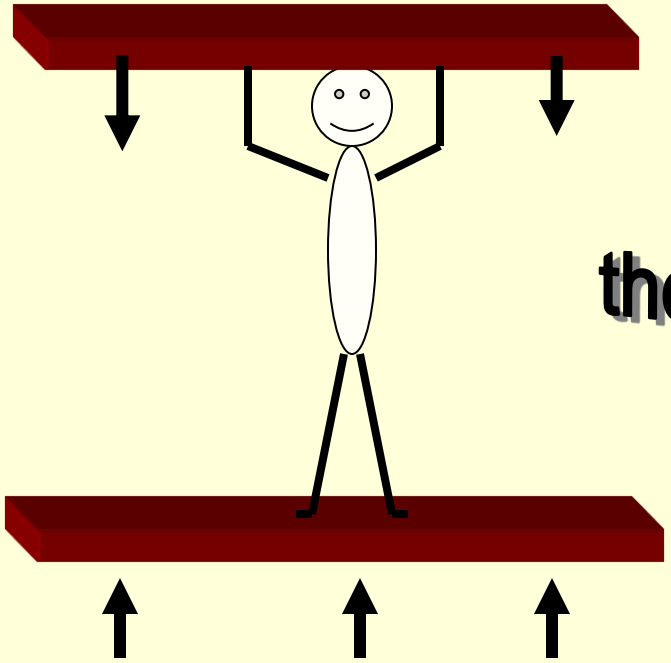
With the result that the individual becomes bedfast, with associated high cost and increased effort of care.

This was the situation in 1980 and still exists in places today!

Observation and analysis of postural attitudes and positions at RHHP concluded:

- Deterioration of the physical condition was secondary to inactivity and inability to change position. *Not the direct result of impairment!*
- The postures adopted were compounded by gravity.
- *But -* Gravity could be used positively i.e forces can be organised to work *in favour* of the disabled person rather than against him.

Posture is ‘a constant struggle against the force of gravity’!! (Whitman 1924)

