Understanding Sensory Processing and Strategies for Home

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What is sensory processing?

- **Sensory processing** refers to the way the nervous system receives messages from the senses and turns them into responses.

- **Sensory Processing Disorder** occurs when sensory information goes into the brain but does not get organized appropriately. It is poorly detected, modulated (filtered), or interpreted.

- **Sensory processing difficulties** impact all areas of a person's life; including social (e.g. making friends), emotional and learning environments.

https://www.spdstar.org/basic/understanding-sensory-processing-disorder

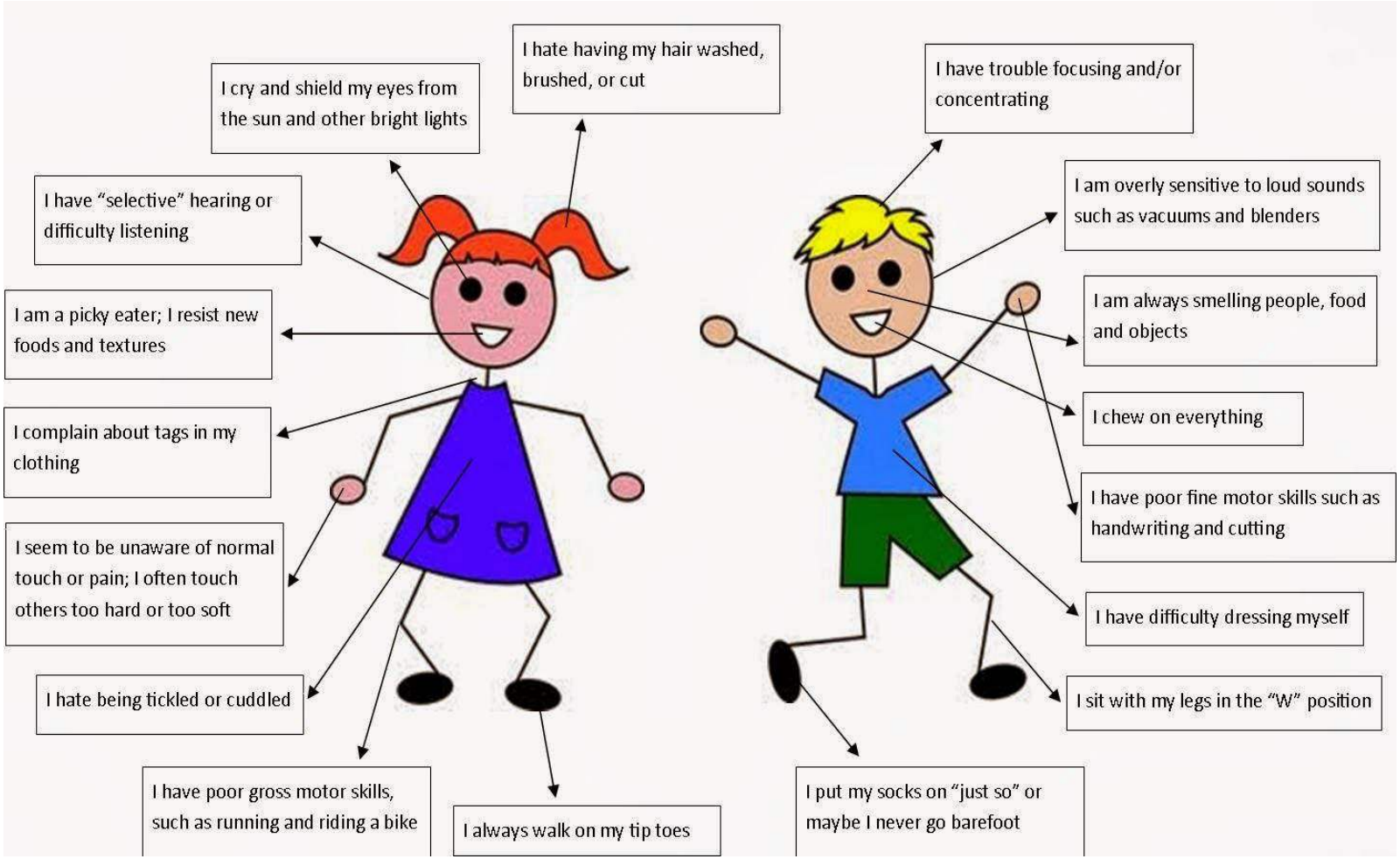
What are the 8 senses?

