Family Development

Making Sense of Our Senses

north east
autism society

Making sense of our senses

Our senses act as our window to the world and are key in helping us make sense of the world around us.

Our senses are:

- **Vision (sight)**
- **Auditory (hearing)**
- **Olfactory (smell)**
- **Gustatory (taste)**
- **Proprioception (body awareness)**
- **Vestibular (balance)**
- **Interoception (internal state of the body)**

Sensory processing is our ability to register, discriminate, adapt and respond to sensory information.

Sensory processing differences are common, for those who are autistic. These differences include hypersensitivities (over responsive or too much) and hyposensitivity's (under responsive or too little).

It is important to understand that people can be a mixture of both hyper (over responsive) and hypo (under responsive) sensitive within specific senses - at the same time and these sensitivities can fluctuate and change on a daily basis. So, for example a person may seek out the noise of a vacuum (as it is familiar and provides some form of comfort or stimulation) but avoid with fear the noise of a high-pitched fire engine (that is both over stimulating and has been heard infrequently and is considered to be unpredictable).

It is also important to understand that sensory differences impact on every aspect of life and therefore we cannot underestimate the difficulties and distress they can cause an autistic person. Within this booklet we have included some common examples of how a person may present when experiencing hyper or hypo sensitivities in each sense, these are not exhaustive lists, and a person does not have to present with all examples to be considered as hypersensitive or hyposensitive.

Auditory (Hearing)

Our auditory system is our ability to hear sounds around us. Some children may be hypersensitive to sound, they may be able to hear sounds that most people cannot hear.

This may mean that sound can be overwhelming and sometimes painful for them. Others may be hyposensitive and seek certain sounds or volumes to regulate themselves.

Hypersensitive:

- Avoids noise
- Covers ears
- May become upset
- Makes their own noises.
- Appears anxious around loud noises.

Hyposensitive:

- Will seek out noise
- Can get overexcited
- Puts ears against loud objects.
- Make/create their own noise using their voice/objects.
- Wants sounds such as TV and radio to be on loud.

To Support:

- Ear defenders/loop ear pods.
- Avoiding busier times (for example, while shopping).
- Offering a calm, quiet space away from noise/busy environment.

To Support:

- Opportunities to access toys/sensory equipment that create noise.



Visual (Sight)

Our visual sense is our ability to visually see what is in our environment.
Some children may be hypersensitive to visual stimuli, becoming anxious and overwhelmed in some environments. Children can also be hyposensitive, seeking visual stimulation from the environment.

Hypersensitive:

- Covers eyes
- Overwhelmed by clutter/ busy environments.
- Sensitive to bright lights.
- Anxious in busy groups.
- Overwhelmed by too much visual information.
- Struggles to make eye contact.
- Notices small details such as tiny crumbs on the floor.

To Support:

- Dim lighting/turn off lights
- Opportunities to be in the dark (black out tents, use of black out blinds in room).
- Reduce visual information on walls.
- Don't force eye contact.
- Avoid busy groups
- Use sunglasses

Hyposensitive:

- Seeks visual stimuli from their environment.
- Holds items close to their eyes.
- Seeks out toys that light up/flash.

To Support:

- Offer light up toys/sensory equipment.
- Posters/information on walls.
- Opportunities to visit different environments
  (indoors and out such as sensory room, park, forest school).

Gustatory (Taste)

Our gustatory sense is our ability to taste a variety of textures and flavours. Some children may be hypersensitive to certain flavours/textures of food and therefore may avoid certain foods and have a limited diet. Children who are hyposensitive may seek out strong flavours such as spicy food along with cold and crunchy foods to 'wake up' their gustatory system.

Hypersensitive:

- Avoiding certain foods/ textures/temperatures
- Can't try new foods
- Limited diet
- Only eats bland food or dry foods.

To Support:

- Provide the child with 'safe foods'
- Introduce new foods in a controlled and managed way (smelling, touching, licking, before tasting).
- Snack plates placed around the house for them to access.

Hyposensitive:

- Puts everything in their mouth
- Will seek out cold, spicy, and crunchy foods.
- PICA (eating of non-food objects)
- Bites hands or sucks objects
- Grinds teeth

To Support:

- Offering opportunities to taste new foods.
- Offering strong flavours, or cold, chewy and crunchy foods.
- Sucking and blowing activities such as bubbles or musical instruments.
- Drinking thick liquids through a straw.
- Rule out an iron deficiency.



Olfactory (Smell)

Our olfactory sense is how we perceive scents and odours. Some children may be hypersensitive to certain smells, causing feelings of anxiety and feeling overwhelmed. Others may be hyposensitive seeking out strong smells.

Hypersensitive:

- Avoiding strong smells
- Over reaction/upset to new smells.
- Difficulty trying new foods.

Hyposensitive:

- Doesn't react to strong smells.
- Seeks out strong smells.
- Smears faeces

To Support:

- Use of fragrance-free products around the house.
- Offer something for child to use to cover nose (cloth/ tissue).
- Avoiding cooking strong scented foods around child.

To Support:

- Offer strong scented foods such as curry.
- Scented sprays on clothing/bedding such as lavender.
- Use of scented candles/ sprays in the home.
- Use of homemade scent bags (bags with strong smells such as essential oils or coffee in them).



Tactile (Touch)

Our sense of touch is our ability to feel textures around us. Some children may be hypersensitive to touch, meaning light touch by others may feel painful. They may become overstimulated by certain textures such as clothing or messy play.

Others may be hyposensitive meaning they seek out touch such as messy play and deep pressure in order to regulate.