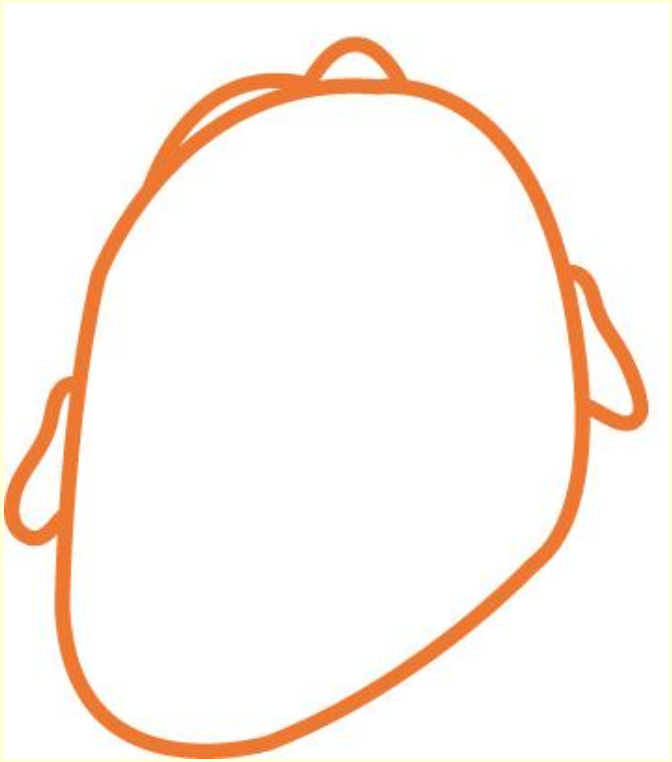


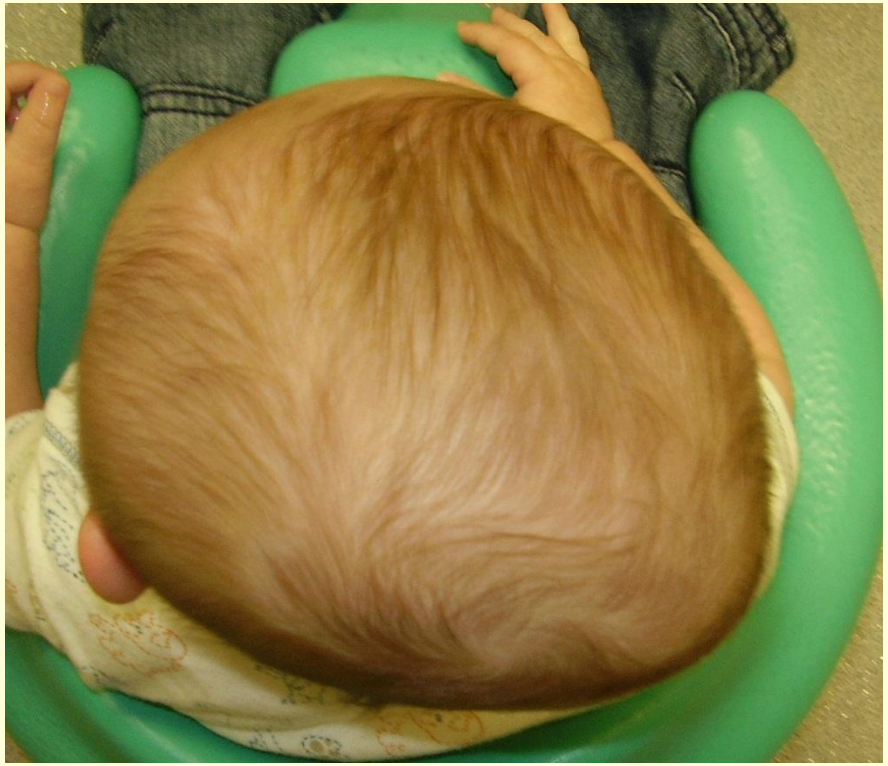
the human sandwich!

(Noreen Hare 1987)

Positional deformity is not confined to disabled people!

Plagiocephaly in an otherwise healthy child.





Courtesy of Chris Drake London Orthotics Consultancy, Kingston-on-Thames UK

!

It was evident that ‘hands on’ therapy alone was largely ineffective in controlling deterioration.

New approach introduced in early 1980’s at the RHHP (now Royal Hospital for Neuro-Disability).

Pope PM 1985 RHHP publication

Pope PM 1992 Physiotherapy 78 (12): 896-903;

Condie E 1991 Physiotherapy 77(2): 72-77

Why *'Management'* not *'Treatment'* ?

- *'Treatment'* – implies recovery and getting/making better.
- *'Management'* – means bringing under control, in this context, for the purpose of:
  - maximising functional independence.
  - minimising secondary complications associated with the impairment.

These are not mutually exclusive approaches. However:

It is possible to have 'management' without 'treatment' but not 'treatment' without 'management'.

(Pope PM 1997 'Physiotherapy' 83(3): 116

Why *Physical* Management not *Postural* Management?