- Visual - sight
- Auditory - hearing
- Gustatory - taste
- Olfactory - smell
- Tactile - touch
- Vestibular – movement
- Proprioception – knowing where the body is in space. Receptors are located in muscles and joints
- Interoception – to do with a person being able to recognise signs relating to thirst/hunger/temperature changes/toileting – recognising urges.

What is the goal?

- Self-regulation – allows children to manage their emotions, their behaviour and their body movement when faced with tough situations
- We want our children to be able to manage their emotions as they emerge
- It is a process that is ever-changing over time
- Particularly during a period of growth – our responses often change
- Constantly having to ask ourselves which aspects our child is having difficulties with

Signs of sensory processing dysfunction



Different Profiles – it's very common to have a mixture of the two

- Over-responsiveness / Hypersensitivity - More reaction than expected
- Under-responsiveness / Hyposensitivity – Child needs more input to have the reaction you would expect
- Sensory-seeking – wants and searches out more input
- Often a very fluctuating pattern that we look at
- Try to ascertain where your child is falling within the profile
- This helps the OT to create goals with you and your child

There can be varying responses

What do difficulties in each area look like?

- OT's look at patterns of behaviour in your child
- Try to look for clues all the time
- This may change over time due to growth spurts, puberty, school transitions.
- Need to stay flexible
- Backtracking – what happened before the meltdown? What led to that point? Were they hungry? Unpick it and it helps to understand what led to that difficult moment

Visual

Lighting

Not to do with vision. Is more about how this is processed.

E.g. neon in a classroom, or flickering? This can make it difficult to focus because they can only pay attention to the flickering light.

It can cause the child to miss out on other information, and make it difficult for them to focus.

It can also make it difficult to find objects e.g. finding shoes on a floor which is scattered with other items

Distractions

A distraction can mean they can't concentrate

Items on the wall, items, hanging from the ceiling, people passing by a door/window can all pose visual distractions. You may need to consider where they are sitting or look at different ways to get their attention if easily distracted (e.g. a touch on the arm, establish eye contact)

Locating objects

Picture of what belongs where.

Sometimes a busy drawer or an area with a lot of different items/objects can make it difficult for a child to find the object they're looking for.

Auditory

Loud noises – covers ears

Some children cannot cope in a hall situation because the ceilings are so high and the sounds are bouncing off each other. It makes them unable to function.

Can be perceived as painful stimulus.

Fight/ flight response – child needs to escape. Can be dangerous/ difficult.

Ear defenders or hoodie can help. Give a fiddle toy to distract. Sometimes a break is key and come back when child is ready

Distractibility

Children can find that their parents voice is just as loud as the fridge and so it can be exhausting to regulate these sounds.

Children can hear all sounds at same volume – fridge, tap and parents voice all sound the same.

Be in front of them. Use touch to get their attention. Bring the attention to you to make it easier for them to concentrate.

Makes own noises

This can be self-regulating for the child e.g. humming, whistling. It helps them to focus on what they are doing.

This helps them block off other noises – allows them to concentrate.

May need extra input to get attention – touch, be in front of them

Taste/Smell

- Food textures/combinations/Colours
- Gagging – seek advice from SLT/OT
- Help with vibration, blowing skills
- Teeth brushing/ different bristles/ finger

Brushes, sit in front of mirror – give hug pre-brush

- Chewing or biting – children quickly learn that getting some kind of feedback can feel quite pleasurable. Can be sign of stress or high alert. Goes up with anxiety
- Smelling food or objects – trying to add another layer onto their interpretation of what they have seen
- Does this smell nice?
  Does this smell safe to me?
  Might this taste good? – their way to explore
- Our challenge is trying to find objects which are safe to chew
- Chewigem Website – the child can design their own chew

Tactile

- Light and deep touch are different.
- May not notice being touched – e.g. if you came up behind them and put a light hand on their shoulder, they might not notice. Or it might be the opposite – it might be interpreted as painful due to how their body interprets light touch. Need lots of extra deep pressure/ firm cuddles/ rough and tumble.
- Try and give touch on their terms e.g. approach from the front. Don't enter in unless we are invited to do so
- It may vary throughout the day
- Can't queue/dislikes crowded spaces – they might be jostled around. This might impact on personal care e.g. washing face/hair. These can become very difficult, despite re-visiting it over and over again
- Clothing fabric issues – e.g. tags or seams, elastic waste bands, denim, lose fitting trousers which may flap against the skin (this can be perceived as painful) When you have this sensation on your skin, it makes it impossible to engage
- Avoids messy play – can be pleasurable for some, but can be avoided completely by others. If wet play is hard, try with dry messy play (check Gympanzees Our Home - messy play for ideas). Follow child's lead – allow them to lead this.
- Poor awareness – hands and face, dirty, clothing twisted, etc. Don't notice or feel it. Try looking in the mirror so they can see. Massage can waken up face so they feel better

