

# The Seven Senses of Autism



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Autistic people experience the world differently from others. Sensory issues arising from autism are a well-known aspect of the condition, and in particular hypersensitivity (increased sensitivity) in one or more senses occurs frequently in autistic people. When you sense the world differently to others you inevitably react and behave differently as well. Someone whose autism causes an increase in the sensitivity of their sense of smell, for example, may be uncomfortable entering a particular room because of a strong smell there that distresses them but cannot be detected by others.

This resource is designed to give an overview of the sensory issues and symptoms often associated with autism, known as the 7 senses of autism. Like all of us, every autistic person is different, so no two autistic people will have the same sensory issues to the same degree. It is also unlikely, though not impossible, that an autistic person will experience differences with all 7 senses as described here, but nearly 4 out of every 5 autistic people will experience sensory issues of one type or another. There are also a number of different ways that each sense can be affected.



Autism affects every person differently and in a way which is unique to that individual person. Similarly, the reactions of everyone on the spectrum are personal and should be supported in a manner that benefits the individual in their own unique way.

## **The Seven Senses of Autism**

7 senses of autism covered in this resource are:

- Sight (vision)
- Hearing (auditory)
- Smell (olfactory)
- Taste (gustatory)
- Touch (tactile)
- Vestibular (movement and balance)
- Proprioception (position of body)

For each, we will explore how an autistic person may have a different experience with the sense, how this might affect their life, and how they can be helped and supported in dealing with those issues. We will give examples of the sensory issues that sometimes arise from autism. In all cases, a key way to help and support an autistic person is to recognise the issue(s), accept them as genuine and ask the person about the environmental factors that can cause them problems if they are able to express this.

It is also important to remember that an individual may have several sensory differences which combine to create unique issues and requirements, and that what works for one person may be entirely inappropriate for another.

A big part of any help and support is identifying that there is an issue at all and seeking to explore it. The fact that you are reading this resource is already a positive step in offering support and deepening your understanding, so thank you!

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## **Sight (vision)**

### **Over responsiveness (avoiders):**

#### **Possible issues**

May struggle when somewhere very brightly lit or where there is a lot to look at, such as a very cluttered space or a busy pattern on a wall or floor.

May experience a similar painful sensation to that which others get from staring into a very bright light from looking at a white surface, for example.



Spaces which are almost entirely white or very light colours can be extremely difficult to cope with and may cause discomfort.

May have difficulty maintaining eye contact. Keeping eye contact with someone else may cause extreme anxiety, pain or be a huge distraction to an autistic person trying to focus on what is being said.

### **Potential impacts on life**

- May find certain types of places (e.g. extremely bright spaces) very difficult to stay in for any length of time, and may find it hard to work, study or rest in such surroundings.
- May need to keep looking in a certain direction to avoid seeing things that cause them pain, such as large expanses of bright white space.
- Difficulty with eye contact can be seen as rude and unengaged when it is actually required to enable the autistic person to focus on listening and to avoid becoming stressed and suffering pain. This can be a major issue in formal settings such as interviews for employment or education if the interview panel do not understand the issue.



## **How to help and provide support**

- May prefer lights to be dimmed, large, open bright spaces to be broken up, and to keep away from very crowded areas and other spaces with lots of things to see that could be distracting.
- Lack of eye contact can be explained to others: why someone does not make eye contact and what it does and does not mean. It is particularly important that this issue is raised in advance of situations such as interviews and other formal settings, and assurances given to the autistic person at the time that others are aware of their condition and that they will not be negatively viewed as a result can be hugely helpful.

## **Under responsiveness (seekers):**

### **Possible issues**

- May try to find more to look at to boost the input to their eyes.
- May be captivated by small details unnoticed by others, found staring into lights or scattering objects about a room to give them something to look at.
- Individual grains of sand or intricate patterns and colours can enthral them for long periods.

### **Potential impacts on life**

- May be easily distracted by aspects of their environment and lose focus on a task they are supposed to be completing, in the same way that others may become so engaged in a book or TV program that they lose track of time.
- This can be problematic if it is a regular occurrence and prevents progress in other tasks or even basic self-care.

## How to help and provide support

- Consider how an environment can be modified to be more comfortable for the person according to their needs – changes required are often very minor.
- Sleeping environments can be particularly difficult, and extra lighting or night lights may help seekers to settle and fall asleep.