What does *Physical Management Incorporate*

Maintain tissue length

Nutrition

Respiratory care

Handling technique

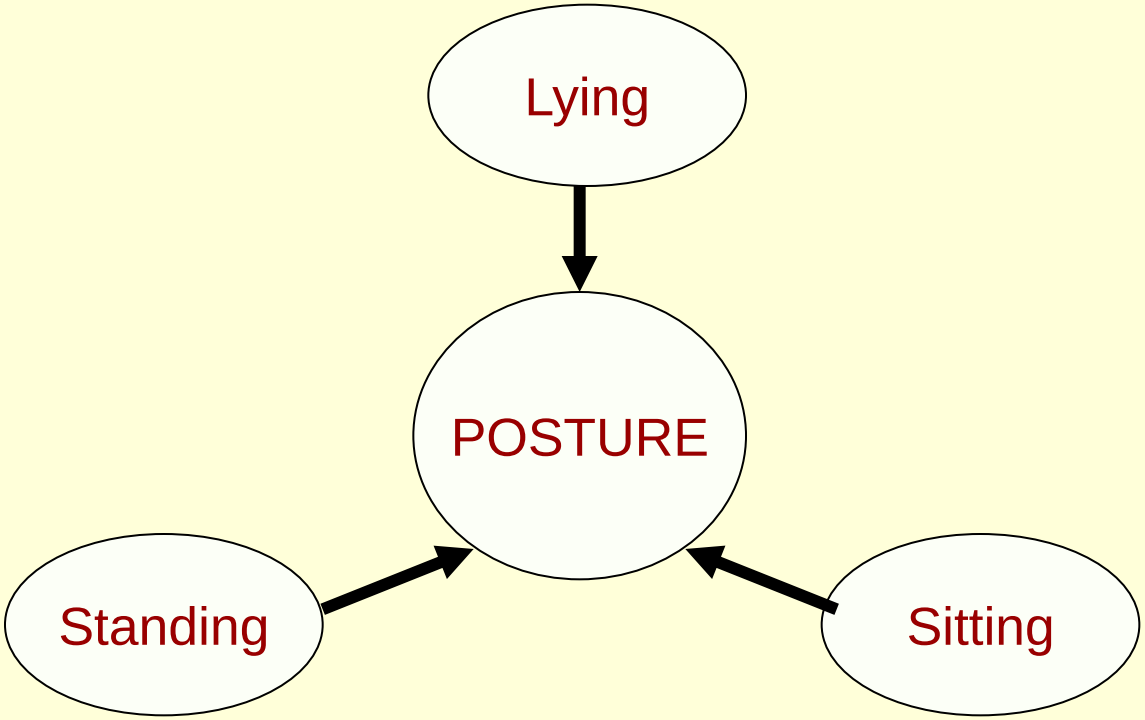
Posture

Continence

Psychological well-being

Therapeutic Activity

Basis of management is control of posture and position



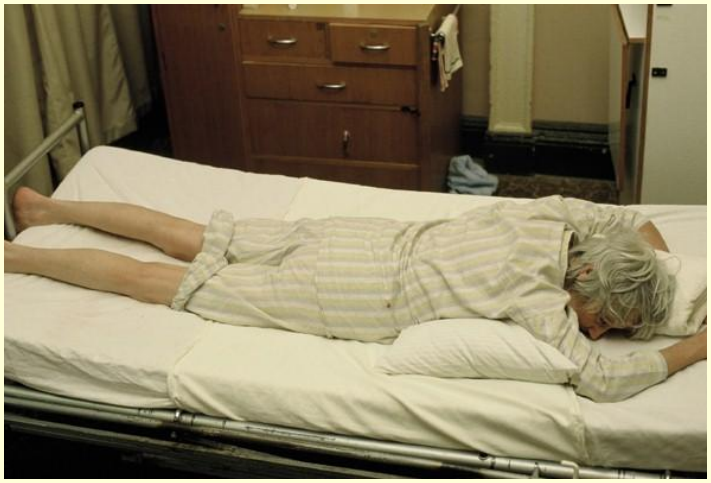
Not a new idea!!! (Pope PM 1985 RHHP publication)

Why is there a focus on posture?

Body posture *directly* influences:

- The ability to function.
- The development of:
  - tissue damage.
  - contractures/deformity..
  - respiratory and UT infections
- The magnitude of many positive neurological signs e.g.muscle spasms.
- Ability to speak and to swallow.

