

Hemiplegia in the Early Years The Role of the Physiotherapist

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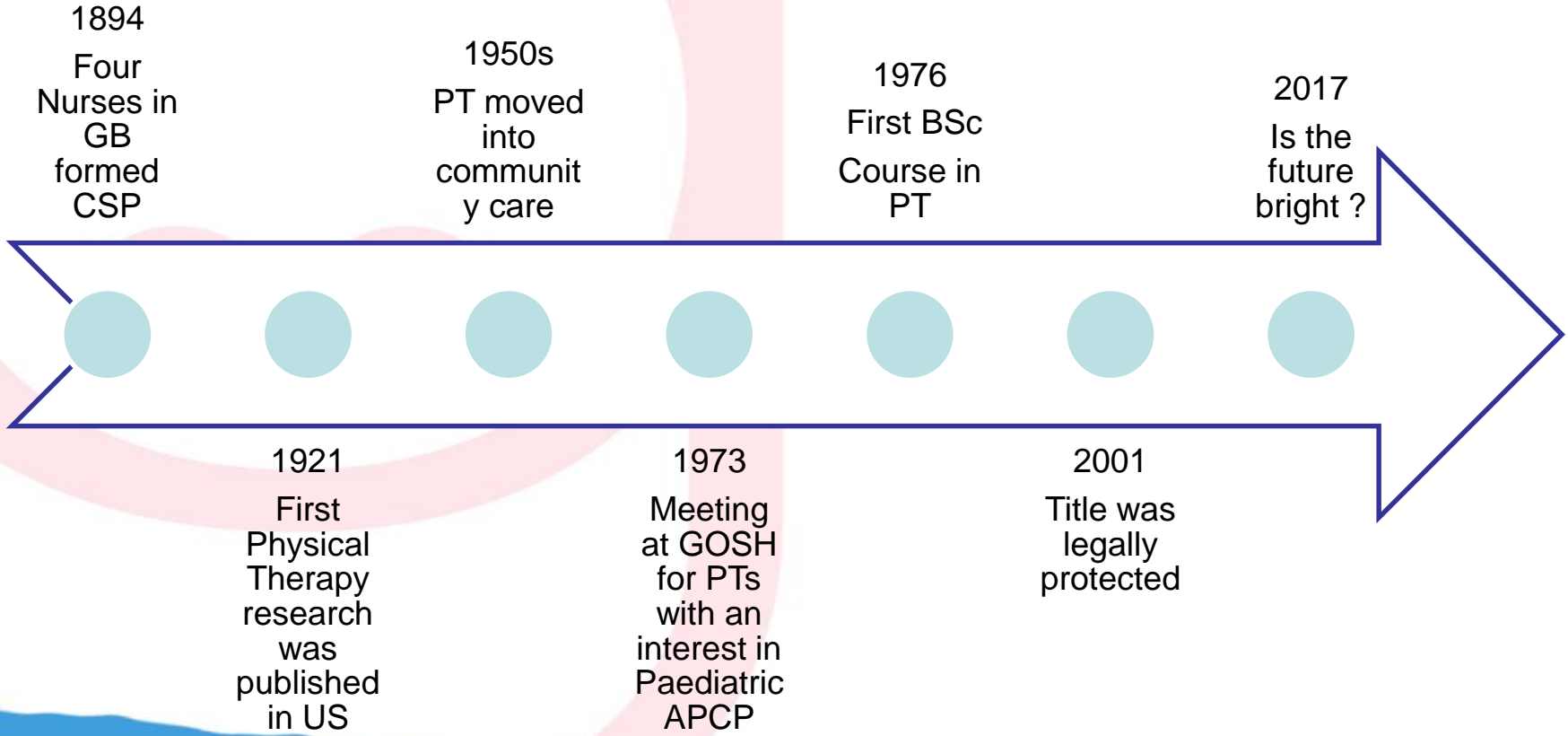
Aims

- An overview of physiotherapy
- Cerebral Palsy and Hemiplegia
- Consider early intervention and the principles of therapy
- Importance of goal setting
- To think about neuroplasticity the brain
- Therapy in practice
- Delivering quality therapeutic care

What is Physiotherapy?

