

**FOSTERING  
DIFFERENCE**

# SENSORY REGULATION DIFFICULTIES IN CHILDREN

How Sensory Sensitivities Affect Your Child's Behaviour

Dr Sara McLean



*‘Someone will brush past her, like literally just brush past her, and she’s in tears running to the teacher that they’ve hit her... and she just has this amazing smell, like she can smell things that , like, no one else in the world can smell... supersonic hearing... I just feel sorry for her, and I think everything that’s going on in her body and she’s just trying to, you know, she’s just trying to listen to a story and her whole body... it’s just buzzing’*

**(Foster parent describing her child’s sensitivity to touch, taste, sounds and smells)**

## **Acknowledgment:**

This resource is part of a series of resources for foster parents who are raising children living with developmental difference caused by early life adversity. The guides are intended to provide general educational information only, and are not a substitute for professional assessment and intervention.

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## What are sensory regulation difficulties and how do they affect children?

Our external world is constantly bombarding us with sensory information. We rely on our senses to give us information about the world and what our bodies are doing (we are aware of our body's position in space). All this information is processed by our brains **at the same time**- at any one time we are simultaneously collecting and processing **masses of sensory information**; without any conscious effort. Our senses work together seamlessly to give us a reliable picture of what is happening in the world. Most of us are able to trust our sensory and bodily information; and our brains process all this competing information **effortlessly**.

**Most of us are able to trust our sensory and bodily information; and our brains process all this competing information effortlessly.**

To explain this, let's take the example of what happens as you read this document. As you read, all your senses are working together automatically to process incoming sensory information. At the same time as you are reading, you may be hearing background noises, you might be aware of other sensations like a dry mouth, the feel of your clothes on your body, the feel of your body against your chair and the glare of the computer screen on your eyes. All this sensory information hits your brain at the same time. Not all of it is information you want to attend to- if your goal is to read the words on this page you do not want to be distracted by non-essential information. You probably find that you are able to **automatically filter out** the unimportant sensory information without much effort; allowing you to concentrate on reading. Because you don't have a sensory processing disorder, this process is effortless and automatic, and you are able to **stay alert and focussed** enough on the words to continue reading.

If you had a sensory processing difficulty, however, this activity would feel very different. While you were trying to read; you would be unable to ignore the scratching of your clothes, the pulsing letters and light of the computer screen; and any background noise. Because you **would not be able to screen out non-essential sensory information** easily; you would have difficulty in concentrating and staying focussed. Many children with sensory processing disorder also find the simple task of reading from a screen difficult, for the same reasons.



## Our **SENSORY PROCESSING** occurs **AUTOMATICALLY** below the level of our **AWARENESS**

Our sensory processing occurs automatically below the level of our awareness; there is no easy way to measure how efficiently our sensory processing is working. But one of the main ways that inefficient sensory processing affects us is by **altering our level of arousal**- this means how alert, calm and focussed we feel. Children can't control their sensory sensitivities. However-we can help them to develop an awareness of their **unique sensory sensitivities** and how these affect their ability to stay alert, calm and focussed. We can work with them to help them to develop the skills to accommodate their sensory needs so that they can **teach themselves** how to remain calm and focussed in a learning environment. This is important because a child's main learning environment, the classroom, is packed full of sensory stimulation, so it is important for a child with sensory processing problems to learn how to manage this overwhelming sensory stimulation.

### **A child's main learning environment, the classroom, is packed FULL of sensory stimulation.**

Children with Fetal Alcohol Spectrum Disorder and Autism often have extreme reactions to the sensory environment. It will be especially important to understand these children's 'sensory skin' so that they can be supported to self-regulate using sensory coping strategies (more about these later in this resource). If your child has significant sensory regulation difficulties, you will need a comprehensive assessment and treatment plan by an Occupational Therapist. There are many checklists that you can use to help determine whether your child is showing signs of sensory sensitivities and therefore could benefit from an assessment by an Occupational Therapist (these are included at the end of this resource).

### **Why is it important to be aware of a child's Sensory 'Skin'?**

Researchers are becoming increasingly aware of the role that sensory processing problems play in the life of children with behavioural, social and learning problems. Sensory processing difficulties seem to be common; they can be experienced by children from diverse backgrounds; ranging from children without any other developmental issues, through to those with severe Autism. We don't really understand why, but it seems that behaviour problems and sensory issues often go together.