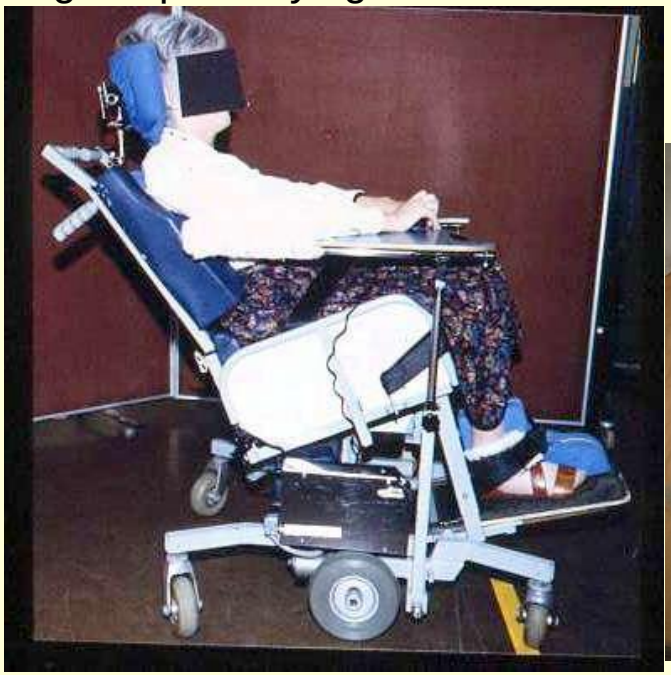
Incorporate a regime into a lifestyle!