### Hearing (auditory)

#### Over sensitivity to sound (hyper-responsive):

#### Types of issues possible:

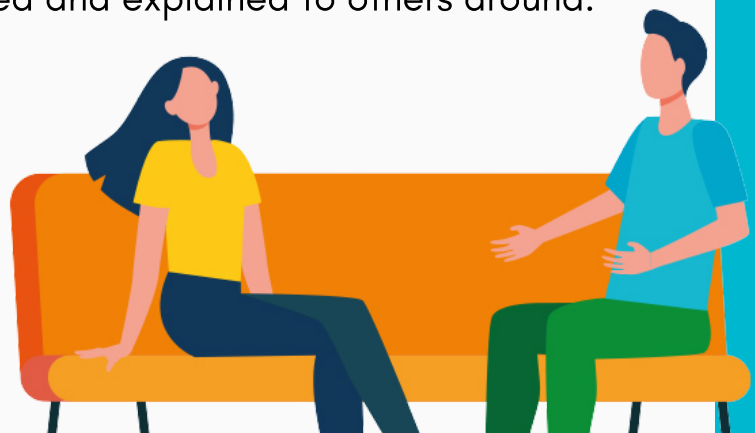
- May find it hard to filter and process the sounds they hear, particularly if there are many different sounds at the same time.
- May be highly sensitive to volume, so that sudden loud noises can cause them pain.
- May find particular pitches or types of sound difficult irrespective of volume, such as many voices in a crowded room or what may be generally considered as background noise like air conditioning, projectors humming, or cutlery tapping on a plate or the table.

### **Potential impacts on life:**

- May find busy or noisy environments very difficult or painful to deal with if the noises are those to which they are particularly sensitive and will want to leave the location to escape the over stimulation.
- Someone who has difficulty filtering out many voices heard at once will struggle to focus in a crowded place where lots of people are talking, such as a shopping centre or an open plan office.
- Someone who cannot tolerate the hum of machinery will be unable to focus while exposed to such a sound.
- Those that react badly to sudden loud noises may find it impossible to carry on normally for a period during and after such noises.

### **How to help and provide support**

- Avoid exposure to environments that cause them pain or difficulty.
- This may be accomplished either by blocking out the sounds, for example with ear plugs or headphones, or visiting places when they are quieter.
- Some may make noises themselves, such as humming or whistling, to drown out the sounds they are finding difficult, which can be encouraged and explained to others around.





- An autistic person with hyper-sensitivity to sound who is regularly expected to work in a noisy classroom or open plan office will certainly need some form of support to function to their full potential, either in managing the sounds around them or by being given a quieter space to work. If the latter is adopted, it is important to accompany this with other measures to avoid isolating them from co-workers or fellow students.

### **Reduced sensitivity to sound (hypo-responsive):**

#### **Types of issues possible**

May try to listen to types of sounds to which they have reduced sensitivity at higher volumes to get the audio stimulation that they need.

#### **Potential impacts on life**

May be driven to seek out the audible stimulation that they need, for example by visiting noisy funfairs regularly just to benefit from the sounds there even if they have no great interest in the funfair itself.

#### **How to help and provide support**

May need help with identifying and safely accessing the stimulation they need. For example, if someone benefits from fairground noises rather than the whole fairground experience, could a recording serve the same purpose, or can other more accessible alternatives be identified and implemented?



## **Environmental meaning deafness:**

### **Types of issues possible**

- Cannot remember the meaning of audio signals like a bell ringing at a mealtime even if they have heard it many times before.

### **Potential impacts on life**

- May not respond to audio cues, which is especially problematic with danger signals like fire and evacuation alarms, as well as creating difficulties with more day to day tasks like school bells.

### **How to help and provide support**

- A friendly spoken prompt when the sound is heard such as “there goes the bell, it’s dinner time” can be enormously helpful.

## **Meaning deafness:**

### **Types of issues possible**

- Struggles to understand words beyond the first 3 or 4 spoken in a phrase.

### **Potential impacts on life**

- May find it hard to follow lengthy sentences or instructions. For example, if given a series of directions will likely only remember the first step.
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### **How to help and provide support**

- Use short, direct sentences to convey the meaning as succinctly as possible and one step at a time.

Write down sets of instructions in steps if possible.

## **Tonal deafness:**

### **Types of issues possible**

- Finds it hard to draw meaning from tone or inflection of the voice.

