What is the Therapressure Program?

Sensory Defensiveness

Sensory Defensiveness is when, instead of noticing a sensation and choosing to either ignore or act on the sensation, the nervous system responds as if the sensation is dangerous (i.e. a flight, fight or freeze response). It is a bit like someone walking to the their car in a carpark by themselves at night. They would be noticing every sound, movement, smell; they would be on high alert to ensure they were safe. They would be ready to run, fight or stop very still. People who are sensory defensive feel like this most of the time.

The cause is unknown. It can be genetic or it can be due to early environments/experience (eg. 98/100 Romanian orphans who had severe sensory deprivation became sensory defensive). It can be, but is not always, part of complex disorders such as Learning difficulties, Autism Spectrum Disorders, Attention Deficit Disorders, Anxiety Disorders or Attachment Disorders.

Sensory Defensiveness makes it very difficult to learn something new or to perform activities you already know. Therefore, it needs to be treated before and during other therapy or learning techniques in order for the other techniques to be effective.

Assessment of Sensory Defensiveness

A formal Sensory Profile questionnaire can be a starting point but an interview always provides more detail about the areas of difficulty and identifies the current coping behaviours. Defensiveness reactions may occur in response to touch, food textures, taste, movement, heights, sound, light, smell, temperature, vibration and more. Coping behaviours may include avoidance; creating rigid routines to avoid the unexpected or creating your own stimulation to block out the unexpected, eg. Make own noises, biting self or others to give self deep pressure, mouthing, sucking or biting objects, lots of movement, climbing.

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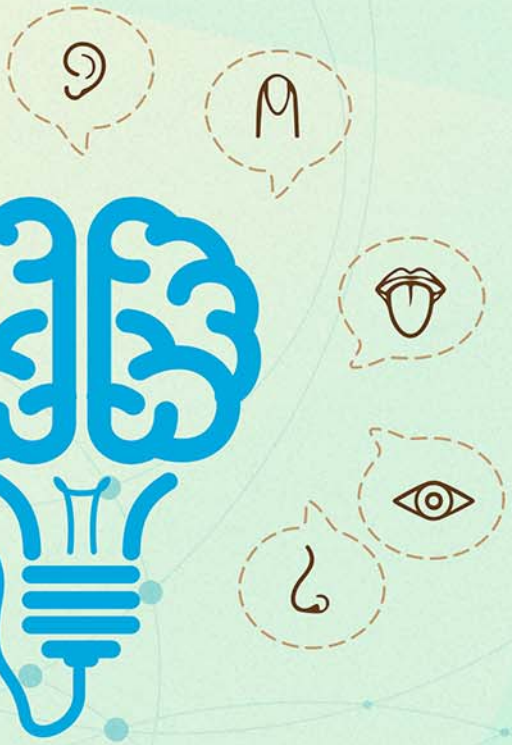
Neurological Processing



One example of neurological processing is the touch system. The touch system has a "Discriminative" pathway, which helps us to interpret what and where we are touching, and an "Evaluative" pathway, which gives constant feedback to and from the limbic system about emotions and the reticular formation about alertness/arousal. For example, the discriminative pathway provides the information from the fingers to help a person thread a needle but the evaluative pathway becomes more active if the needle pricks the finger.

In normal sensory processing, a non-dangerous sensation is noticed and an evaluation indicates there is nothing to be feared so the sensation is used in learning or performance of an activity, eg. Threading a needle. If the sensation is no longer needed in the activity, the sensation "habituates", ie. the person stops noticing the sensation, eg. When a watch is first worn, it is noticed but eventually the wearer stops noticing it because it is not needed for the other activities that the person is doing.

If an evaluation of sensations indicates danger, the amygdale is activated for a fight/flight/freeze response. Hormones are activated, eg. Cortisol, to ensure that the body continues to pay attention to every sensation, ie. not to habituate, to either suppress or heighten the feeling of pain and to have reflexes extra-alert.

"Sensory overload" is when the sensory system has so much stimulation that there is a response from the emotional (limbic) and arousal (reticular formation) systems of the body. Examples of sensory overload in people with normal sensory processing include becoming exhausted following the noise and crowds at a shopping centre, becoming angry with the jack-hammer that has been waking you up every morning, having a headache from the ringing in your ears after a concert.

These feelings/emotions occur much sooner for people with Sensory Defensiveness. For example, the soft touch of clothing as you are getting dressed, children talking in the classroom, brushing up against other people when you are sitting next to them on the mat, the whirr of the computer, posters hanging from strings across the middle of the classroom may all be enough to make someone genuinely exhausted, sick or angry. If they are almost at "sensory overload" most of the time, it will not take much to push them over the edge into an emotional response, eg. A teacher or classmate saying something negative.

Research has indicated massage increases serotonin (a hormone that is in your body when you feel good) and decreases cortisol (a hormone that is in your body when you are stressed). In addition, weight-lifting has been shown to provide one of the highest levels of endorphins (hormones that are in your body when you feel good). These hormones tend to only last 1.5-2 hours in the body.

Treatment of Sensory Defensiveness

Treatment of sensory defensiveness involves:

- [a] **Education**
- [b] **Specific intervention facilitated by a trained therapist**
- [c] **Evaluation/ongoing problem solving**

Education about sensory defensiveness is helpful to the caregivers, the person themselves, and various teachers/therapists involved. Specific intervention and evaluation can involve the following steps in the order that they appear or in an order that suits the situation, eg. Appropriate activities may be incorporated first while waiting for a holiday period to apply the Therapressure program).

1) Wilbarger Therapressure Program including deep pressure (brushing) and joint presses every 1.5-2 hours for at least 2 weeks
2) Data collection on the most challenging behaviours that seem to be resulting from sensory defensiveness to see if the program is helping
3) During the two weeks, experiment with a variety of "weight-lifting", "deep pressure", "heavy work", "big muscle" activities to see what can be fitted into the child's routine in the long term
4) Fit appropriate activities into the child's daily routine (see child's own specific sensory diet)
5) Problem-solve other strategies to help, eg. Using behaviour management, relaxation techniques, mindfulness training etc.
6) Re-visit OT after 6 months to monitor progress and continue problem solving.