We think that Sensory regulation issues affect up to 20% of all children but we suspect that they may be more common amongst children placed in foster care - but this hasn't been well researched yet. While the formal research is still lacking, many foster carers do not need convincing of the impact of sensory difficulties on their children's lives.

**Children are not aware of and CANNOT control the way their sensory information is processed and integrated by their brains.**

## What causes sensory issues and what do they look like?

We don't seem to have a very good understanding about how sensory processing disorders come about. This problem seems to be related to difficulties in the brain and nervous system's processing of information. Sensory processing can't be controlled by conscious thought or willpower (it's an automatic bodily function like digestion or heart beat). Children are not aware of, and cannot control the way their sensory information is processed and integrated by their brains. For children affected by sensory processing difficulties, the world can be an exhausting and overstimulating place! They will struggle to maintain the optimal 'calm and alert' state that we all need in order to engage in learning activities.

Sensory processing difficulties are **complex**, and can sometimes include problems with balance and posture; or difficulty with body awareness and body coordination. The symptoms of sensory processing disorder can be **wide ranging** but include:

1. Problems with movement & posture (Sensory-based Motor Disorder);
2. Problems with sensitivity (Sensory Discrimination Disorder) or
3. Problems with how the sensory system reacts to surroundings (Sensory Modulation Disorder).

This resource will focus on the difficulties that are linked to behaviour problems for children- those that affect a child's attention and readiness for learning; and sensory triggers that cause an explosive behaviour and meltdowns due to overstimulation. A child with sensory sensitivities can become extremely distressed and defensive in the wrong sensory environment- they can 'shut down', becoming **sleepy and 'tuned out'**; or they can experience distress that is so intense that they run away or lash out in an **attempt to escape** the situation.



## What goes wrong with children's sensory processing?

One or more of the following can happen for children:

- The information coming in from the senses is *not processed properly* (taste, touch, smell, sight, sound).
- They have trouble *filtering out* sensory distractions. When there is lots of sensory information coming in at the same time, they cannot filter out unessential sensory information, causing sensory overload. The more senses being stimulated, the worse this situation is for children.
- Their central nervous system does not *respond normally* to sensory stimulation- it doesn't produce a normal reaction – either over or under–reacting to normal sensory stimulation (e.g., being touched).
- When required to focus in situations in which *multiple sensory input information has to be integrated* (e.g., school work); it is stressful, tiring and difficult; causing difficult behaviour aimed at helping them cope with being overwhelmed.

### But what does this look like for children?

Issues with sensory regulation can take many forms, but common issues include:

- ✓ *Over sensitivity* to one (or more) sensory form (e.g., touch, movement or sounds). This can lead to avoidance of textures, touch, sounds etc. The child can panic or have extreme behavioural reaction if they are unable to avoid these overwhelming sensations.
- ✓ *Under-reacting* to sensory stimulation. In this case, the child seems to seek out extreme or intense sensory experiences, like loud noises, crashing into objects, whirling, and spinning.
- ✓ Unusual levels of physical activity (either extremely high or low). This also occurs with difficulty in executive functioning and other childhood difficulties such as ADHD.
- ✓ *Fluctuating* levels of alertness- a child's arousal level changes in response to the sensory environment (e.g., too much time spent listening in a classroom environment; too much visual stimulation/bright lights). A child can become quite sleepy or hyperactive in certain sensory environments if they are not able to use regulation strategies.



- ✓ *Trouble with coordination.* In this case a child can be clumsy and have difficulty in learning new behaviours and tasks involving motor coordination due to poor sensory feedback from their bodies.

So how do we help children with these difficulties?

There are many sensory checklists that can help identify the main type of sensory difficulty your child is experiencing. An occupational therapist can help you address your child's needs. Some of the questions to think about include: How does my child react to sensory stimulation like touch or bright lights? How does the sensory world affect my child's mood and energy levels? What kind of sensory input does my child need in order to be able to concentrate for extended periods of time? What can my child do to help manage the sensory world? What does my child need to maintain a calm and alert state? Who do I need to let know about how the sensory world affects my child?