- Physiotherapy is a healthcare profession that promotes the health and wellbeing of all.
- Physiotherapists are responsible for the assessment and physical management of problems due to accident, injury, ageing, disease or disability

History of Physiotherapy

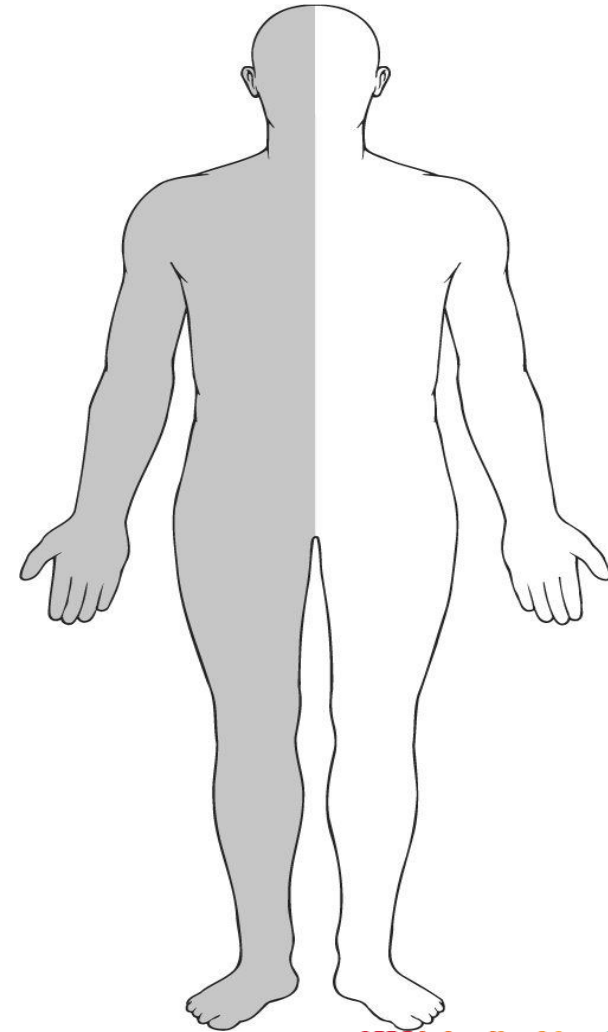


Paediatric Physiotherapy

- Paediatric physiotherapists bring their specialist skills as physiotherapists and have additional expert knowledge and experience of child development and of childhood disabilities.

Hemiplegia

Weakness/paralysis of half of the body resulting from disease or injury to the motor centres of the brain