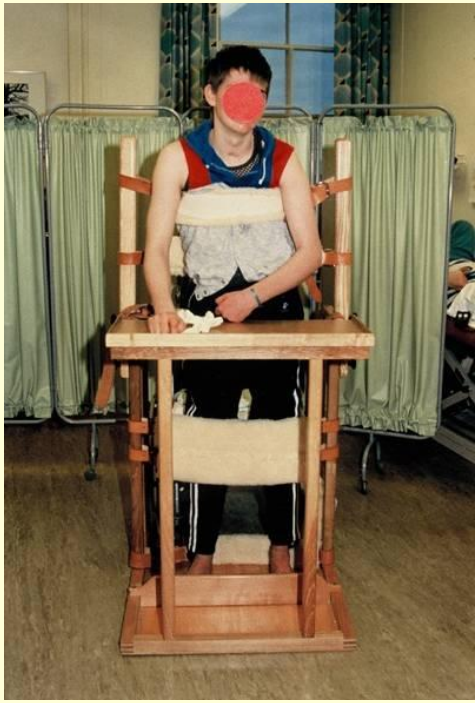
regular prone lying

night time support

standing

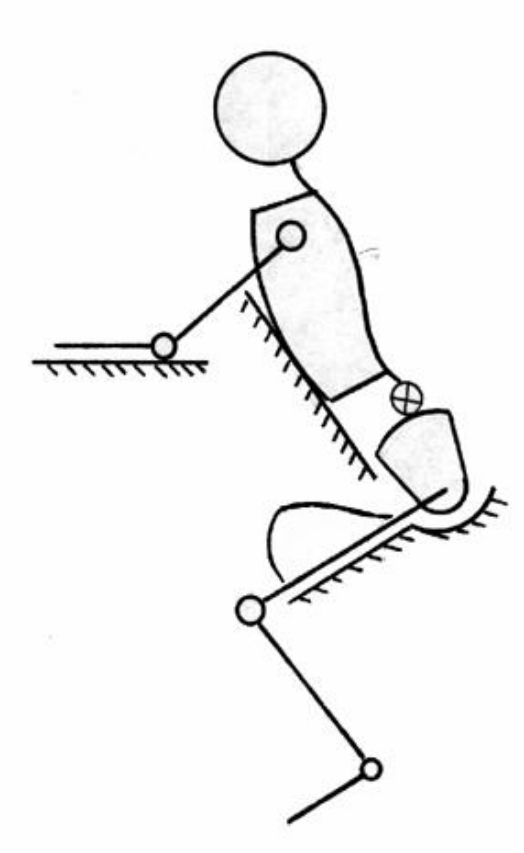


Appropriate support in sitting



Posture Adopted

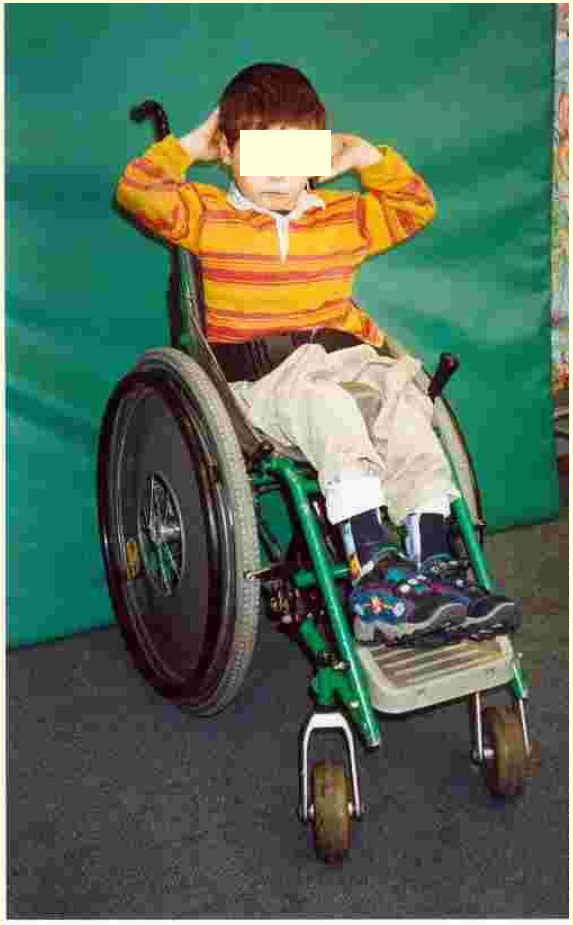
