SENSORY DIFFERENCES
WHAT IS SENSORY INTEGRATION?

We all use sensory information all of the time to help us make sense of the world around us and how we function within it. We all have sensory preferences, for example you may like sweet things but not spicy food, there may be sounds that are really unpleasant to you but don't seem to bother other people.

Many people on the autism spectrum have difficulty processing everyday sensory information. Any of the senses may be over- or under-sensitive, or both, at different times. These sensory differences can affect behaviour, and can have a profound effect on a person's life. Here we help you to understand autism, the person and how to help. You can also find out about synaesthesia, therapies and equipment.

Too much information

Sometimes an autistic person may behave in a way that you wouldn't immediately link to sensory sensitivities. A person who struggles to deal with everyday sensory information can experience sensory overload, or information overload. Too much information can cause stress, anxiety, and possibly physical pain. This can result in withdrawal, challenging behaviour or meltdown.

If someone is having a meltdown, or not responding, don't judge them. There are things that you can do to help. This can make a world of difference to someone with autism and their carers.

Often, small changes to the environment can make a difference. Creating a sensory profile may help you to work out what changes are needed.

Three points to remember are:

- **Be aware.** Look at the environment to see if it is creating difficulties. Can you change anything?
- **Be creative.** Think of some positive sensory experiences.
- **Be prepared.** Tell the person about possible sensory stimuli they may experience in different environments.

How sensory overload might feel for an autistic person

Watch a short film which shows you what it could feel like to experience sensory overload.

https://youtu.be/ycCN3qTYVyo

Sensory Processing/ Sensory Integration

Some children have sensory processing difficulties that cause them to react differently to sensory input than others do. Their internal sensory environment is different from other children's, causing them to react with challenging or unusual behaviours to what appears to be non-threatening sensory input, for example ordinary sounds of the texture of certain fabrics. Their responses are due to their body's reactions to sensory input or sensory needs.

Our life is full of sensory experiences and we all respond to these in different ways. We touch, move, taste, hear, smell and see.

We may be aware or subconsciously aware of where we are and how we interact with the environment.

- Sometimes we seek sensory information to make us feel better (e.g. a cuddle).
    - Or
- Sometimes we retreat from certain types of sensory input if it makes us feel overwhelmed (e.g. very loud noise or bright lights).

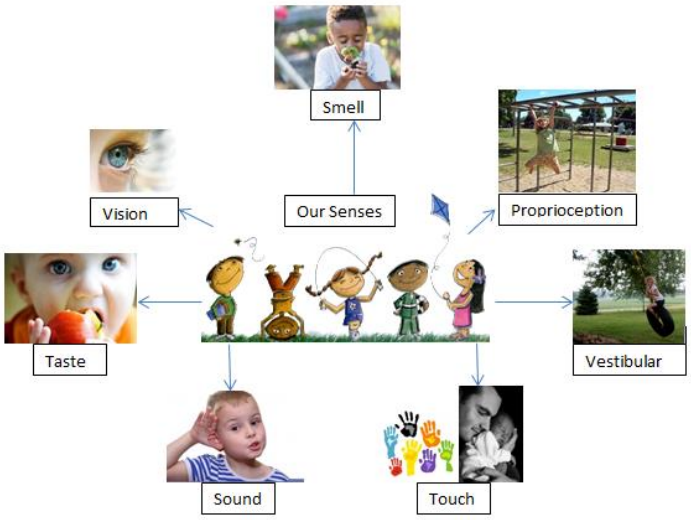
Most people are able to interpret sensory information with ease and therefore the sensory experience and activity are completed successfully. This can also be described as sensory integration.

Our Sensory Systems

When we are considering sensory integration difficulties we look at 7 sensory systems. The first 5 (sight, hearing, touch, taste, smell), we are all familiar with.

- The other 2 are less known and are to do with how we move and recognise the position of our bodies. **These are proprioception and the vestibular system.**

Our senses all work together to give us a picture of who we are, where we are and what is going on around us.



Proprioception
This sense is located in our muscles and joints. It is an unconscious sense that detects where our body parts are in space and how they are moving. It tells us how hard we are pushing things and allows us to gauge how much pressure we need to do a task. It allows us to perceive pressure we need to do a task. It also allows us to perceive pressure (for example in massage) and resistance to movement. Proprioceptive input is key in helping us to adjust our arousal levels, particularly in calming and organising the nervous system when it is over-aroused.

Vestibular
This sense allows us to detect where our head is in relation to space. The receptors are in our inner ear. It tells us whether or not we are moving, how quickly and in which direction. It contributes to our sense of balance, head control and coordination.

The vestibular system is very important in influencing our nervous system and arousal. Fast movements tend to wake us up, while slow rhythmic movements put us to sleep. Straight up and down or backwards and forwards movements such as jumping on a trampoline tend to be organising, while rotary movements such as spinning or turning in a circle can have an alerting and sometimes disorganising effect.

When there are difficulties with sensory integration

Difficulties at the level of sensory integration often contribute to impairment in higher level integrative functions, such as social participation and praxis (the ability to plan and organise movement).

There may be people who have different reactions to sensory information but this does not interfere with their level of functioning in daily life. For example, a child may not like a particular smell, taste or texture on their skin but this does not interfere with their participation in daily activities. Our individual likes and dislikes are what make us unique. However, there are some individuals who have difficulty interpreting sensory information and this can impact on how they feel, think, behave and respond.
This can interfere with how they perform in play activities, at school, in life activities, with self-care tasks, learning and relationships.

Sensory processing difficulties can have a negative impact on a child at home, in school and in the community in the following areas:

- Attention
- Emotional stability
- Social communication and participation
- Self-regulation e.g. eating, toileting, sleep.
- Motor skills e.g. washing, dressing, handwriting, cutting with scissors, participation in sports/ P.E

> "One of the most debilitating symptoms for some children and adults with autism is sensory oversensitivity"
> (Temple Grandin 1985, 2011)

Useful resources

- Higashida, Naoki (2014) *The Reason I Jump*: *One boy's voice from the silence of autism*. Sceptre
- Grandin, T. (2006) *Thinking in Pictures*. Bloomsbury Publishing
- The National Autistic Society http://www.autism.org.uk/sensory
- *Raising A Sensory Smart Child* by Lindsey Biel and Nancy Peske
- *Building Bridges through Sensory Integration* by Ellen Yack, Paula Aquilla and Shirley Sutton.
- Sensory Integration Education https://www.sensoryintegration.org.uk/What-is-SI