

Supporting sensational children

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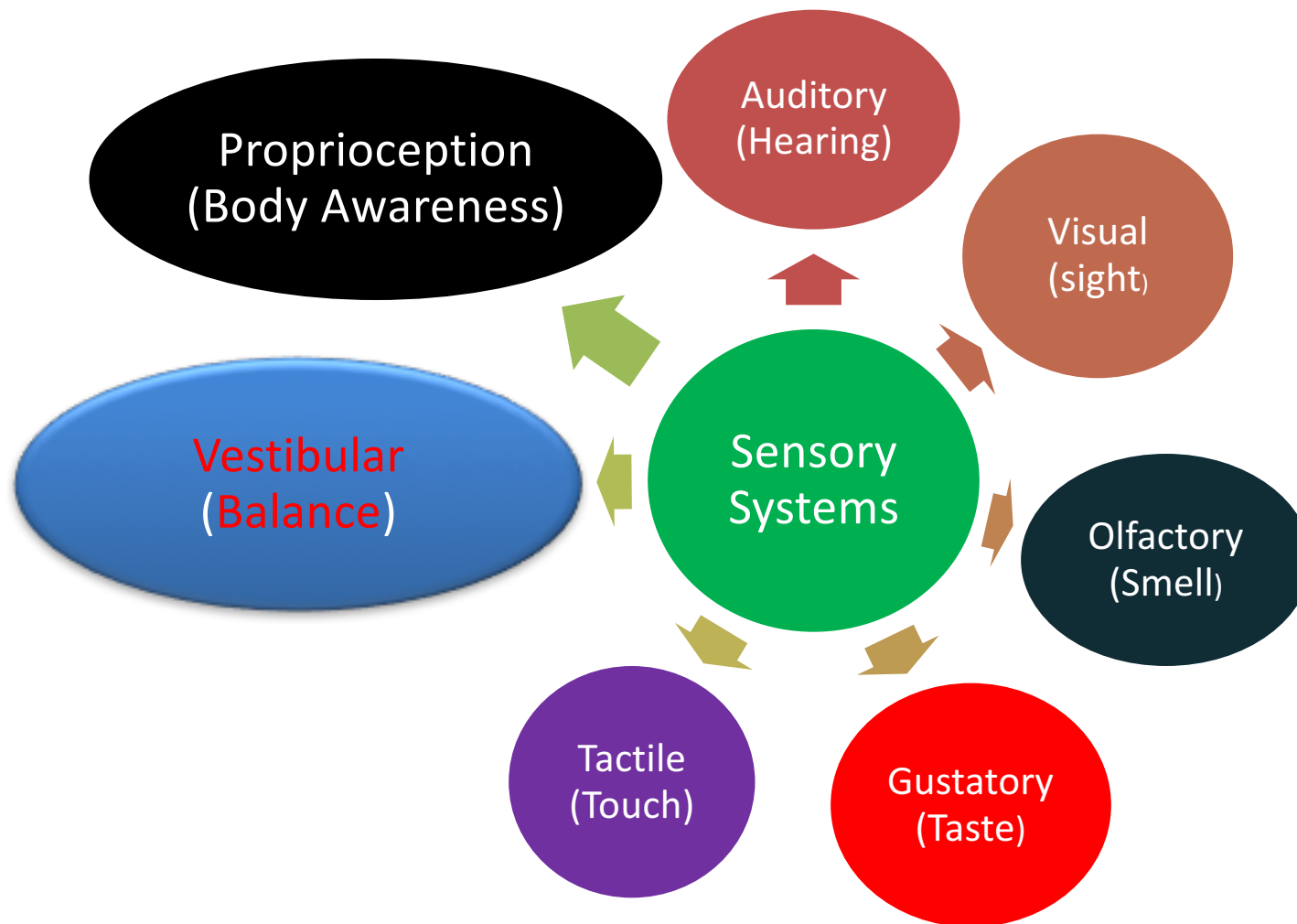
What is Sensory Integration

- The term “**sensory integration**” refers to the ability to take in sensory information from the environment, interpret it, organise it and then respond appropriately through engagement in occupation.
- Theory was developed by Dr A. Jean Ayres an Occupational Therapist, Psychotherapist and Educational Psychologist.