Vestibular / Movement

- Fidgety/on the move – a family meal can become almost non-existent! This is a sign they need to move.
- Spinning/rocking/twirling – seeking movement.
- Can be fearful of climbing equipment – they feel movement too much – need to introduce movement V slowly with some pressure so they start to feel safe. Make them feel safe as they move – hold onto them while moving. Don't force it!
- Avoids feet leaving ground
- Every approx. 90 minutes – we need to give those opportunities for 'rough and tumble' kind of play again. Otherwise we get the deregulation again.
- Need the right kind of activity and right level – specific for the child. If seeking movement, look how you can get movement into their day to stay regulated.

Do we feel calm or alert??

- Where is the child's engine?
- Most children understand the dynamics of a car e.g. we need to put fuel in it, we need to service it, it needs to stay in control on the road etc.
- You might use this to describe your state
- We want to try and notice when that car is escalating
- E.g. we might start to notice raise voice, crying, increased tone, quieting etc.
- This is when we need to try and tip the scale a little bit

Calming and Alerting – check where child is

- **Calming (when car is in high state) includes**:
- Slow, rhythmic movement – linear fashion, swing, roll over therapy ball, gentle up and down, rocking for little ones.
- All sensory systems, nice smells, turn TV down, moments of quiet.
- Deep, steady pressure (which is quite firm can be relaxing and very calming) tight squeeze/ massage – deep, constant pressure
- They will let you know when it's okay to let go
- This can help the system to re-regulate again
- E.g. yoga (Cosmic Kids), massage – you take your body to an extreme and it makes you become more aware of the movement and the limb and takes the focus away from what was the problem at the time

- **Alerting (when car is in 'Low' level) includes**:
- Rapid, high intensity movements, rapid bouncing, jumping
- Loud voice, bright lights, strong tastes
- E.g. dancing, rough & tumble play, trampoline

Sensory paths and obstacle courses help to focus – the idea behind this is that 'anything goes' – if you only have a small amount of space that can work! Just do what you can with the space you've got. Create different movements, use different body parts, the idea of right and left. You can work on the particular skill your child has. Frontwards, backwards
https://youtu.be/kF4CcNYPkn0

Proprioception / Body awareness

Child needing proprioceptive input:

- Walks on toes or is heavy-footed on and off
- Rough & Tumble play
- Risk taking – their need for pressure overrides risk
- Falls, trips, bumps on purpose – not registering pain.
- They might walk with their shoulder/arm pressed against the wall
- Looks closely at hands/feet
- Poor balance
- Looking at hand and feet when using them

What to do?

- Massage, squeezing, clapping to show where they are
- The more that we can deliver pressure to the child – the better! E.g. press ups against the wall, push and resist back to back, You can use your own body or furniture
- Pushing, pulling, lifting, carrying e.g. bringing in heavy bags of shopping
- Pushing and pulling a small ball – this will stimulate all the receptors
- It doesn't have to be a piece of equipment e.g. can be recycling boxes, laundry basket, digging, helping to sweep, moving furniture

Interoception

- Temperature
- Hunger – They might be on the move all the time, so they might need more calories going in, and they might not know this. So you can help them regulate this. E.g. packing and offering extra snacks. Hunger can be very deregulating and it can lead to poor behaviour.
- Thirst – may just not notice they are thirsty. Need to keep water bottle with them all the time. Dehydration can influence behaviour and learning so need to offer drinks throughout the day. Sports water bottle – deep suck is regulating.
- Toileting urges – may be focusing too much to know to go to toilet. Increased anxiety may make them need the toilet. If you wonder if they feel or not then refer to GP, Continence team etc