Hypersensitive:

- Avoiding certain textures or foods.
- Becomes overstimulated, anxious, or upset when touching certain textures.
- Sensitive to certain items of clothing.
- Low pain threshold (being touched by others may feel painful).
- Avoids physical touch.

Hyposensitive:

- Enjoys getting messy and messy play.
- Smears faeces
- Touching surfaces and different textures in their environment.
- Seeks physcial touch and deep pressure.
- High pain threshold (may not react or recognise pain).

To Support:

- Access to wipes/tissues
- Not forcing the child to touch something that makes them feel uncomfortable.
- Offering gloves
- Cutting tags off clothing
- Seam free clothing
- Access to clothing they feel comfortable in.

To Support:

- Opportunities to access messy play activities.
- Sensory mats
- Deep pressure massages
- Weighted blankets and teddys (be conscious of weight and height of child in relation to the weight of blanket).
- Body socks

Vestibular (Balance)

Our vestibular system is located in our inner ears, it supports our balance and control. Children who are hypersensitive may be oversensitive to movements and become easily dizzy or sick. Hyposensitive may present as constantly seeking movement.

Hypersensitive:

- Sensitive to certain movements.
- Struggles with certain kinds of transport such as cars and may experience travel sickness.
- Rarely rocks or spins
- Becomes easily dizzy

To Support:

- Avoid spinning rides
- Consider transport
- Sitting on the floor
- Mild rocking
- Having someone to walk beside them/to hold onto when walking.

Hyposensitive:

- Seeks out fast movements
- Spinning
- Bouncing when walking
- Walking on tip toes
- Rarely gets dizzy
- Enjoys rough and tumble play.
- Risk taking behaviour such as jumping and climbing.

To Support:

- Bikes
- Swings
- Spinning (both ways to regulate)
- Trampoline
- Sitting on a higher chair
- Sensory circuits
- Balance boards
- Wobble cushions

Proprioception (Body Awareness)

Our proprioceptive system is our joints and muscles and tells us where our bodies are in relation to space. It also relates to our force and pressure. A child who is hypersensitive may appear as clumsy, bumping into items around them and having poor hand eye co-ordination. The child may not be able to recognise or control their pressure. We may see a hyposensitive child seeking pressure and movement from their environment.

Hypersensitive:

- Bumping into objects and other people.
- Appears as clumsy
- Struggles with pressure, may break items.

To Support:

- Weighted cutlery
- Weighted pens/pencils
- Open plan rooms to avoid injury

Hyposensitive:

- Jumping
- Stomping
- Enjoyment from deep pressure.
- Chewing
- Dropping to the floor
- Difficulty with handwriting
- Walks on tip toes
- May squeeze people with a great deal of force without realising it.

To Support:

- Weighted blankets/teddys
- Deep pressure hugs/massages
- Wearing a backpack (can add water bottles to add weight depending on how much feedback the child needs).
- Resistance bands
- Body socks



Interoception (Internal State of the body)

Our interoceptive system is our internal sense and helps us to understand what is going on inside of our bodies. A child who is hypersensitive within this sense may be oversensitive to their body signals such as needing the toilet, feeling hunger and feeling pain, compared to hyposensitive, where some children may confuse their physical and emotional signals, for example, anxiety and hunger. They may not receive the correct signals from their nerve receptors to tell them how they feel.

Hypersensitive:

- Low pain threshold
- Feeling full quickly
- Sensitive to change of temperature.
- Accessing the toilet frequently.

To Support:

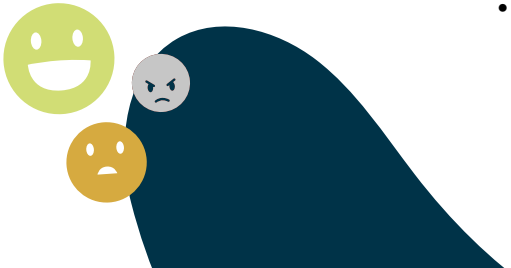
- Use of mindfulness strategies such as body scanner, grounding, and body maps.
- Emotional regulation tools (zones of regulation, five-point scales).
- Access to a toilet
- Encourage the child to wear clothing that clings to the body as it will help the body/brain to register the texture and tension of the clothing.
- Using an electric toothbrush will provide stimulation to the mouth and jaw and in turn will stimulate the body/brain to pay attention to reactions of the tactile receptors in the jaw and mouth.

Hyposensitive:

- High pain threshold
- Overeating (not getting the signals to tell them that they are full).
- Eating small amounts and becoming full quickly.
- Forgetting to use the toilet (not getting the signals to tell them that they need to go).
- Emotion signals getting mixed up, for example anxiety and hunger.
- Being unable to recognise subtle changes in mood.
- Unable to identify when feeling ill.

To Support:

- Reminders to use the toilet.
- Scheduling in times for eating and drinking and taking breaks.
- Hydration charts
- Support from a dietician.
- Being vigilant if child falls ill in case of unknown injury.
- Use of mindfulness strategies such as body scanner, grounding, and body maps.
- Emotional regulation tools (zones of regulation, five-point scales).
- Use hand and foot massage to help the brain to notice different parts of the body more effectively.



Looking for more resources?

Brought together by our Family Development team, members of our Neurodiversity think tank and from families sending us their tips and advice we've put together a bank of free resources to help you, as part of our valued community, to navigate the day-to-day challenges of life.

Scan the code to find out more!

north east
autism society

Family Development

www.ne-as.org.uk/family-development