Sensory Integration enables us to:

- Play
- Learn and work
- Develop skills
- Develop sense of self
- Self-regulate
- Interact socially

The 7 senses (Sensory Systems)

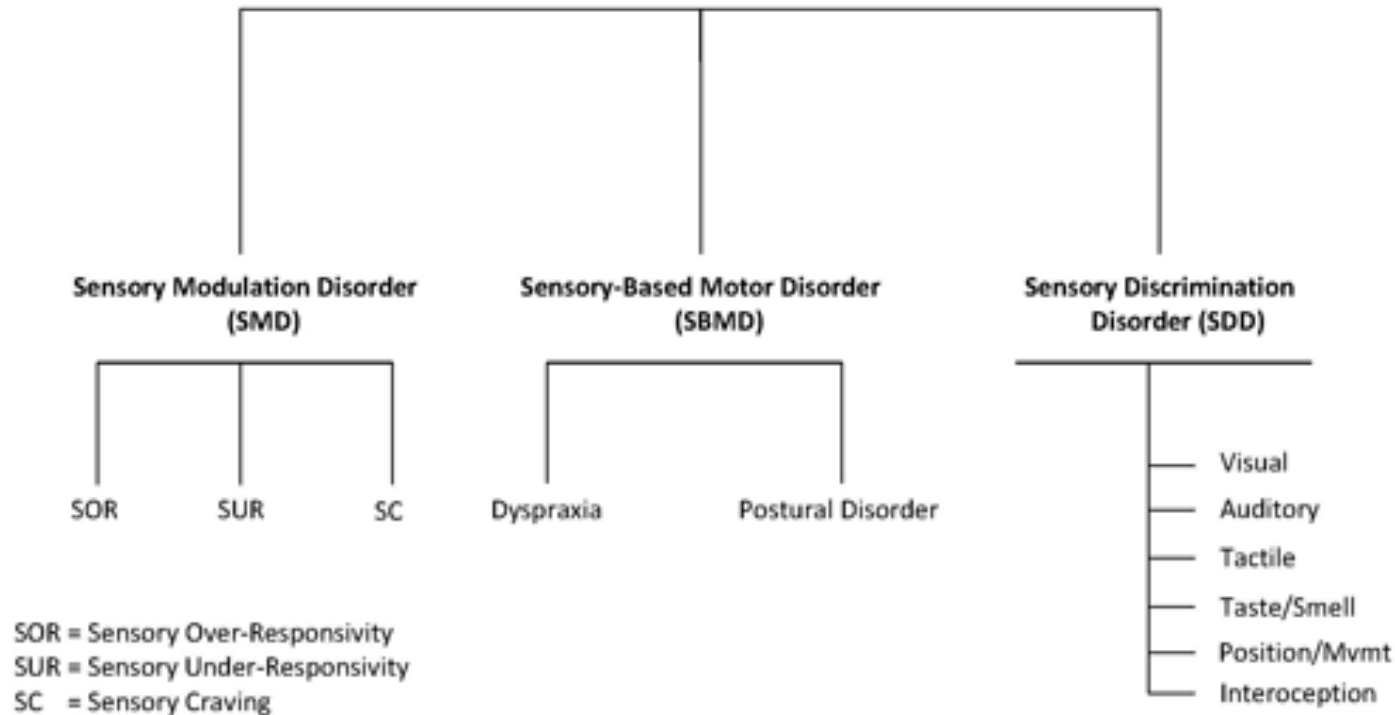


Activity

Hot bread

Sensory Processing problems

Sensory Processing Disorder (SPD)



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Miller, LJ et al., 2007

Neurological Threshold

- The point at which a person's nervous system responds to sensory input.
- A person with sensory processing difficulties may have a low or high threshold to certain or all types of sensory input.

