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Sensory interventions

The speech and language and occupational therapy teams at the NAS Helen Allison School have been using a co-ordinated multi-disciplinary approach –the sensory diet – to meet the often complex needs of children with autism. This innovative intervention is producing very encouraging results.

Feeling just right

Most of us unconsciously learn to combine our senses (sight, sound, smell, touch, taste, balance, and the sense of our body in space), in order to make sense of our environment. However, many people with autism have sensory processing and/or modulation difficulties.

Ensuring that a child with sensory processing difficulties has the right ‘sensory diet’ can help remove barriers to learning. A sensory diet is a diet of scheduled activities and sensory input for the body and neurological system. Just as the body needs the correct food evenly spaced throughout the day, so does the body need activities to keep its arousal level optimal. A sensory diet helps the child’s nervous system to feel better organised and therefore assists the child’s attention and performance. This is paramount for the child to be a successful learner.

Although this is important for everyone, it is even more important for people with sensory processing disorders, because they are sometimes unable to modulate or self-regulate their sensory stimuli. Sensory diets aim to ensure that the individual has the right amount of sensory stimulation throughout the day, in order for them to feel ‘just right’, as we term it. This allows the student to focus on the task in hand, rather than being distracted by stimuli, like their shirt label rubbing on their neck or the smell of the teacher’s hand cream.

Employing an occupational therapist for two days a week has enabled some exciting collaborative work at the NAS Helen Allison School. Working together, the speech and language therapists (SALT) and occupational therapists (OT) have enabled children’s sensory needs to be identified and sensory diets prescribed, where appropriate.

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This has also been done alongside an innovative programme of Therapeutic Listening[®] where both the OT and the SALT have received specialist training. Therapeutic Listening[®] is a programme which provides high-quality, auditory input as part of a sensory diet. It uses the sound patterns in music to impact on all levels of the nervous system. Specially-selected CDs are used, which have been electronically altered to elicit the responses needed to sustain attention and active listening. Therapeutic listening[®] impacts on proprioceptive (position) and vestibular (balance and movement) senses and helps the person to feel where s/he is in space and time. Therapeutic listening also impacts on sensory modulation – for example, where students are over-sensitive to certain sounds within the environment.

What else is on the menu?

Another type of intervention we have found effective is the Wilbarger Touch Pressure Protocol, a treatment regime that involves providing deep pressure to the skin on the arms, back and legs, through the use of a special surgical brush, followed by gentle compressions to the shoulders, elbows, wrists/fingers, hips, knees/ankles, and sternum.

Many students also benefit from daily sensory circuits, a series of activities designed specifically to wake up all the senses. Each session includes ‘alerting’ activities, like spinning or bouncing on a gym ball; ‘organising’ activities, such as balancing on a wobble board; and ‘calming’ activities, like wall pushes.

All NAS Helen Allison School staff are now trained to implement the sensory diet approach. Many children have equipment in their classrooms to enhance their sensory modulation, such as oral chews, fidget toys and a variety of seating options to enhance focus, which are used throughout the day. Vestibular input is the strongest of brain stem sensations, and we have found that slow, gentle and rhythmic swinging is often the fastest way to calm someone down. Approaches now in place include specialist suspended swings; large gym/peanut balls; weighted blankets; brain gyms; and sensory circuits. In addition, some children have had weighted backpacks prescribed.

The use of a quiet, calming room/space within classrooms has also been identified as essential. A number of sensory/quiet rooms have been set up within the school, further education department and residential settings.

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Sensory intervention has had an impressive impact on improving the communication, interaction skills and motor skills of some of our most complex and 'hard-to-reach' children.

Case study

Lucy, aged six, has a diagnosis of autism and also hyper-mobility (low muscle tone). Lucy is non-verbal and had very limited understanding of the spoken word. She had very little communicative intent, hummed constantly and had reduced interaction with her peers, staff and environment. She had poor visual tracking and observation and poor core stability, affecting all motor skills.

We devised interventions for Lucy that included daily core stability exercises; a daily sensory circuit; a twice-daily individualised sensory diet, including Therapeutic Listening®; the Wilbarger Protocol; and suspended equipment, as well as communication work, carried out during sessions in the swing/sensory room. Over nine months, Lucy had improved in all areas. She can visually track objects in horizontal and vertical planes without difficulty. She follows school routines and transitions and has improved endurance for both gross and fine motor activities. Lucy can rise from floor unaided and her balance is improving, as is her awareness of herself in space. She is aware when her nappy is wet and will now walk in the middle of the corridors, rather than 'hugging' the walls. She is also requesting hugs from parents for the first time and is accepting unexpected touch. Lucy will now to turn to her name and her humming has significantly reduced. Her awareness of her environment has significantly improved and she seeks interaction opportunities. Above all, she is noticeably happier!