

# Sensory Integration Therapy in Practice



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This is a case study about a 10 year old girl, 'Lucy', who suffered a traumatic brain injury when she was two years old. Lucy was seven years old when I started working with her as an occupational therapist.

As well as fatigue and right-sided muscle weakness, there was evidence to suggest that Lucy might have some sensory processing difficulties. Her mother and school reported that she was often upset and overwhelmed in noisy environments, covering her ears. She was irritated by wearing certain clothing, causing challenging behaviour at home and refused to engage in messy play activities that involved getting her hands dirty. She appeared restless and fidgety during reading time in class and before bedtime.

After liaising with the multidisciplinary team and Lucy's mother, it was agreed that she would benefit from a sensory assessment. Lucy's mother and class teacher completed the Child Sensory Profile caregiver and school companion questionnaires and I carried out OT observations at home and in school.

The assessment looks at the seven senses; auditory (hearing), gustatory (taste), olfactory (smell), vision, tactile (touch), vestibular (balance & movement) and proprioception (body awareness).

The results of the assessment showed that Lucy was over-responsive to certain sensory input. She was unable to filter out noise, which caused frustration and reduced concentration. She was also sensitive to touch, making her averse to exploring and feeling different textures. The assessment also showed that Lucy was not receiving enough vestibular and proprioceptive sensory input (under-responsive), causing restlessness and fidgeting such as rubbing her face and nose. She was engaging in this type of behaviour to increase the level of sensory input in an attempt to try and regulate her sensory needs.

I shared the findings with Lucy's mother, school teacher and therapy team, with recommendations:

- Include more movement-based activities in Lucy's school and home environments to work on her vestibular and proprioception system, integrating rest breaks to help conserve energy. Movement breaks were as simple as short walks up the corridor to get away from the desk, engaging in peanut roll exercises supported by school staff or going on the balance beam.
- A therapy ball chair was provided to help Lucy maintain better levels of concentration while sitting at her desk. This also helped her to work on core sitting balance.
- Control the level of noise Lucy was being exposed to at school and home by providing noise-cancelling headphones and a relaxing space to play or work quietly if these environments became too noisy. This included a pop up tent she could retreat to if things become too much at home, soft cushions to rest on and a heavier duvet to help improve sleep quality.
- Education was given to help recognise signs that Lucy was becoming dysregulated, to support Lucy to recognise these signs, and to put active control measures in place to make these situations more manageable for her.
- A touch desensitisation programme was advised within school to help Lucy gradually explore different textures and items in a sensory tray along with some gentle hand massage.
- A fidget toy bag was also provided to support Lucy to channel her fidgeting. The type of toys that were selected also helped her to work on bilateral hand integration and fine motor skills, tying in with her occupational therapy goals.



The therapy interventions were reviewed regularly to look at Lucy's progress and activities were adapted accordingly. Feedback from the sensory interventions has been positive and Lucy's attention levels have improved in class sessions. She is able to engage better in activities with less frustration and emotion.

Improvements with touch desensitisation were observed as the programme advanced, and we were able to incorporate fun activities such as pony riding and beach combing as Lucy became more open to exploring items and getting her hands dirty.

A second Sensory Profile assessment was carried out two years later to review Lucy's sensory needs, as it is common that a child's sensory needs may change as they grow and develop. Whilst there has been minimal change in some areas, such as hypersensitivity to noise and under responsive proprioception, the assessment showed reduced sensitivity to touch and better regulation of her vestibular system. The assessment also showed that the existing strategies were continuing to work and that Lucy was still using the active self-regulation strategies we put in place regularly to help with sensitivity to noise and touch and to incorporate movement/balance and proprioceptive activities into her daily life.

Looking ahead, I have made some small adjustments to Lucy's sensory interventions to keep them age appropriate, meaningful and fun. I work jointly with the physiotherapist and continue to liaise regularly with Lucy's mother and the multidisciplinary team to ensure a collaborative approach when addressing her sensory needs.



For more information about our sensory integration service, or any of the other rehabilitation services we offer at A Chance for Life Ltd, visit our website [www.achanceforlife.co.uk](http://www.achanceforlife.co.uk) or get in touch with our team.

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