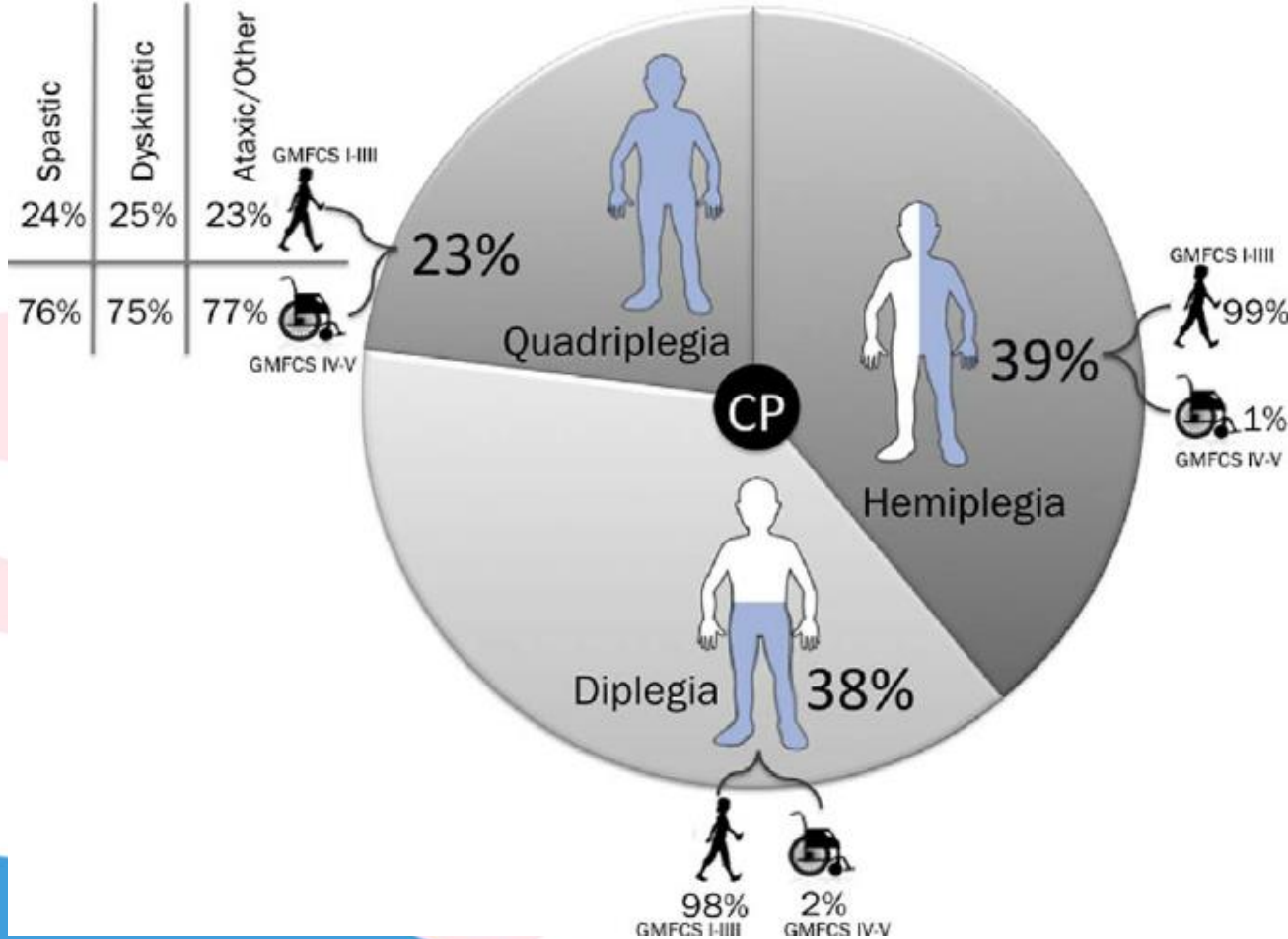


Cerebral Palsy

A group of disorders of the development of movement and posture, causing activity limitations that are caused by non-progressive disturbances that occurred in the developing foetal or infant brain.

