

Sensory processing



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Our senses

Our senses (sight, sound, smell, taste, and touch) tell us about our environment. Our senses receive information from both inside and outside of our bodies. Sensory processing (sometimes called sensory integration or SI for short) refers to how our senses work together to organise and process incoming information from the world around us. The central nervous system (brain and spinal cord) controls our sensory system. When our sensory system works together it allows us to interact with the environment in purposeful and meaningful ways. Whether you are biting into an apple, riding a bicycle, or reading a book, your successful completion of the activity requires processing sensation or 'sensory integration'.

In addition to the five senses we also have two special senses, proprioception and vestibular. The proprioceptive sense gives us information about where our body parts are and what they are doing. The vestibular sense gives us information about our position in space and the movement of our head in relation to gravity.

People with sensory processing difficulties may be over-sensitive (hypersensitive) or under-sensitive (hyposensitive) in some or all senses.

People who struggle to deal with all this information are likely to become stressed or anxious and possibly feel physical pain. This can result in behaviours that may not seem linked to sensory sensitivities but could be the underlying cause.

This leaflet is for staff, carers and the person themselves to help identify possible sensory needs and suggests some helpful tips.

The environment

Environments can overload our senses. A "sensory smart" environment provides people with opportunities for heavy movement (pushing or lifting weighted items, moving a chair, etc.) and/or other calming or alerting sensory activities to improve their ability to attend and focus during interventions.

The person may be distracted by:

- Bright lights or objects.
- Patterns on furniture, flooring or walls.
- Notice what other people miss e.g. fluff on floor.
- The detail of an object rather than the object itself.
- Cluttered environments.
- Sudden noises such as a fire alarm.
- Smells such as air fresheners and detergents.

Things to consider and helpful tips:

- Fluorescent or harsh lighting can hurt the person eyes. Many say that they can see these types of lights flickering or hear them hum which can be very distracting or possibly even painful. Due to these difficulties it is best to use soft lighting or to turn fluorescent lights off in interview/therapy rooms wherever possible.
- Be aware! Complex patterns such as patterned floors and wallpapers or window blinds can be distracting.
- Certain background sounds, which other people ignore or block out, can be unbearably loud or distracting and will affect their ability to concentrate. Noisy environments will result in difficulties with processing both auditory and visual information simultaneously resulting in being over stimulated and overwhelmed. Consider using noise reducing head/ear phones or keeping noise disruption to a minimum.
- People can become overwhelmed by subtle smells that you may not even notice such as someone's deodorant, perfume, air fresheners or the smells of fabrics.

Mixing with others

Mixing with other people can be extremely anxiety provoking especially as they have no control over their actions.

Things to consider and helpful tips:

- For individuals who find touch difficult standing in a queue can be uncomfortable. Use a coat over the arm or the trolley/basket as a barrier between them and others.
- If the person has difficulty with standing too close remind them of the arm length rule.
- Be aware that the person can be distracted by your jewellery, patterned and/or bright clothing and perfumes.
- Say the person's name at the beginning of the sentence when asking them a question or giving them instructions.
- In busy environments ensure you have the person's attention before you talk to them e.g. stand within close proximity.



Personal care and daily living skills

- The person may have a high or low pain threshold. They may over react to small injuries such as cuts or stings (hypersensitive) or not respond to injuries or have a history of not recognising or responding to injuries, not be able to distinguish between hot and cold drinks (hyposensitivity).
- Some people will dislike personal care such hair washing, nail cutting and hoisting.
- Be aware some individuals dislike certain textures and clothing such as long sleeves, socks, ties, etc. They may wear clothes that are inappropriate for the weather or want to wear the same clothes all the time.

Things to consider and helpful tips:

- Tell them the temperature of drinks/meals.
- Consider a firmer touch rather than light touch. Deep massage in the intervention area before the procedure may help, e.g. deep massage to lower legs and ankles before putting on socks or toe nail cutting.
- Bath rather than shower.
- Recommend cutting labels out of clothing.
- Consider eating habits, food preferences (including non-edible foods) and referral to a dietician for further assessment if restricted diet is a major problem.

Proprioception

Proprioception tells us where our bodies are in space and how our different body parts move. It helps us respond and interact in our environments. Poor proprioception may result in difficulties with judging depths e.g. walking up steps, changes of flooring or bumping into others and furniture, lack of co-ordination.

- The person may move their body rather than their head.
- They may stand too close to people.
- They may be uncoordinated when completing tasks such as dressing, driving or using computers.
- Is fearful of someone bumping into them.
- Has difficulty with buttons, zips, pens, cutlery, etc.

Things to consider and helpful tips:

- Use a weighted ruck sack or a weighted neck/shoulder wrap for walking or weighted lap pad to help them stay in their seats and finish their work.
- Heavy duvet or weighted blankets/jackets may help reduce anxiety.
- Use chairs and furniture that offer high body contact.
- Some people like to access tight spaces to reduce anxiety levels.
- A wrist weight, adaptive grips or larger handles may provide more feedback and awareness to their hands during writing or hand activities.
- Bathing may be calming.