To put it simply, there are **three main steps** in helping your child to regulate their sensory world:

## 1. OBSERVE your child's sensory skin

The first step is to observe your child- identify your child's 'sensory skin'. What are your child's triggers? How do they respond to the sensory environment? Can they identify how the sensory world affects them? Your child's sensory skin will resemble one or more of the following:

- Automatically **over reacting** to the sensations from the environment.
- Automatically **under reacting** to the sensations from the environment.
- Trouble in **properly noticing** sensations from the body.

## 2. Work out how to help your child to REGULATE

Together with your child, identify ways that your child can **regulate their sensory experiences** so they can become calm and alert again. Work out how to avoid sensory triggers as much as possible. Are there actions your child can take that will help them to stay calm and alert in an overstimulating environment? Are there actions you can take to change the environment to make it more calming for your child? More detail about strategies to help your child to regulate are included later in this resource.



### 3. PRACTISE this, and review regularly

Teach your child how to use sensory regulation strategies. Ensure you use as many 'transportable' strategies as you can. Practice using these in daily life. Let others know about what you have discovered.

Let's look at each step in more detail...

***'Everyone has individual sensory preferences for calming, waking up, concentrating, etc.'***

#### 1. OBSERVE your child's sensory skin

Here are some guiding questions to help you observe the relationship between the sensory environment and your child's behaviour:

- What aspects of the sensory world cause my child difficulty (lights, textures, sounds, tastes, body positions, touch)?
- What are the key triggers for anger/ irritability/ avoidance behaviour?
- What situations make it hard for my child to concentrate?
- Have I discussed this with my child? Does he/she have any ideas about what causes them distress?
- What does this tell me about how to make the world more manageable for my child?

The following lists, although not exhaustive, gives examples of the types of everyday difficulties that children can experience.

For example, if your child ***over-reacts to sensory stimulation*** you may find that:

- Your child doesn't like being touched, especially light touch- will react with anxiety or reject physical affection.
- Your child may be bothered by certain clothing fabrics, clothing tags; avoids touching certain textures.
- Your child may be bothered by lights or certain patterns, blinks or squints often.



- Your child may be sensitive to sounds, background noise.
- Your child doesn't like certain tastes or is extremely fussy with texture or temperature of food.
- He/she may resist brushing teeth; being touched on face; and having face washed. Can show extreme anxiety/ anger when hair is touched/ shampooed, or cut.

If your child ***under-responds to the sensory world***, you might see the following clues:

- Your child needs to touch everything (touch doorframes when passing through; touch walls when walking past).
- Your child seeks out movements that give strong sensory feedback (e.g., lying with head upside down on couch; putting everything in his/her mouth).
- Your child may feel compelled to touch textures and surfaces that provide a comforting experience (e.g., favourite blanket).
- He/she may have difficulty in holding and using tools that rely on sensory feedback (e.g., scissors, pens, forks).
- He/she may have difficulty in orienting and coordinating body parts to get dressed; be a sloppy dresser, appear messy.
- He/she may have difficulty in registering the environment, getting going in the morning, seem lazy and unmotivated.
- Your child can have difficulty in noticing if hands and face are dirty.
- Your child may not notice when injured or in pain.
- Your child constantly fiddles with anything within reach; needs to touch everything.
- Your child constantly chews on pens, pencils, prefers food with very strong tastes.
- Your child prefers to sleep under heavy blankets, seeks out 'squishing' sensations.
- Your child needs to smell everything, shows preference for strong smells, unable to detect bad food by smell.
- He/she seeks out 'rough play', tackling and wrestling games; bumps into other children.



A child can also have difficulty in **processing information that is coming in from their bodily sensations**- for example sensory information about the position of their bodies in space; or about the internal sensations of their bodies (e.g., hunger). The following may be clues that your child might have trouble properly noticing and processing bodily sensations:

- Your child may have problems in realising where their body is in space, or in coordinating their bodies in space.
- Your child may have difficulty in judging how much pressure to apply when picking up objects; pushing too hard on objects and breaking them often; may play with others with too much force, hurting them.
- He/she has difficulty in discriminating tactile sensations; may react equally badly to a cut or the feel of the shower on his/her skin.
- He/she will avoid activities that move the body in certain ways (e.g., that involve balance, hand eye coordination, climbing or lifting feet off ground).
- Your child seems clumsy; has poor body awareness, knocks things over.
- Your child may not notice when hungry or thirsty; may need reminding.

