



## Understanding Sensory Sensitivity

Sensory sensitivity refers to the way in which we react to stimuli around us. We have seven senses: sight, smell, taste, touch, hearing, vestibular (balance) and proprioception (body awareness). The information from these senses is processed by the brain and leads to a motor (physical) response. More recently, another sense has come to our attention called interoception. This refers to our ability to respond to internal body cues, such as hunger and pain.

We learn to take in the right amount of sensory information to allow us to successfully engage with our environment. For example, when we are working at a computer, we will shut out background noises and concentrate on the screen, ignoring other visual stimuli.

However, some people have difficulty modulating sensory information and may either feel overwhelmed by too much sensation (hyper-sensitivity) or receive too little sensory information (hypo-sensitivity). Adamson, Hare and Graham (2006) reported that 70% of children with Autistic Spectrum Disorder (ASD) have sensory differences to the normal population. Sensory processing impairment is included as one of the criteria for the diagnosis of people with ASD (American Psychiatric Association, 2013):

*'Hyper- or hyporeactivity to sensory input or unusual interests in sensory aspects of the environment (e.g., apparent indifference to pain/temperature, adverse response to specific sounds or textures, excessive smelling or touching of objects, visual fascination with lights or movement)'*

You can have sensory hyper-sensitivity or hypo-sensitivity in one area only, or across several senses and you can have mixed sensitivity. For example, some children with ASD appear to be hyper-sensitive to sound, vision, taste, smell and touch but hypo-sensitive to proprioception and vestibular information. There is an interesting video on YouTube which explains this from a child's perspective: <https://www.youtube.com/watch?v=D1G5ssZIVUw>

When a child has hyper-sensitivity, they are likely to try to avoid or lessen the stimulation from the sense that is too strong. For example, a common response is to cover the ears or eyes to reduce sound and visual information. Children with hyper-sensitivity to taste, smell and touch are likely to avoid unfamiliar

foods and may find it difficult to sit in a dining room because of food smells. Hypo-sensitivity can lead children to seek out more sensation, for example, rocking or knocking into objects, biting objects, seeking strong tastes or smells. Alternatively, they may appear very passive and unresponsive.

We find that most children with a restricted diet and food avoidant behaviour are hyper-sensitive to the taste, smell and texture of food. Very commonly these sensitivities appear early on in the process of weaning a baby onto solid foods. It is particularly common when babies are introduced to textured foods, especially lumpy 'second stage' baby foods. As the baby gets older, hyper-sensitivity develops into a strong disgust response to many foods. The child recognises food visually and rejects anything unfamiliar, including similar foods that may be a different brand or presented in a different way e.g. broken or marked.

It is important to understand the child's sensitivities as they may interfere with learning and coping with daily living. There are simple ways in which the environment and the child's daily life can be adapted to allow for sensory processing difficulties. With eating and drinking, it is important to set up the mealtime so that the child is sufficiently alert but not worried by noise, visual information, too many people or strong smells. Then it is important to look at the sensory aspects of the food itself and the child's preferences.

It is possible to overcome specific hyper-sensitivities by a process called de-sensitisation. This consists of carefully graded exposure to stimuli that the child usually has difficulty coping with. An example might be de-sensitisation to the sides of the mouth – a common problem with many children who are hypersensitive to the texture of food. These programmes are usually designed by a professional – a psychologist, speech and language therapist or occupational therapist – but are often carried out by parents, teachers or other care workers as the activities must be done frequently. An example of the many small steps needed is given in the outline below, with the general principles of de-sensitisation.

**AIM: exploration of hard objects and foods that X can hold and take to the sides of his mouth.**

- X will pick up objects and foods with his hands
- X will take these to his mouth and lick, suck and taste them
- X will allow suitable objects and foods to touch to the sides of his mouth
- X will begin to explore these objects and foods with his tongue

- X will allow pieces of food into the sides of his mouth and learn to move them around.

A specific programme for a child would give details of activities for each step.  
*Do not try to do this without guidance from a professional.*

### **General principles of a de-sensitisation programme**

- Child focussed – *follow a child's lead/interests, pick a time when she is amenable to working with you*
- Developmentally appropriate – *any mouthing objects should be suitable for his/her age so dummies, mouthing toys are ok for babies but not for older children.*
- Carefully graded, with small steps – *this is to ensure success and avoid fear and anxiety*
- Involves controlled change and variety – *we need to keep the child interested and enable them to generalise*
- Challenging – *if it is not challenging, the child isn't learning anything new*
- Frequent but not time-consuming – *a little, often, will ensure the best results and is less likely to lose the child's interest and yours!*
- Paired with rewarding experience – *this is not meant to be a chore so try to make activities fun with lots of positive attention from you*
- Regular exposure to the same foods over time – *although you want some variety, it is important that the child gets to like foods through familiarity and has the chance to really know what they feel like and how to manage them in the mouth*

### **References:**

Adamson, A., O'Hare, A. and Graham, C. (2006) ***Impairments in Sensory Modulation in Children with Autistic Spectrum Disorder***. British Journal of Occupational Therapy. 69(8)357-364

American Psychiatric Association (2013) ***Diagnostic and Statistical Manual of Mental Disorders (DSM) 5<sup>th</sup> Edition***

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