Low Neurological Threshold – person may display hypersensitivity, they may react too quickly or frequently to sensory stimulation and they may appear overly excitable or hyperactive.

High Neurological Threshold – person may display hyposensitivity, they may be less likely to react or take longer, they may appear fatigued, sluggish or apathetic.

Ayres' SI assumptions

- The central nervous system is plastic
- Sensory integration develops
- The brain functions are integrated as a whole
- Adaptive interactions are critical to sensory integration
- People have an inner drive to develop sensory integration

So what is the difference between Sensory Integration and sensory based interventions?

Ayres Sensory Integration	Sensory based interventions
Aims to have a lasting impact on neurophysiological processing of sensation	Aims to modify regulatory state or behaviour quickly without necessarily having a lasting effect
Adheres to elements in the fidelity-to-treatment instrument	Uses sensation to support function but does not meet fidelity criteria
Requires active engagement and adaptive responses	Sensation may be experienced passively with or without an adaptive response
Requires specialised equipment	Minimal equipment needed
Requires specialised environmental affordances	Easily implemented in everyday environments
Provided in the context of play	May or may not be playful
Provided in 1:1 context that allows individualised and responsive modification of the intervention	May be administered in individual or group context
Practitioners have advanced training	Advanced training is recommended but not essential

Sensory checklist – the parent as sensory investigator

Avoid/Adapt: Designing service-wide systems for success

Tertiary (intensive) interventions for people with 'high-risk' behaviours:

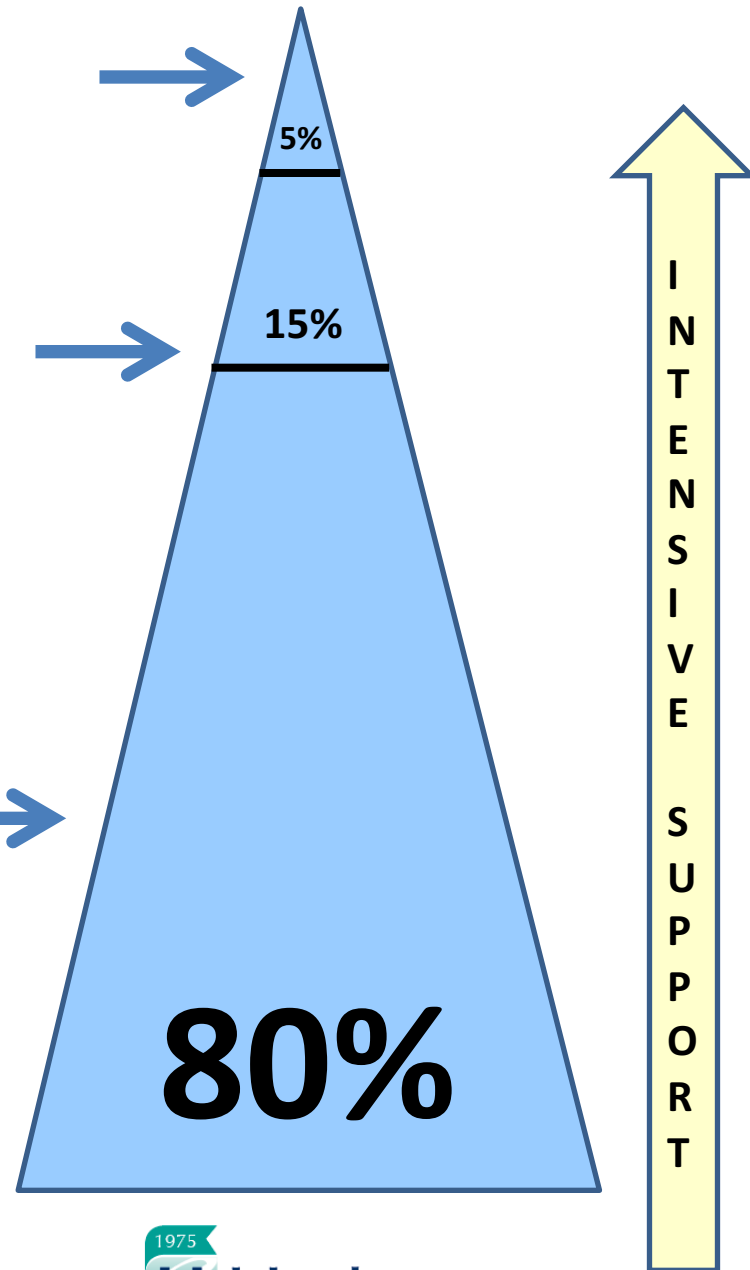
- Assessment based
- Resource intensive

Secondary (targeted) interventions for identified 'at-risk' individuals:

- Some individualising
- Small group interventions
- High efficiency
- Rapid response

Primary (universal) interventions for all individuals, staff and settings:

- Preventative, proactive
- Differentiated instruction
- Research – validated curriculum



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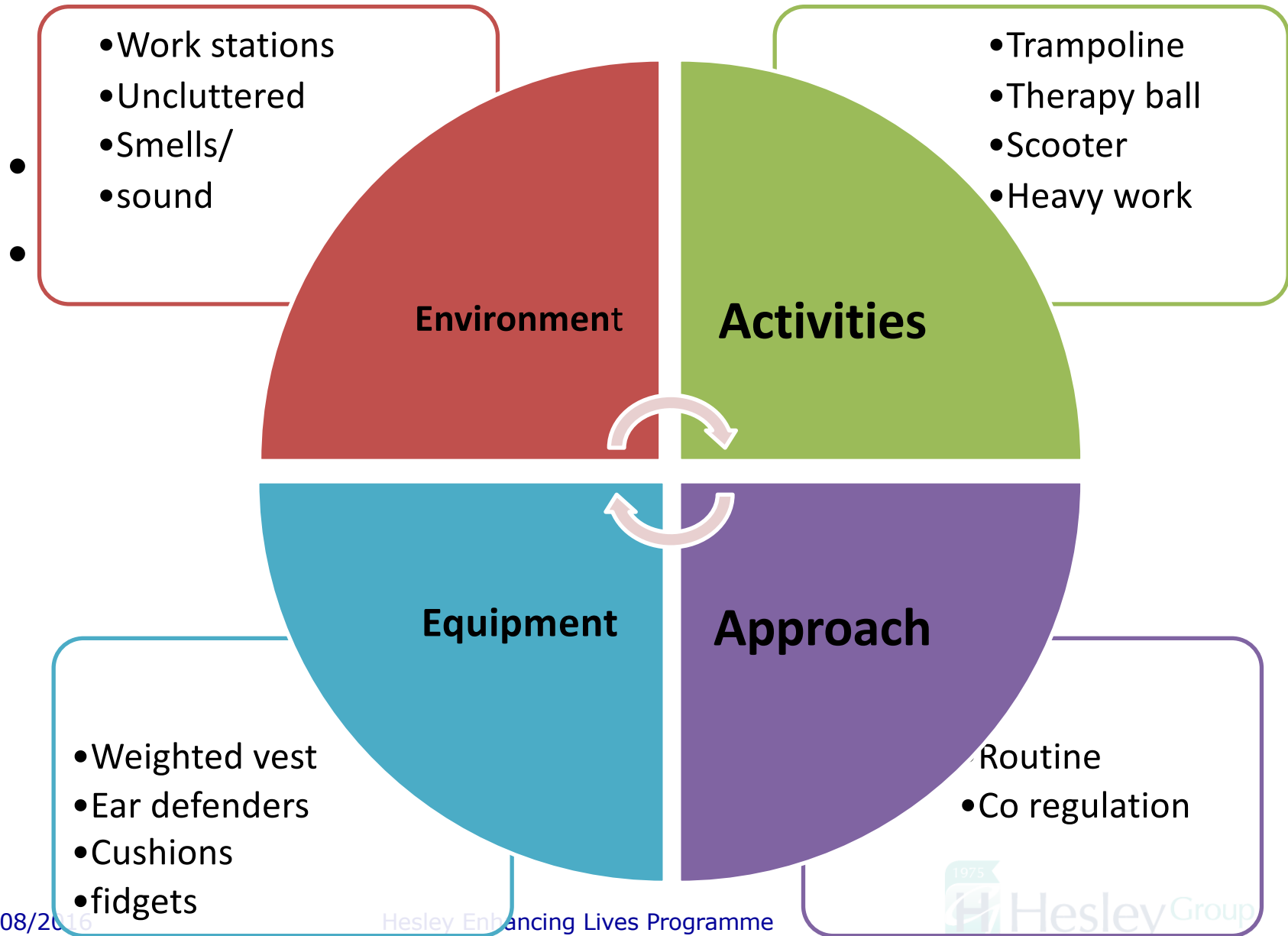
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Sensory diet

