

# The 8 Senses



## Over (Hyper) & Under (Hypo) Sensitive

Each of the 8 senses may become over-sensitive (hyper-) or under-sensitive (hypo-) to sensory stimulus. For example, a person with autism who is over-sensitive to light may turn the lights off in class; conversely, a person who is under-sensitive to light may turn all the lights on, a person who is over-sensitive to particular smells may try to avoid them and conversely a child who is under-sensitive to particular smells may seek them out as a comfort.



### Sight

- Sight refers to the bodies visual system of using **smooth and precise eye movements** to scan and visually **assess the environment**.
- A person with autism may be **oversensitive visually** and experience difficulty in controlling a **debilitating response to bright lights, cluttered walls in rooms and highly patterned or brightly coloured clothing**.
- A person with autism may find it **difficult** to use or **maintain eye contact**, what may appear rude but may actually be a **reluctance to participate in an action which can cause physical pain and anxiety**.
- Strategies to reduce visual over responsiveness including modifying lightning, reducing glare, and lessening the need for eye to eye contact.
- Some people with autism may seek **opportunities to boost visual input** they are receiving. A person may be captivated by small details unnoticed by others or staring into light sources. Patterns or colours may be fascinating, and they may need lights to help them sleep.



## Sound

- People with autism may or may not react differently to different noises / level of noises
- Sound may affect a person with autism as they **may be very sensitive to loud noises (whistles, crowds cheering)**.
- People with autism may also **create noise themselves in an attempt to block any environmental or situational noise out (humming, fingers in the ears, squealing)**.
- People with autism may or may not respond to being called/spoken to.



## Touch

- Unexpected **touch can cause great distress to a person with autism.**
- Find out what the individual likes / dislikes in regard to touch before starting your session
- A person with autism **may not like to be touched** or they **may like to touch everyone and everything.**
- A person with autism **may not like certain clothes/fabric and how they feel against their skin.**
- Let them know when you are going to place a hand on their back or guide them into a position during a coaching session.
- On the contrary some people with autism require deep pressure and may rub up against other participants during the session. These people **may need to be reminded of boundaries and personal space.**



## Taste

- People with autism **may have restricted eating patterns** e.g. only eating crunchy foods such as dry rice krispies and toast
- Some individuals who also have intellectual disabilities alongside autism may eat inedibles, e.g. ice, hair, paper, metal, stones, soil. **This is called “Pica” which is a craving for substances of no nutritional value.**
- Coaches may need to be aware of any restricted eating patterns or Pica ahead of sessions.
- **Ask the parents/carers** if they use chew’s or other techniques to avoid this behaviour.



## Smell

- A person with autism may have an over responsive or **hyper-sensitive sense of smell** which creates strong and intense smells out of the ordinary, everyday smells such as spicy foods, petrol or shampoo.
- May be overwhelmed by smells and **may avoid going to places or avoid eating certain foods.**
- Possibility to have a **hypo-sensitive sense of smell** and may seek out certain strong smells for comfort such as spices, flowers, or perfumes.
- Our sense of smell can help us to **identify danger** such as smoke, gas etc. People with autism may not be able to identify things based on smell or they may have a lack of smell or be unable to identify strong smells.



## Interoception

- Interoception is a sense that **provides information about the internal condition** of our body - how our body is feeling on the inside.
- Interoception allows us to experience many **body sensations** such as a growling stomach, dry mouth, tense muscles or racing heart. Awareness of these body sensations enables us to experience essential emotions such as hunger, fullness, thirst, pain, body temperature, need for the bathroom, relaxation, anxiety, sadness, frustration and safety.
- People with autism may over respond to **interoceptive signals**, where they feel their internal sensations more readily. They may be distracted or highly anxious and may feel a lot of sensations at once, which may be **overwhelming and stressful**. They may take frequent bathroom breaks or complain of pain with the slightest discomfort.
- People with autism may under respond to **interoceptive signals**, they may not feel their **internal sensations** as readily, unless they are very intense. This person may wait until the very last minute to use the bathroom, may be difficult to toilet train, may have a significant health concern but never complain of discomfort because it is more difficult for them to feel it.
- People with autism may also have **difficulty discriminating or pinpointing exactly what internal sensation they are having**. They may complain of feeling sick but can't give specific symptoms, may insist they feel happy even though they are clearly outwardly sad. It is hard in these situations for the person to correctly distinguish their internal sensations and make sense of them.



## Proprioception

- Proprioception refers to **the unconscious sense** which tells us where our bodies are in relation to space and other objects and how our different body parts are moving.
- Proprioceptive receptors are located in our joints and ligaments, they **regulate movement and posture and control of pressure** for certain movements such as shaking hands.
- Some people with Autism may experience **hyper-sensitive proprioceptive difficulties** which makes understanding where one's body is in relation to other objects difficult, thus appearing clumsy or uncoordinated and misjudging personal space.
- Some people with Autism may be **hypo-sensitive and seek proprioceptive sensory inputs** by banging objects, jumping, bumping into people or biting or sucking on fingers.
- **Deep pressure** such as tight bear hugs, tight clothing, or weighted items such as heavy blankets may be enjoyed.



## Vestibular

- Vestibular is the sense of **movement**
- **The vestibular sense** is the sense which provides information about movement, balance, and the body's relation to gravity. It tells us if we are upside down, right-side up, left, right, horizontal, vertical and in what direction we are moving.
- The vestibular sense also tells the person if they are moving or not, how fast and in what direction = movement, balance, and coordination.
- **Balance** is the key to the vestibular sense!
- **A person with autism may** have difficulty with motion, spinning, swinging OR they may crave motion, spinning and swinging.

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