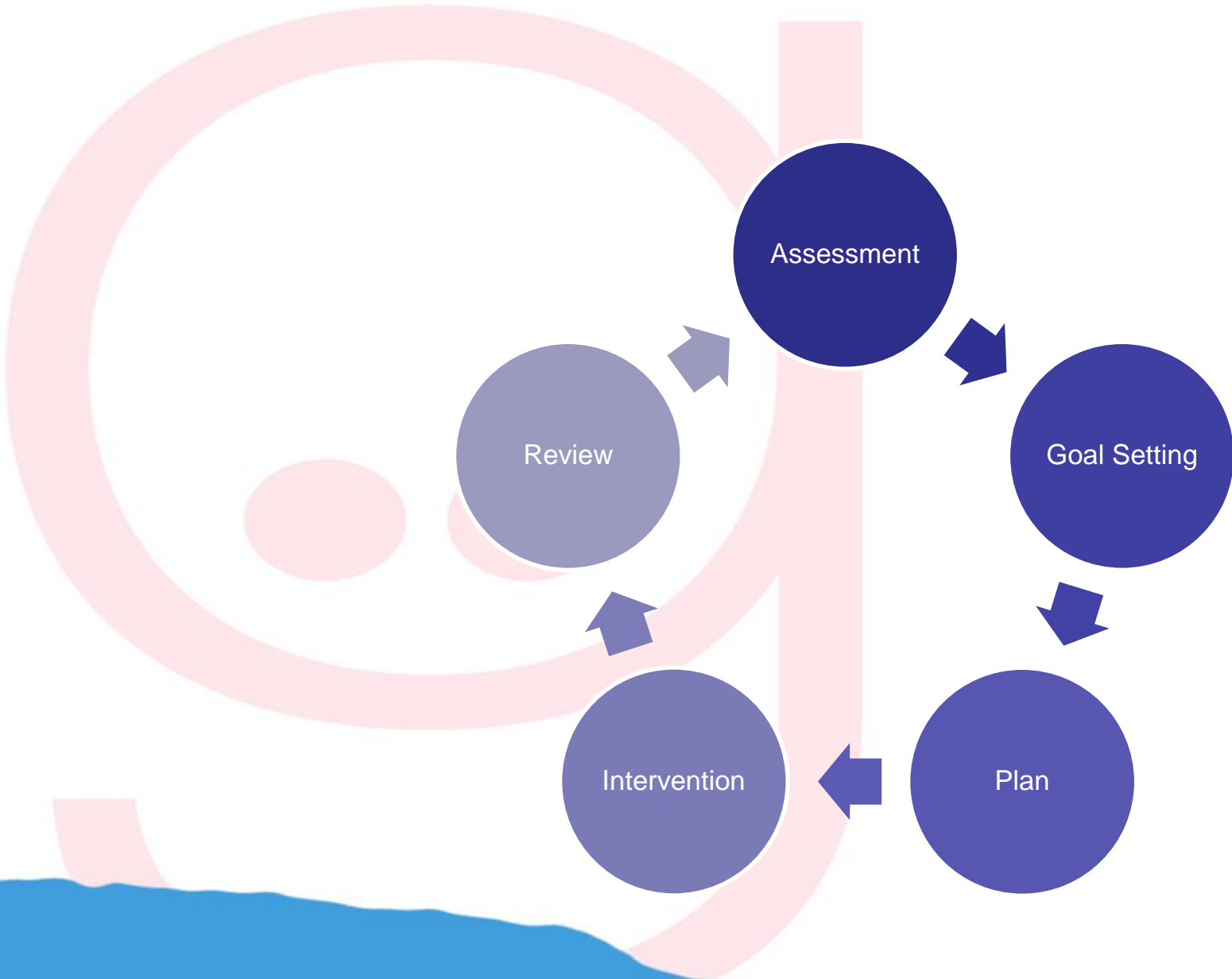
Rosebaum et al 2006

Cerebral Palsy

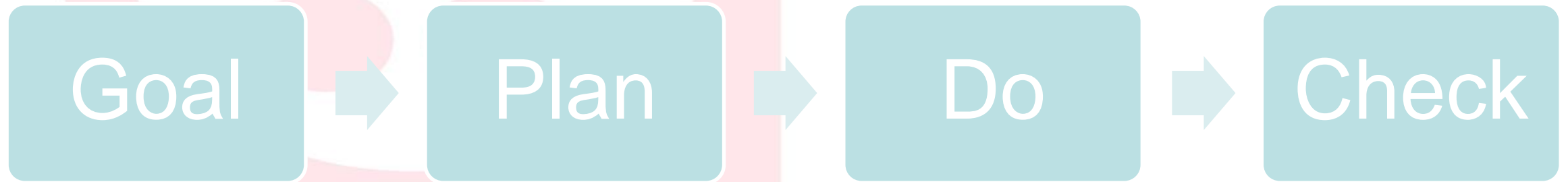




EARLY YEARS INTERVENTION