‘Sensory diet’ is a carefully designed and personalised activity plan that provides sensory input to stay focused and organised during the day

(poorly evidenced efficacy)

Sensory diet:



Types of interventions

Proprioceptive input	Vestibular Input	Oral-Motor Input
"Heavy work"	Linear, rhythmic movement	Crunchy foods
Pushing/pulling things	Rocking motion	Chewy foods
Wearing "loaded" backpack	Bouncing gently	Drinking through a straw
Push ups/monkey bars	Swinging (not spinning)	Blowing
Climbing	Jumping	Deep breathing
Big hugs or wrapping up	Sitting on a "wiggle" cushion	Minty/sour candy

Move- Vestibular

- Up and down movements **ALERTING**
 - See-saw, bouncing on therapy ball, trampoline, move'n'sit cushion
- Linear (slow, predictable, rhythmic) **CALMING**
 - Swing, prone on therapy ball/roll, rocking chair, scooter board, hammock
- Linear (unpredictable, fast, arrhythmic) **ALERTING**
 - Tunnel (with movement), swing, scooterboard
- Rotary/spinning **ALERTING**
 - Hammock, outside spinner, small individual spinner
- Inverted/upside down **ALERTING**
 - Hanging upside down, bending over with head between knees, prone on therapy ball,

Move- Proprioceptive

sensory input into muscles, tendons and joints

ALERTING or **CALMING**

- Heavy Work- animal walks, pushing, crawling, pushing medicine balls, scooterboard
- Crash and Bump- crash mat, pillows



Touch

- Fidgeting/holding objects **ALERTING** or **CALMING**
 - 'DETECTIVE WORK' - recognise if toy is not working and remove or exchange
 - Koosh balls, squeeze/stress balls, small slinky's, coiled elastic shoelaces, drinking straws, soft pieces of fabric
- Temperature
 - Warm temperature **CALMING** -wheat/heat pack, warm bath
 - Cold temperature **ALERTING**- e.g. transition activities, cold drink, ice cream cake
- Light touch **ALERTING**
- Deep/Firm touch **CALMING**
 - Firm "bear hug"
 - Playing with clay, playdough, theraputty (pushing, pulling, poking)
 - Deep massage, swiss ball roll/squash

Mouth

- What actions can you do with your mouth?
 - Blowing, sucking, swallowing, biting, crunching, chewing, licking
- How it feels or tastes?
 - Resistance created in the mouth (with your jaw, lips, tongue, teeth) when you are blowing, biting, crunching, chewing, sucking
- What can you use?
 - food, straws, whistles, bubbles, musical instruments (harmonica), exercise water bottle, blow the sheep in prone, bubble monsters (hands and knees or cross legged), party blowers (with or without noise), pin wheels, ping pong balls, feathers, 100's and 1000's, blowing bubbles as part of a relay or obstacle course.

So what do we know?

TOM



Questions of

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