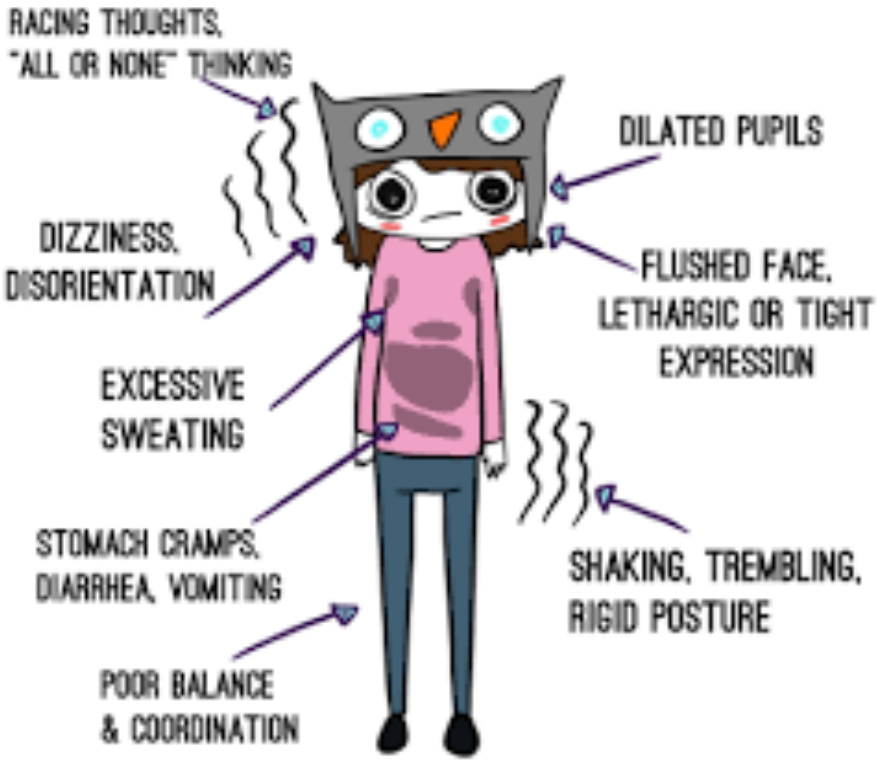
The magic of pressure to calm

Principles:

- Use your own body as a tool – you being able to provide that pressure to the child or using your walls, floors, apps (e.g. yoga) Any types of routine that helps to get their body moving. Stacking chairs, moving sofa, tug of war, etc
- Equipment – can be useful but depends on how a child responds to that (lap-pad, water bottle). Peanut ball instead of chair, roll over, bit of a bounce, ball rolled on them.
- Using experiences in their natural state to create that kind of pressure – manipulating clay, push-ups, star jumps, doing an action for a short period of time
- Active versus passive
- Making it safe – take cushions off sofa, safe rough play
- Heavy work – push, pull, lift, carry
- Use housework/ every day activities
- Do laundry, hoovering, take out rubbish.

What about sensory overload?

What are the common signs?



They may be aware they are feeling overloaded but hide it until they go home. Then they can explode.
School/ other professionals may not see it.
Different per child – each reacts to stressors different.
It is a sign to intervene – to get back to that calm state of arousal
Talk about it, ear defenders, take them out of the room, deep pressure etc.

Sensory diet

- What is it? Strategies in place before actual activity starts
- How often? Am I trying to alert or calm them?
- Who designs and reviews it?
- Keep it topped up to a level so they are always in the just right level.
- You need to figure out with the OT what would work for you, your child and the space that you have
- We need to make sure we are drip feeding into the system in order to help them as best we can
- It is often reviewed over time and differs day to day
- Space/ situation will change the diet
- E.g. weekends might be different to weekdays

The Importance of breath

- Connecting to self
- Recognising internal signs
- Reducing anxiety
- Moments of stillness
- We are constantly filtering so much information
- Trying to have very brief moments where things can quieten down and just stop for a moment
- For some children this might just be 10 seconds but that is a start
- Learning to let go and relax
- Focus on one of the things that we can control within ourselves which is the breath
- Many of these children are ‘mouth’ breathers rather than breathing in through their nose
- Shallow breathing leads to tension and this can be a sign of some underlying anxiety
- Blow through a straw to move a cotton ball
- Blow into an instrument

A final resource

- https://www.sensoryintegration.org.uk/page-19079

- £5 one off fee and you can access the course yourself

- Yoga balls! Go over on top off them and squish them!
- Food – granola, chewing gum! Frozen fruit

- The out of sync child - Carol Kranowitz
- The out of sync child has fun – Carol Kranowitz
- The out of sync child grows up - Carol Kranowitz