Goal Setting



Principles of Therapy

1

Child Active

Promote Skill acquisition

2

Compensation

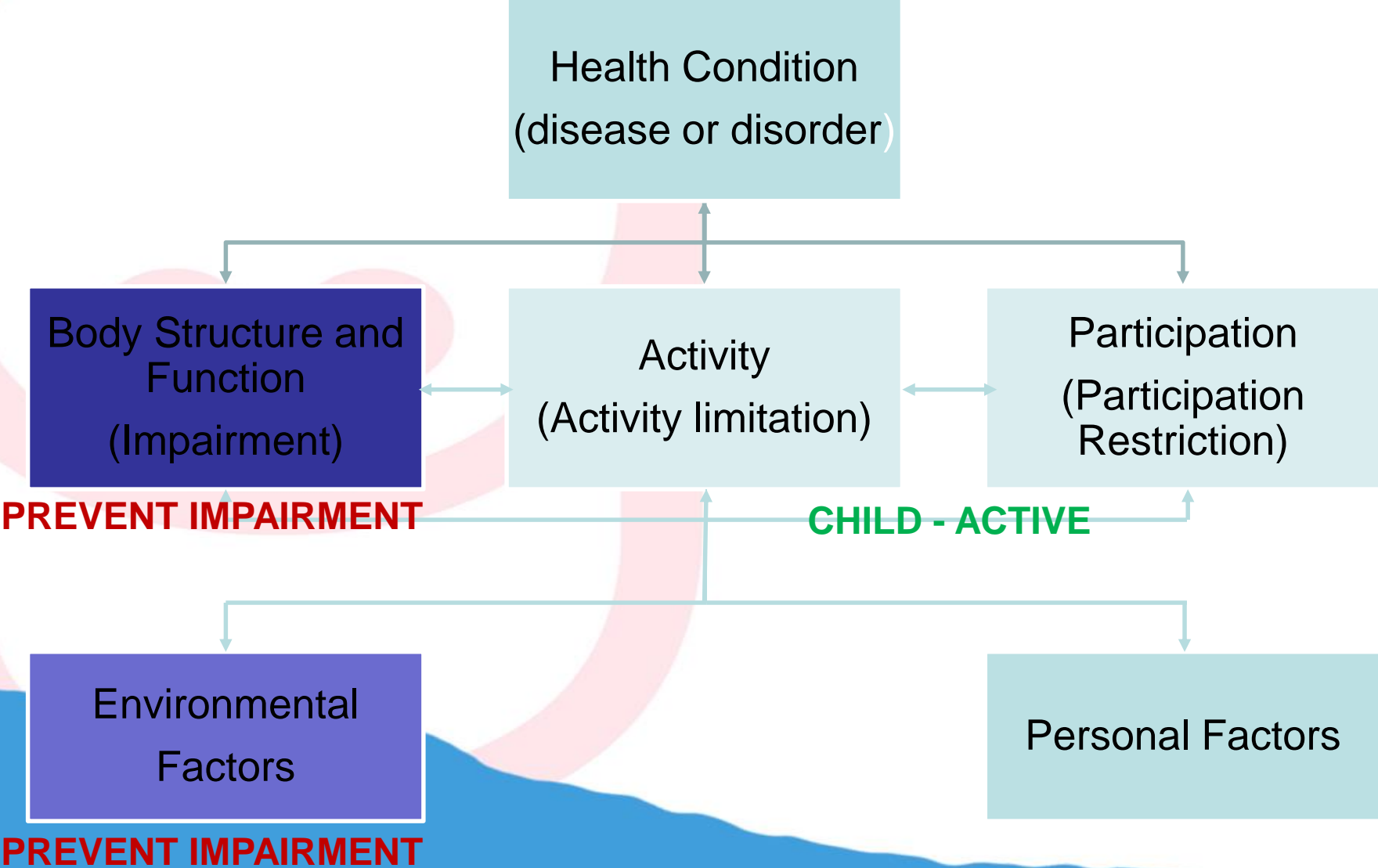