Low concentration

There will be a need to seek movement activities.

Things to consider and helpful tips:

- Allow regular access to movement. Allow for “movement breaks” and movement activities such as stretching, moving from one foot to another or doing push ups against the wall.

- Consider sitting on a therapy ball/ball chair, beanbag, rocking chair or using chair arms to prop themselves up.
- Encouraging moving around in their seat, crossing their legs, crossing their arms or tapping their foot.
- Trampolines, swings or car journeys may help.

Anxiety

Sensory processing difficulties cause the brain to be dominated by the activity of the parts associated with fear and instant reactions resulting in high levels of anxiety.

Things to consider and helpful tips:

- Carrying an object to fiddle with such as a pebble or stress ball in a pocket.
- Avoid noisy busy environments such as supermarkets or shopping centres.

- Use iPod, music or noise reduction headphones.
- Chew chewing gum.
- Focus on a special interest activity.
- Bathing.
- White noise machines may help.
- Distraction techniques such as smelling an aromatherapy oil on a tissue.

Over sensitive to movement and balance

Things to consider and helpful tips:

- Sitting on a stool to use appliances e.g. loading washing machine.
- They will dislike bending down so try to put things at eye level.
- They will dislike walking on uneven ground.
- Avoid movement activities such as escalators, car journeys.
- Holding onto the trolley can help when shopping.
- Use a weighted ruck sack or carry a bag in both hands to distribute weigh evenly.



When communicating

There are some simple strategies to maximise the person's ability to process information.

Things to consider and helpful tips:

- Use open and closed questions correctly.
 - Say the person's name at the start of a sentence.
 - If eye contact is uncomfortable look over their shoulder when talking to them.
 - Remember that they may need 6-10 seconds thinking/processing time as some people will think in colours or pictures rather than words.
- They may have difficulty starting, maintaining and finishing a conversation.
 - Use borders around the page or text to help identify where the page ends.
 - Use yellow paper.
 - Always introduce yourself and wear a name badge as it may be difficult to recognise people especially if they have changed their hairstyle or are wearing sun glasses.



Consider synaesthesia

Every person's brain has to integrate information from several different senses. This leaflet has highlighted some difficulties and considerations with multisensory processing (where existing sensory information is processed together). This is different from synaesthesia (where unrelated modalities are activated). However some research is suggesting both conditions may be different expressions of a single underlying problem of sensory network connectivity.

Synaesthesia is a condition in which normal sensory stimulation triggers unusual sensory responses. It is two or more of the senses that are normally experienced separately are involuntarily and automatically joined together. In other words a 'mixing of the senses'. For example, people may see colours when they hear sounds or report that musical notes evoke different tastes - the music of Britney Spears may taste like broccoli. Other people may consistently see numbers as colours: four being red, for example, or eight being green.

When further specialist assessment may be necessary

Individuals may have a strong sensitivity in certain areas but this does not necessarily affect their day to day activities. Most people may have already developed their own coping strategies or just need a little help to adapt their environment or task to meet their individual needs.

If the sensory processing difficulties are having a significant effect on the person's functioning and is disabling consider referral for specialist assessment.

Reasonable adjustments to support people accessing our service

Helping people understand

- Allow time for them to process what you have said (at least 6 seconds).
- Check they have understood.
- Be prepared to repeat and rephrase what you have said.

Information from people

- Ask direct, brief questions
- Questions about time and frequency are often difficult to understand.
- They may give an answer they think you want to hear or repeat what you say, seeming to agree.
- Check answers, ask again in a different way.

The support people need

- Ask the person and/or their carer or advocate what support they might need.
- Be prepared to ask again at different stages.

Understanding behaviours

- Behaviour is how many people communicate how they are feeling and may be a coping mechanism or due to physical or mental illness.
- Don't assume the behaviour is a result of the learning disability.
- Bear in mind the person may be anxious. Consider sensory impairments, if in doubt, ask.

Good environments

- Consider the environment – some people are sensitive to light, movement, sound, smell and touch.
- Keep the environment calm. Some people can't cope with busy areas. Familiarity is important to people with learning disabilities.

Improving appointments

Think about:

- Choosing the best time of day and having the first or last appointment.
- Making a longer appointment.
- The best place for them to wait.
- Fitting in with important routines including home visits wherever possible.

Telling people what you are doing

- Explain at every stage what you are about to do, what will happen, and why, checking consent throughout.
- Explain in simple language or use pictures and/or symbols.

Keeping language simple

- Avoid humour and double meaning words as these can be taken literally.
- Make sure your facial expressions and tone of voice match what you say.
- Some people use complex 'social' language but may not understand the meaning of the words.

Contact us

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