

Sensory Processing Difficulties

Understanding How Children with Autism or an Intellectual Disability Experience Sensory Input

WHAT IS SENSORY PROCESSING?

We all experience the world through our senses - sight, sound, touch, smell, taste, body awareness, movement and interoception (sensing our internal body state e.g. feeling hungry, sick, tired).

Sensory processing is the way we identify, process and organise the information we receive from within our bodies and from the environment around us.

How we interpret sensory information and respond to it is called sensory processing.



How we process sensory input is different for everyone. We all have our own sensory preferences – things we enjoy and seek, and things we dislike and try to avoid. Sensory preferences can influence the way we play, socialise, learn, and do everyday tasks and activities.

For example, some children don't like the feel of certain fabrics, labels and tags; some dislike being hugged, while others seek out physical contact. Some children have strong food preferences, enjoy fast and intense movement, or struggle to manage loud or specific noise.

Our senses are flooded with input all the time – traffic noise, bright lights, cooking smells, the movement of swings and playground equipment, brushing our teeth, washing our hair. We need to filter out what is irrelevant, and pay attention to what is important. If we don't, sensory input can be overwhelming.

SENSORY PROCESSING DIFFICULTIES

The ability to process sensory information begins in utero, and continues to develop and change throughout life. The fastest development of sensory systems happens in early childhood as the child's central nervous system matures.

Each sense develops at its own pace and by the time a child starts pre-school, they are able to identify different forms of sight, sound and touch, and regulate (control) their responses to them.

All children experience difficulties processing sensory information at some point. Most children, however, learn how to adjust and manage so that they can participate in everyday activities and cope in group situations. This adjustment happens alongside physical development, and the accumulation of experiences as they grow.

Children with sensory processing difficulties struggle to filter out repeated or irrelevant sensory information, and do not adjust their responses to sensory input over time. They continue to 'over or under' respond to things in their physical and social environment, or within their bodies.

Children with sensory processing difficulties often have a sensory profile with one or more of the following characteristics:

Hyper-responsivity – these children are more sensitive to sensory stimuli than most children. They tend to become overwhelmed by sensory information and react defensively, often with strong negative emotion (anxiety, agitation). They can become quickly upset when exposed to some forms of input.

Sensory Avoiding – these children actively avoid certain input because it creates unpleasant sensations. They tend to enjoy routine and structure so that sensory input is predictable. Lower tolerance of some input may mean they prefer to spend time alone.

Hypo-responsivity – these children are less sensitive to sensory input than most, and can appear passive and withdrawn. They require a lot of sensory input for their brains to register this information. They often appear unaware of, or slow to respond to certain sensory information, including pain.



Sensory Seeking – these children seek out specific forms of input and may show a preoccupation for some sensory experiences. They require additional input for their sensory system to respond. This often occurs when they are trying to remain calm, or want to raise their level of arousal. For example, touching or stroking hair, sniffing objects, flicking fingers.

Autistic children in particular tend to experience sensory input differently to others. They can find some input almost intolerable.



WHAT DO SENSORY PROCESSING DIFFICULTIES LOOK LIKE?

When a child has difficulties regulating their response to sensory input, they may become distracted, impulsive, over-active and restless. They may also appear disorganised, avoidant, anxious or withdrawn.

Children who are *hyper-responsive* to sensory input may:

- become easily overwhelmed by noisy or crowded places and withdraw to a quiet spot
- be easily startled by sudden noises
- refuse to wear clothes they describe as 'itchy or scratchy'
- be easily distracted in class by noises or movement that others haven't noticed
- dislike getting messy and be reluctant to participate in activities such as working with play dough or clay, finger painting, cooking, or eating with their fingers
- respond to particular tastes and textures by spitting out or refusing some foods
- avoid group situations and seem reluctant to join in; they may have difficulties engaging in play.

Children who are *hypo-responsive* to sensory input may:

- have a poor sense of their own body in space. They may appear clumsy, bump into things a lot, and have poor hand-eye coordination
- constantly want to touch and feel things
- not understand / invade the personal space of others
- find it hard to sit still and want to jump around
- seek fast and intense movement – bouncing on a trampoline, rough and tumble, being thrown in the air
- seek out crisp, crunchy foods.

HOW CAN I HELP?

The help you offer your child will depend on their individual sensory profile and preferences. All strategies need to be enjoyable. Some general ideas are listed in the next column.

Children who are *hyper-responsive* to sensory input may benefit from:

a **quiet space** for withdrawal so that they can leave a stressful situation to regain calm and control

reducing the sensory load - turn off or lower lighting, decrease noise, reduce the number of people in the space, and remove task-related demands

making the environment more predictable so that they can anticipate sensory input and make a choice to manage or avoid it, e.g. use headphones, move to another room, go for a calming walk

support to prepare for potentially overwhelming environments and situations, e.g. forewarn them about environments that could involve, noise, lights, crowds

physical activities that are rhythmic, repetitive and patterned (calming) - dancing, singing, walking, swinging, stirring

learning to notice when sensory input is becoming too much, and how they can get away or take a break.

Children who are **hypo-responsive** to sensory input may benefit from:

visual supports to focus their attention on the task or activity at hand

practicing **mindfulness** activities, such as describing things they can see, hear, feel, and smell

access to **fidget items** (puzzles, squishy balls, bubbles, sensory bottles, bean bag chairs)

physical activities that expend energy - climbing equipment, a ball pit, a trampoline, swimming

sensory activities - moulding clay, digging in sand

arranging furniture to provide safe, open spaces

frequent movement breaks throughout the day

eating foods with **strong flavours and mixed textures**

deep pressure – bear hugs, weighted blankets, lap pads or firm clothing

learning to notice when sensory input is becoming too low, and how they can increase their level of arousal.

WHEN & WHERE TO GET MORE HELP:

If your child's sensory difficulties are interfering in everyday activities, organising an assessment of their sensory profile and preferences may be helpful.

It is possible that this assessment could lead to the diagnosis of a Sensory Processing Disorder. Being over-responsive or under-responsive to sensory input, or having unusual interests in sensory features of the environment, could also contribute to a diagnosis of Autism.

Occupational Therapists are usually involved in the assessment and treatment of sensory processing difficulties, and can assist in adjusting a child's physical environment to help them feel more calm and confident.

An Occupational Therapist may recommend a sensory-based intervention or sensory integration therapy.

If you have any feedback on this tip sheet please fill in our [feedback form](#). You can find readings, resources and links related to this topic on our [webpage](#).

If you are still concerned, contact your GP or Paediatrician about services that might be helpful.