Modify task or environment

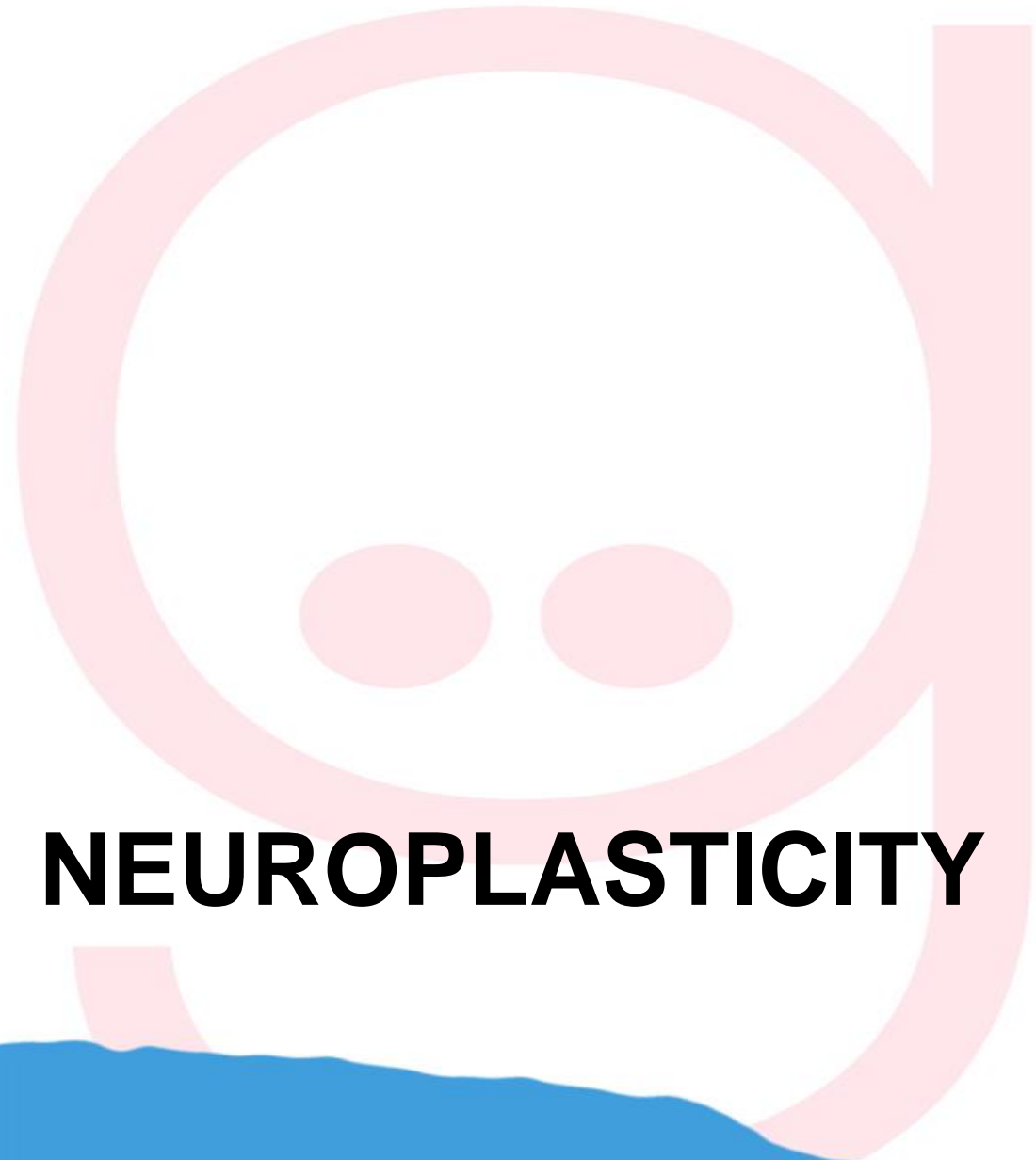
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Prevent Impairment