for design and development of SAM

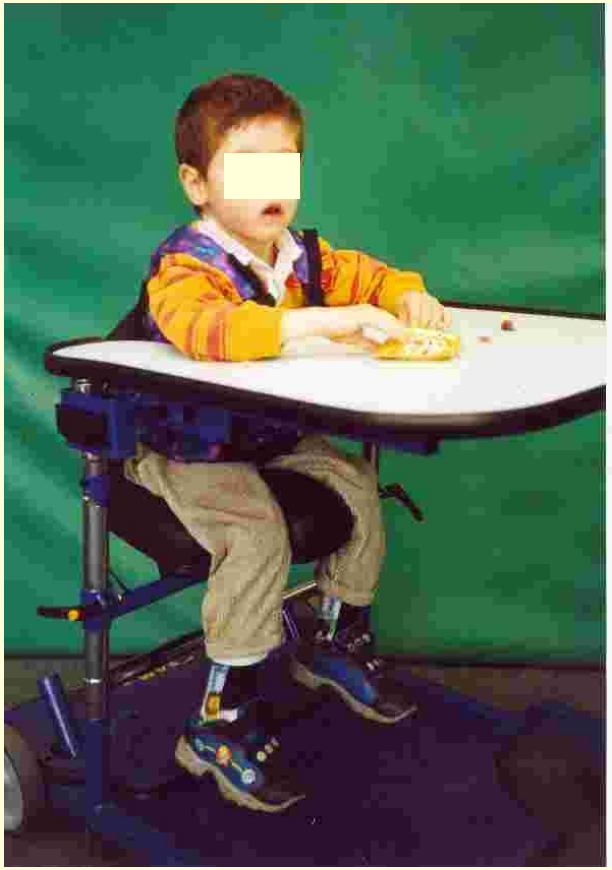


The conventional motor cyclist

The SAM seat

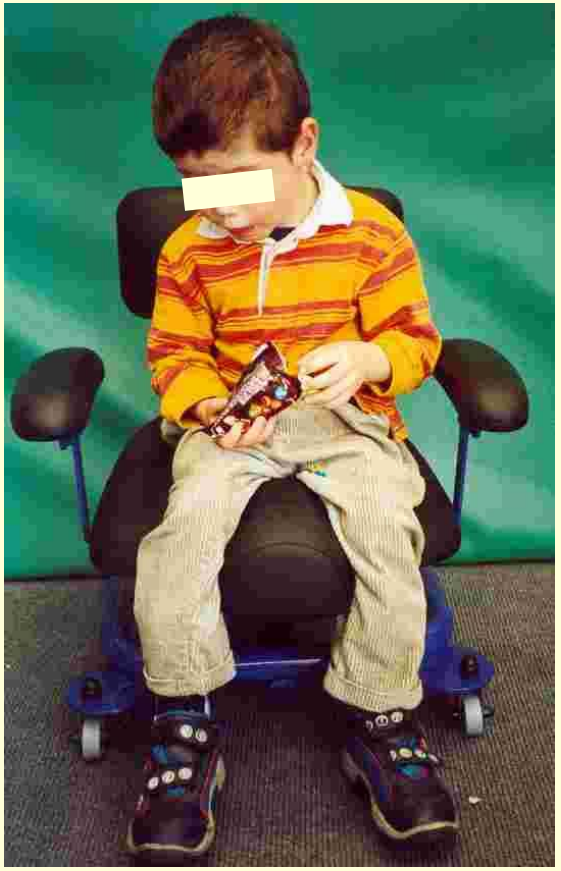
John looks more ‘normal’!