This above lists are only guides - not all children will show these symptoms; and this list is not exhaustive.

To complicate things further, a child can have a mixture of any or all of the difficulties listed above. For example, they can over-react to some sensory stimuli (e.g., noise) but under react to others (e.g., touch). Each child's sensory style will be unique and its significance for managing behaviour will vary from child to child.

For children in foster care the situation is more complex still. Childhood trauma can cause many symptoms that are similar to sensory processing disorder; and it is important to **be aware of a child's traumatic past** when considering which strategies might help them. A child who recoils from touch can do this because of sensory sensitivity, but this kind of aversion can be trauma related (perhaps because touch is associated with sexual abuse). In another case, a child may avoid exercise because they have difficulty in controlling and co-ordinating their bodies; but aversion to exercise can also be trauma-related (where a child avoids exercise because it induces a rapid heart-beat that reminds them how their heart beat rapidly during a frightening abuse). It is always important to talk to your child about what is happening for them and seek their permission before trying any strategies, but especially before using sensory strategies that involve touch.



It can be helpful to compile a sensory profile with your child. A sensory profile is a document that is unique to your child, and records what sensory stimulations 'wind them up' or 'calm them down'. There is an example of one of these for 'winding up' and 'calming down' later in this document.

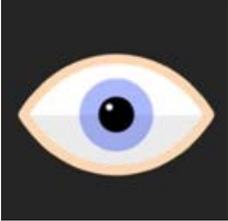
The things that affect children will depend on whether they are over or under responders in each of the senses. For example:

1. **Sight:** Over responders may find the dark calming, may fatigue easily if working on bright computer screens. Under responders may prefer bright colours.
2. **Sound:** Over responders may find everyday noises overwhelming, or just too loud to manage. They may often hold their hands over their ears as an attempt to block out noise. Background noise such as air-conditioners and heaters may make them irritable or fatigued and they may need to use headphones to block out this kind of stimulation. Under responders will talk louder than necessary and have difficulty modulating their voice to match the speaker and the situation.
3. **Taste:** Over responders may avoid any food with strong tastes or textures. Under-responders may seek out a food or drink based on its ability to provide sensory input (e.g., seek out sour or salty foods, crunchy foods or extremely hot or cold foods).
4. **Smell:** Over responders may recoil at many daily smells, may judge a person as likeable or not based on their smell. Under responders may seek out strong smells such as menthol rubs or aromatherapy oils.
5. **Touch/Tactile:** Over responders may recoil at light touch. They may complain about the restrictiveness of clothes and the itchiness of labels on clothes. Under responders may seek out touch through hugs, through their need to touch everything they see.

There is a worksheet on the following page that you and your child can use to make a list of sensory experiences that **calm** him/her. You can use the same approach to listing what sensory experiences make your child too **wound up**. There's an example of how to complete one of these at the end of this resource. You'll notice that these handouts don't mention bodily senses as these are harder for children to detect; but children can also be taught to move their bodies in specific ways in order to regulate their sensory world- we'll return to this later in this resource.

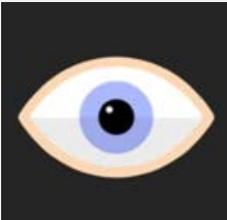


MY SENSORY 'LIKES'

SENSE	THESE THINGS HELP ME STAY CALM
	SIGHT
	TOUCH
	HEARING
	SMELL
	TASTE



MY SENSORY 'DIS-LIKES'

SENSE	THESE THINGS STRESS ME OUT & WIND ME UP
	SIGHT
	TOUCH
	HEARING
	SMELL
	TASTE



## 2. BUILD up your child's REGULATION skills activities

Once you have an idea about your child's individual likes and dislikes and how these affect your child, the next thing to consider is how to **build in** sensory coping strategies **into their daily life and routines**. This can be done by building in sensory coping strategies at regular times during your child's daily routine.

Plan your day to include sensory activities that help your child maintain their optimal level of arousal. By building in sensory coping strategies into your child's routine, you can help your child to avoid becoming too hyperactive or too 'tuned out' to take part in learning.