Manage alignment and Health

WHO ICF 2007





NEUROPLASTICITY

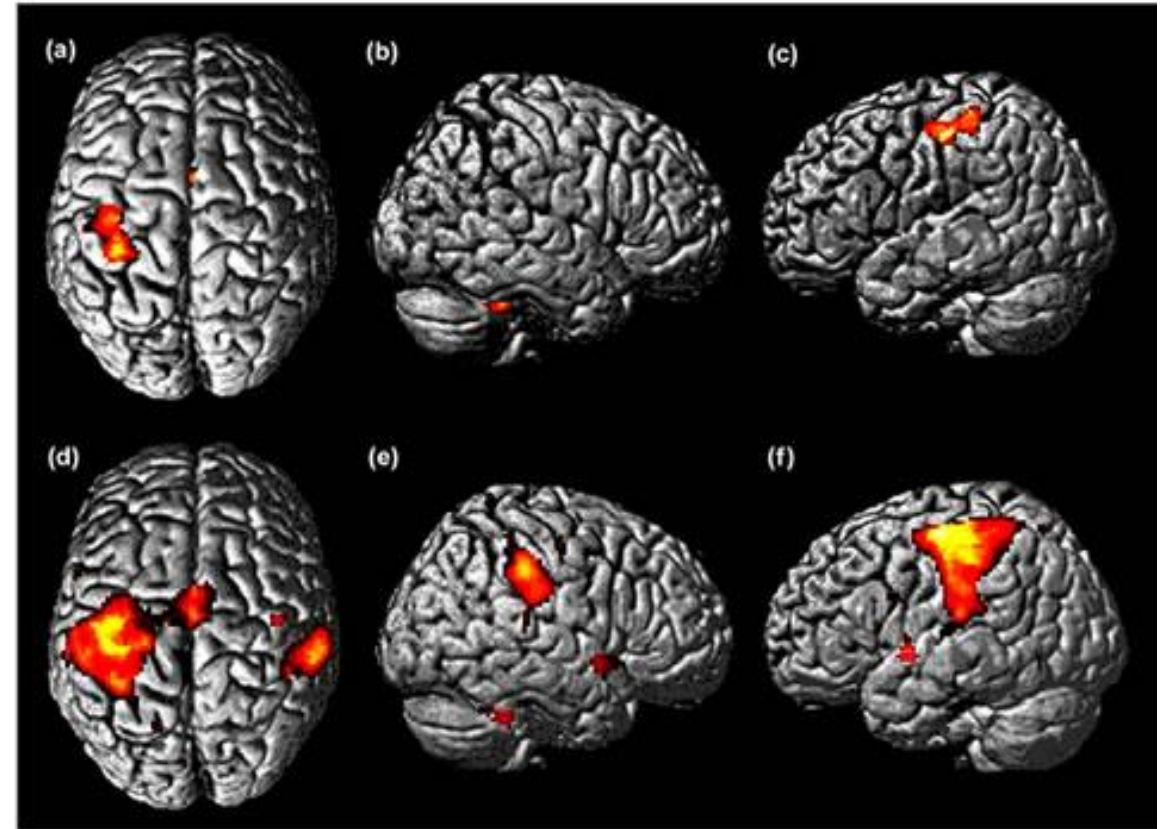
Use it or lose it



Neural circuits not actively engaged in task performance degrade

Use it and Improve it

Training a specific function can enhance that function



Specificity



How you practice matters

Repetition Matters

Induction of plasticity requires
sufficient repetition



Intensity Matters



Plasticity requires sufficient
training and intensity

Time Matters

Plasticity is not a one off event



Different forms of plasticity occur
at different times during training

Motivation is Key

Motivation + Attention +
Rewards = Increased Learning



Goal directed training/functional training



Age Matters

You cant start young enough



Transference

= Promotion of subsequent
plasticity



Interference

= Maladaptive plasticity

= development of 'bad habits'





EVIDENCE BASED THERAPY

Child Active

- Constraint Movement Induced Therapy (CMIT)
- Bimanual Play
www.research.ncl.uk/hemiplegiaresearch-fungames
- Spasticity Management
- Goal Setting
- Exercise programmes
- Hydrotherapy
- Rebound therapy
- Kinesiotaping
- Robotics

Compensation

- Equipment prescription
- Wheelchair provision

Prevention

- Hip surveillance
- Orthoses
- Range of movement

The Multi-Disciplinary Team

Health

- Paediatricians
- CDC services
- Speech and Language Therapists
- Occupational Therapists
- Physiotherapists
- Orthotists
- GPs
- Health Visitors
- Children's Community nursing

Education

- Pre-school teachers (portage)
- Teaching staff (SENCO)
- Learning support staff
- SEND