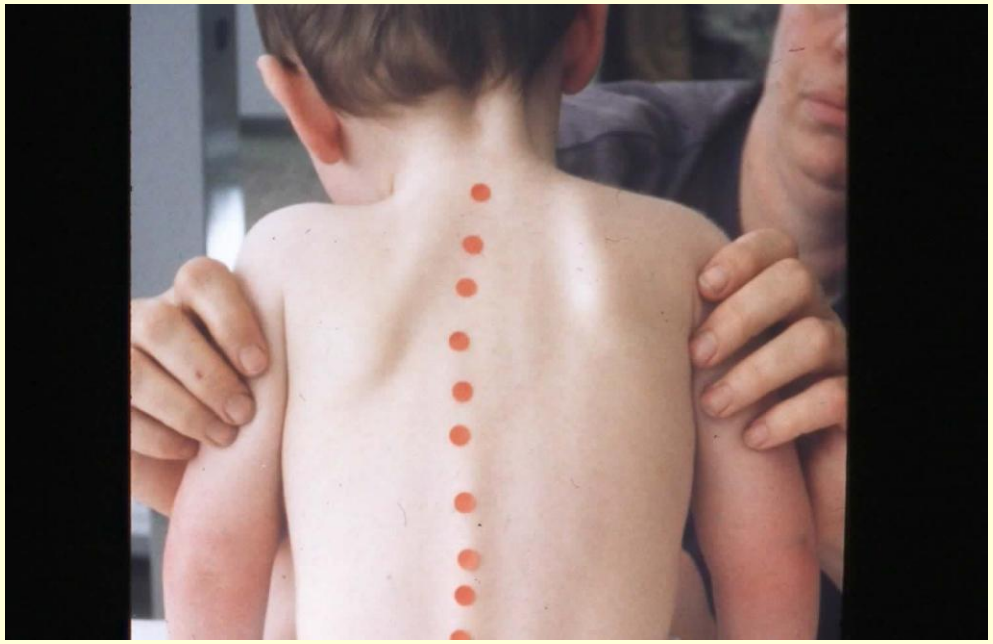




'STRATO' a development of the SAM

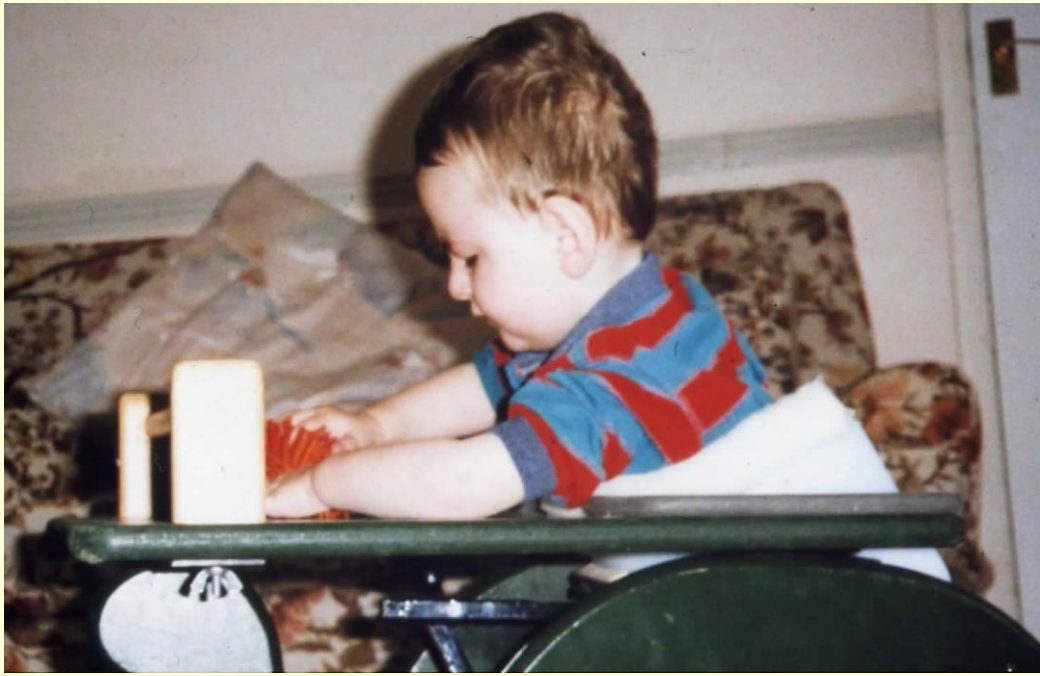
For the more able child, particularly the diplegic, giving the base stability so necessary for functional efficiency.





Early assymmetry

Straddle seat, forward lean support



PM is a speciality and must be recognised as such if it is to succeed.

To be successful we must have:

- *MANDATORY TRAINING! Professionals* aware of the need and who know what to do.
- *Care workers and carers* who are *trained* and with time, energy & motivation.
- *Client* willing to co-operate.
- *Integrated service* e.g. wheelchairs, beds, medication, dietetics etc.
- *Equipment* designed for purpose.
- *Respite provision* providing specialist care, advice etc.

Pope PM 1997 Physiotherapy 83(3): 116-123
Pope et al 1991 Clinical Rehabilitation 5: 15-23

Where is the evidence?

Not robust but!

- A decade of monitoring at the RHHP found:
  - Reduction in incidence (10% → 3%) and magnitude of pressure ulcers.
  - Reduction in magnitude of contractures and deformity.
  - Fewer people confined to bed.
  - More active population
- Supported on further monitoring in a Community setting.
- Without intervention, deterioration is inevitable.

(Pope PM 1997 'Physiotherapy' 83(3): 116)

Now it is up to you!!

Is *Physical Management* a priority?

- More people surviving with life threatening and deteriorating conditions e.g BI, MS

  <u>but</u> the pathology in MS for example, continues and the disability increases.

- More people surviving crises at both ends of life

  <u>but</u> with varying degrees of disability.

Due to:

  - Increase in knowledge.
  - Technological advances

Physical Management is simple but not easy!

- Client participation is essential.
- Difficult to convince people of the benefit when they have a static or deteriorating pathology.
- Appropriate support may conflict with ability to function.
- *Care workers and carers require training*.
- Many carers do not have the time or energy to carry out procedures with little *functional* benefit or that conflict with appearance/lifestyle.
- Full time carers need respite!

Is *Physical Management* attainable?

- One must know the ideal in order to make the best compromise!
- The best compromise is achieved *only* through comprehensive assessment and analysis of condition and circumstances?
- Co-operation of all parties.
- Compromise is nearly always necessary. (There are always ‘trade-offs to any intervention!)

Pope 2007 Severe & Complex Neurological Disability publ. Elsevier Ltd
Pope 2007 Night positioning for people with MS. MS Trust October

In Summary

- Posture and motor deficit predisposes to associated/secondary complications.
- If no positive intervention, deterioration is inevitable.
- Management focuses primarily on control of posture and position.
- A management regime is best incorporated into lifestyle.
- Maintaining optimum physical status can improve QOL and reduce cost/effort of care.
- *Valid outcome measures are required if the benefits are to be evaluated appropriately.*

Thank you for your support and for your interest in this work.

The future development of PM is in your hands!