The logic is simple-just as your child's sensitivity to the sensory world causes them to become dys-regulated; you can also use your child's reactivity to the sensory world to calm them. While it may take some trial and error to work out strategies that suit your child; it is almost always worth the effort.

But how do we explain this to children? Some children understand about their bodies being like a car engine that we need to make sure runs 'just right'- that is not too 'revved up' or too slow. This idea comes from the ALERT program (details at the end of this resource). Other children will understand sensory regulation better using visual prompts. For example, you can use photos or cartoons of people in a sleepy state (their bodies are too slow) and being energised (wound up). This will help them to understand their different internal states in a more concrete way. It also helps to let them know that each state is Ok in different situations. For example, being 'revved up' is best for the playground; being 'sleepy' or 'low' is perfect for going to bed and being 'just right' is the way to be in the classroom.





There are a number of sensory inputs that we can use to get to the 'just right' level needed for the classroom. We can use **all five traditional senses** (guided by the charts provided); but also **body movement** and **large muscle work** (we'll return to body movement strategies later in this resource).

It's ideal to develop strategies that can be *used in a range of settings and used throughout the day*.

Sensory regulation can also be enhanced by *engaging multiple* and/or *competing* senses.

## Engaging multiple senses

Sensory regulation can be enhanced by involving the large, deep muscles of the body, by body movement and by engaging in 'mouth' work involving oral muscles and sensory input.

**Body movement strategies:** Think 'soothe as you move'; these kind of strategies include bouncing on trampoline or mini-tramp, star jumps, spinning on giant swing or rubber tyre, running up stairs.

**Touch strategies:** These can include deep pressure (tight bear hugs); weighted blankets, a pillow sandwich, or a heat pack (\*but check with child first before using touch).

**Large Muscle work:** For example seated chair 'push ups' (lift own weight while seated in chair); push-pull activities (e.g., lift up chairs and place on desk; mopping the floor; pushing against the wall), lifting heavy objects (carry in shopping or carry pile of books for the teacher between classes).



**Mouth work:** sucking through a long twisted straw (drinking against resistance), sucking on sour lollies, eating crunchy foods, chewing ice or sucking on ice blocks.

Once you know what works for your child, you should aim to incorporate these 'movement, muscle and mouth' strategies into regular intervals in your child's day; keeping in mind your child's sensory preferences.

## Engaging competing senses

Engaging *competing* senses is a useful way to regulate your child that is relevant in **any activity that requires attention, concentration and fine motor coordination**. Schoolwork, writing, attention and tasks that require concentration are all examples of these kind of activities. These activities are critical to success at school; and can all be improved by making sure your child's **other senses are worked at the same time (think mouth, muscles, hearing)**. Teachers are becoming more aware of the need to use these sensory strategies to assist children with sensory sensitivities to be successful in the classroom environment. Here's some examples of how 'engaging competing senses':

**Engage sense of taste-**When your child is doing schoolwork or needs to listen for prolonged periods of time, allow them to suck on a hard lolly, a sour lolly, or use chewing gum. Schedule crunchy or chewy food breaks. Let them wear and use chewy rubber necklaces/bracelets- to help with their concentration, writing and schoolwork.

**Engage small muscles-** When your child needs to sit and listen allow them to use rubber fidgets and quiet squeeze toys. Let them do doodling with pen and paper- all these strategies help concentration and listening in class.

**Work big muscles-** Engaging your child's large muscle groups gives them a sense of deep pressure and helps them maintain optimal arousal. Build big muscle group strategies into breaks between classroom activities. Seated chair mini push- ups; carrying heavy shopping bags or piles of books; or helping the teacher by lifting chairs onto desks can all be helpful. A phone book can be used to weight your child's chair so that they need to use more muscles to

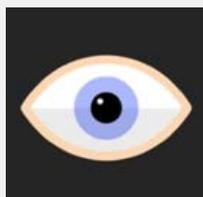


shift it. Build in activities like pushing against the wall; or mini swing, bouncing or running breaks.

Engaging more than one different sense can help prevent any one sense becoming overloaded. Playing music through headphones may help your child focus on writing; using fidgets or large muscle activities may help your child's auditory concentration. An occupational therapist can also assist with a range of strategies that will make fine motor tasks less fatiguing for children and will assist in behaviour related to school achievement. Of course, it will be essential to involve your child's teacher in any plans that involve sensory techniques being used in the classroom. It can be useful to complete a sensory plan that lists the activities that your child can do before or during school activities that require concentration and attention (see table on the next page). There is an example of what this might look like when completed at the end of this resource.



