

Keeping Everything in Balance



Key strategies to
enhance motor
skills and learning
in children with
Vision Impairment.

Jenny Andrew
Physiotherapist.

Self-Check of Balance



Keeping our Balance



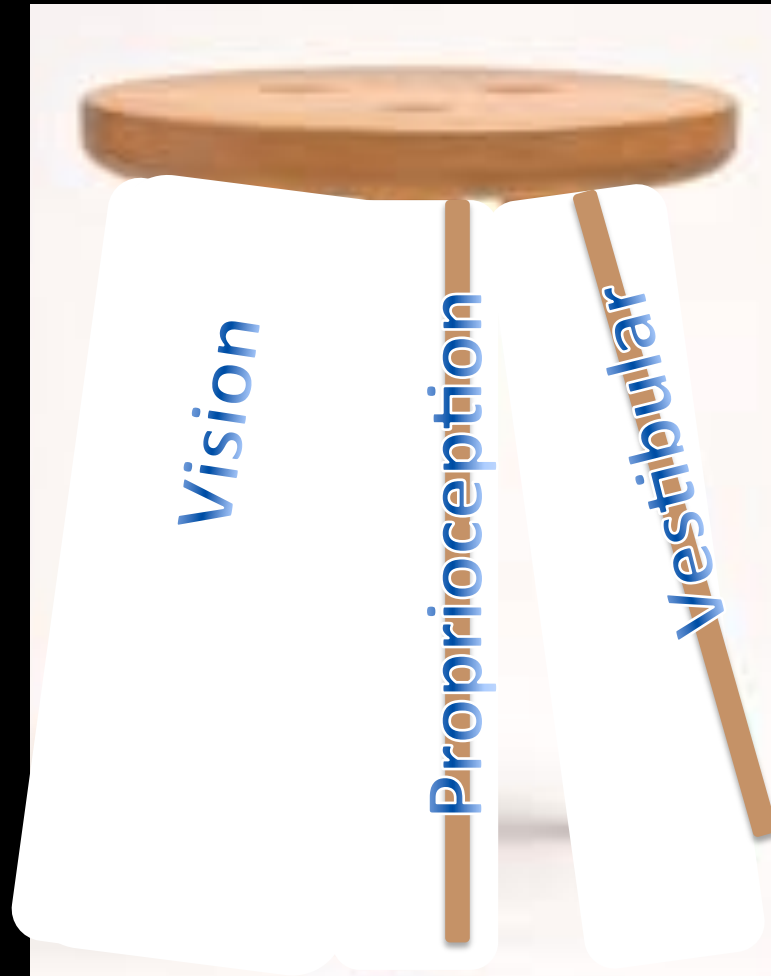
- We have identified the following key factors:
 - Vision
 - Vestibular sense
 - Proprioception
 - Hearing

The three-fold system



Why is it so important in VI

- When the vision component is removed the 'stool' is literally unstable.
- The other two systems must learn to compensate
- In VI children the vestibular system particularly needs to be trained to fulfill its role.



Newborns



Vestibular System



- The VESTIBULAR sense directly influences muscle tone, smooth accurate motor control and balance reactions, controls our arousal levels, gives us perception of space and orientation and helps with auditory processing and emotional development and behaviour.

Vestibular System in VI



- Vestibular calibration occurs with movement and adjustment of the head and body to new positions, therefore this is essential to promote.
- The vestibular system is most sensitive to when the head is tilted down.
- Children who are blind use a head down position more readily when they are not supported or feel less stable.

Keeping our balance



- Remember we identified the following key factors:
 - Vision – most significant impact when absent, but signals can be distorted where vision is impaired.
 - Vestibular sense – directly attributing to balance and spatial orientation, but also linked to postural tone and arousal levels
 - Proprioception – knowing where our body parts are in relation to one another
 - Hearing – more sensitive, but takes a long time to become a worthy sense for establishing identification in the absence of sight.

These are all SENSORY RELATED

BUT



- Large portion of sensory feedback is directed by vision so children with vision impairment are at risk of having fragmented sensory feedback.
- The first 7 years are when maximal sensory organising occurs

A CIRCULAR PROBLEM exists – the senses need to be used in order to develop, but the use of the senses can create overwhelming feedback, leading sometimes to not wanting more of or any repeats of a particular kind of input.

Sensory Presentation Examples



- Extraordinarily high or low tolerance of sensory input – pain, movement, touch, temperature, sound, smells
- Fussy about clothing/doesn't notice twisted clothing, food textures, shoes, having hair brushed or washed, rejects touching objects/craves touch & hugs, having mess on their hands/not noticing being messy
- Has a hard time sitting still/tends to lean, likes to spin, jumps a lot/enjoys falling/falls often.
- Poorly coordinated, low tolerance or anxiety for being moved or moving, ploddy-type walk, difficulty planning movement,
- Too much or too little exertion/extraneous or non-purposeful movement, hits or bites self.

Helpful Ideas



- Move – as much as possible. Be aware of sensory-related regulation difficulties and consult your Physio or Occupational Therapist for specific advice.
- Rolling activities as this includes vestibular, proprioceptive & tactile input.
- Prone weight bearing activities – crawling
- Scooter boards
- “Heavy Duty” activities (pushing, carrying, holding, providing resistance with movement)
- Weighted products (best used under therapy guidance)

Thank You

- Thank you for your participation and attention today.

Jenny Andrew

Paediatric Physiotherapist

Paediatric Therapy Ltd (Contracted to BLENNZ)

P.O. Box 23-419

Hunters Corner

Auckland 2155. e: jenny@paediatric-therapy.com