Social Care

- Social workers
- Specialist advisors
- Housing services
- Aids and adaptations

Voluntary Private

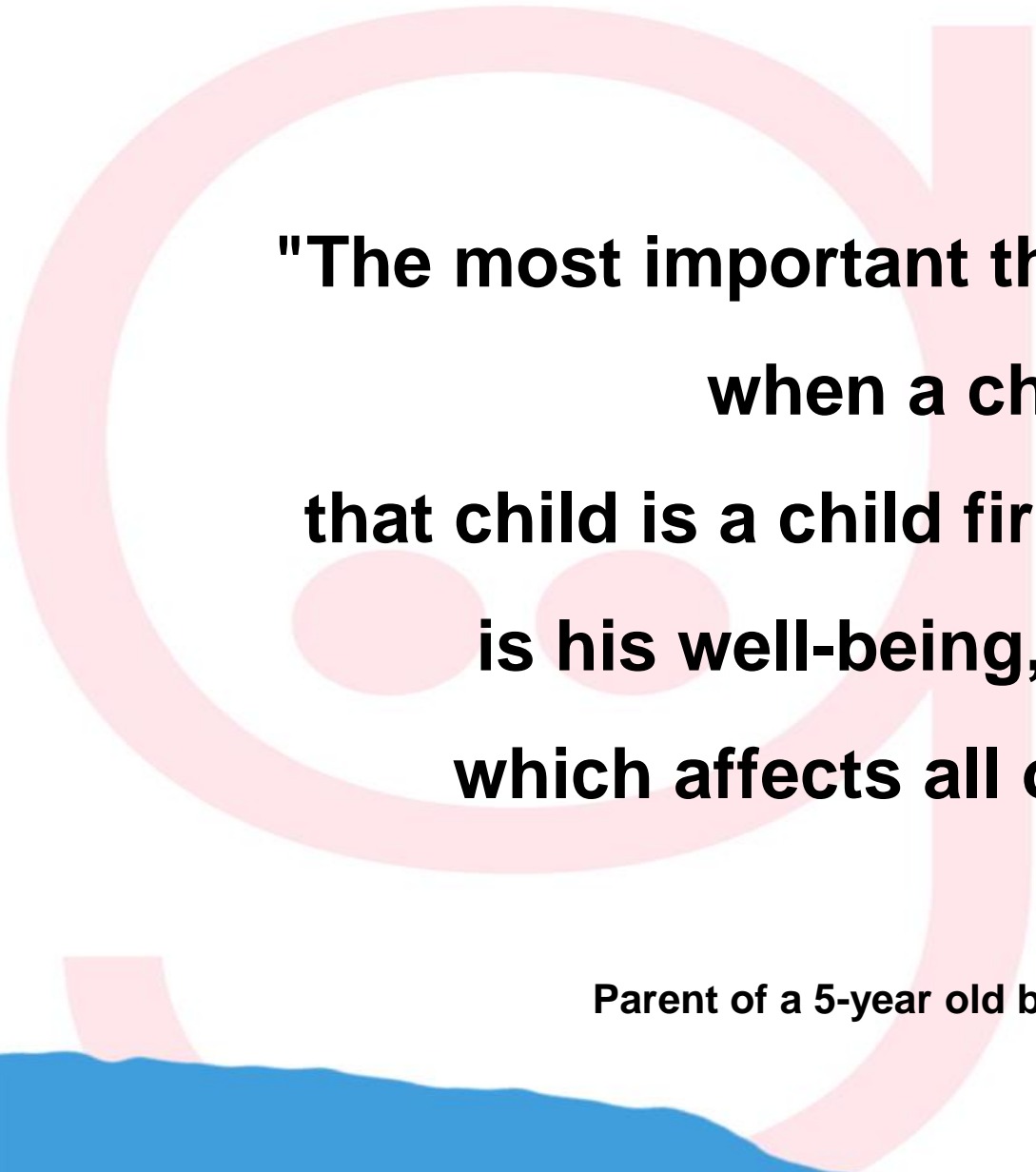
- Care staff
- Charities
- Private therapy

Our Challenge



For the Future

- Early Intervention etips study



**"The most important thing to remember is that
when a child is born,
that child is a child first to his or her family. It
is his well-being, not his disability,
which affects all our everyday lives.**

Parent of a 5-year old boy with multiple disabilities Sparcle Study

Questions