THESE THINGS HELP ME CONCENTRATE



SIGHT



TOUCH



HEARING



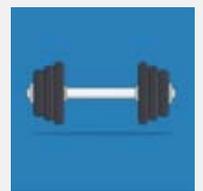
SMELL



TASTE



MOVING MY BODY



USING BIG MUSCLES



Here are some guiding questions to think about when developing a sensory regulation strategy with your child:

- What aspects of the sensory world cause this child difficulty (lights, textures, sounds, tastes, body positions, touch)?
- What can I do to change these things to make the world more manageable for this child?
- What kinds of activities help my child to regulate? Can I build these activities into their daily routine?
- What kinds of activities help my child to concentrate in situation where they are not permitted to move around (e.g., concentration during writing or reading)? Can I teach them strategies to help them in these situations?
- Have I discussed these ideas with my child? \*Does he/ she have any ideas about what calms them?
- Have I checked out that what I am planning to do is OK? Is there an alternative that feels safer for my child \*?
- Am I thinking in terms of 'transportable' or 'take away' skills- can I teach approaches that my child can use in different settings, rather than skills that rely on me being present?

Remember traumatised children might have strong reactions to touch; or to certain body positions-It is really important to check that you have the child's permission to try any sensory calming technique, in case it brings back memories of trauma. For example, calming muscle pressure in the form of tight bear hugs may not be tolerated, but the same kind of pressure from a weighted blanket could be enjoyable to your child.

Always consider how any sensory regulation strategy could affect your child and check out your ideas with your child before using them.

### 3. PRACTISE, review and revise your strategies

When implementing these strategies, start with strategies for the times where your child's behaviour is affected by their sensory sensitivities or when their sensory issues affect their concentration. It's also important to emphasise strategies that are '**transportable**' wherever possible. This really just means that you want to try to use strategies that your child can use in **any** setting. For example, a handkerchief with aromatherapy oils; a small fidget ball; or a sour candy are good examples of



transportable strategies- items that can easily be carried in a pocket to be used whenever they are needed.

Finally- remember to communicate what you have learned about your child's sensitivities to the significant adults in the child's life such as teachers and caseworkers. This will also help to embed coping strategies in all the important areas of your child's life. Remember your aim is to support your child to have their very best calm and alert day- every day- wherever that may be.

## Further information

- <http://www.sensory-processing-disorder.com/>
- [http://shopau.sensorytools.net/as\\_books?productID=2438](http://shopau.sensorytools.net/as_books?productID=2438)
- <http://www.sensorysmartparent.com/sensory-checklist.pdf>
- [http://sensorysmarts.com/signs\\_of\\_spd.html](http://sensorysmarts.com/signs_of_spd.html)
- <http://www.child-behavior-guide.com/sensory-processing-disorder.html>



**MY SENSORY 'DISLIKES'**

**THESE THINGS STRESS ME OUT**



**SIGHT**

Bright lights  
Computer screens  
Fluorescent lights



**TOUCH**

Unexpected touch  
Light touch



**HEARING**

Background noise, especially voices



**SMELL**

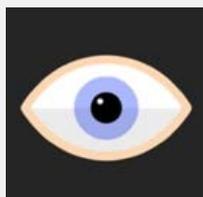


**TASTE**

Squishy textures



## THESE THINGS HELP ME CONCENTRATE



### SIGHT



### TOUCH

Use fidget toys



### HEARING

Block out voices with white noise



### SMELL

Use my scented hanker-chief to smell



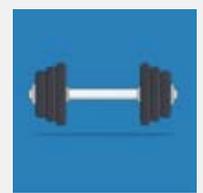
### TASTE

Use chew necklace  
Suck against resistance using a long straw  
Suck on a sour lolly at break times



### MOVING MY BODY

Walk up and down the stairs next to the teacher's office five times



### USING BIG MUSCLES

Do five seated push-ups before listening to story time



To find out more about Developmental Difference and your child,  
visit;

[www.fosteringdifference.com.au](http://www.fosteringdifference.com.au)