### **Potential impacts on life**

- May misunderstand things like sarcasm and irony, and take words more literally than intended, particularly if tone or body language is used to convey the actual intended meaning.
- May fail to identify moods and emotions if not conveyed by the words spoken, such as someone saying they are happy while showing with tone and body language that they are not.

### **How to help and provide support**

- Say exactly what you mean and try not to rely on interpretation of how you say it or your body language to get the full meaning. Encourage and welcome questions of clarification, even if it seems obvious to you.

## **Smell (olfactory)**

### **Increased sensitivity to smell (avoiders):**

#### **Types of issues possible**

- May detect smells that others cannot sense and have a much stronger experience of smells around them. For example, they may smell the type of shampoo someone has used on their hair or experience a strong aroma from a cleaning product used on a floor.

## Potential impacts on life

- May find it difficult to spend time in places where there is a smell that they find strong or unpleasant.
- As others may not even be able to detect the smell at all, this can make their discomfort hard to understand, particularly if the autistic person is unable to communicate what the issue is.
- For example, a young child may resist going into a certain shop or other place because they associate it with an unpleasant aroma but cannot tell their parents this and wonder why no one else has the same problem.

## How to help and provide support

Avoiding the places that are difficult or taking steps to reduce the smell where possible, such as increased ventilation or using different cleaning products, may be of assistance.

### Reduced sensitivity to smell (seekers):

#### Types of issues possible

May be drawn to strong aromas to stimulate their sense of smell.

May go out of their way to experience strong scents like curry powder or perfume, and may approach people to smell their skin or hair.



### **Potential impacts on life**

- Can cause difficulties socially, particularly if approaching other people to smell them who do not understand or appreciate their condition and may feel threatened.
- May miss important warning signals from smells, such as smoke, gas or food that has gone off. If an autistic person has trouble sensing or identifying such smells, they could be in avoidable danger at times without assistance.

### **How to help and provide support**

- Educating others that they meet, explaining why the behaviour takes place and that there is no harmful intent.
- Awareness of those regularly around the person that warning smells may be missed.

### **Taste (gustatory) Increased sensitivity to taste:**

#### **Types of issues possible**

- May not be able to tolerate some tastes and flavours.
- Some food smells may be overwhelming.
- May not tolerate certain textures of food.
- May prefer food of a certain colour or temperature.

### **Potential impacts on life**

- Diet may become too limited to be healthy.
- May be seen as a fussy eater by others without understanding of the condition.
- May stop feeling hunger pangs if frequently put off food and thus not eat enough.
- May only be able to eat and drink from certain containers and cups.

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## **How to help and provide support**

- New foods can be introduced by making them similar in texture and colour to the person's preferred food tastes. (Mash up fruit or vegetables if they prefer smooth foods etc.)
- Social stories. Write a short info sheet that puts the food into a very positive light that will encourage the person to want to try it! Use the person's motivator within the storyline to engage their attention further e.g. Use a Thomas the Tank Engine plate to offer the food.
- Desensitisation (a behavioural technique). Try putting a small piece of 'new food' near the person's plate until gradually it can be placed on the plate. This could take several days or even weeks. Eventually the individual may try it.
- Alternate mouthfuls of a favourite food with mouthfuls of the new food. This can work well with children or older individuals. Keep it positive and treat it as a fun game.
- Most of all be positive and be patient and enable the person to feel in control. We all need to feel in control of our lives.

## **Reduced sensitivity to taste:**

### **Types of issues possible**

- May prefer foods that are very strong tasting or spicy.
- May pick up and eat or explore with their mouths non-edible items, including everyday things such as grass, stones, soil and faeces (known as pica).

### **Potential impacts on life**

- Risk to health of eating non-food items.
- Diet may become too limited to be healthy.
- May want to eat constantly to stimulate taste sensations.

### **How to help and provide support**

Keep the person safe by avoiding exposure to harmful items. Offer substitutes for non-foods, for example twigs in place of wood.

Use distractions when non-food may be eaten, such as fidget toys.

### **Touch (tactile)**

- Increased sensitivity to touch:
- Types of issues possible
- Simple touches may be unpleasant or painful.
- May overreact to minor pain.
- May avoid getting dirty or messy.
- May avoid certain activities such as eating certain foods, brushing their teeth, bathing, and having a haircut.



- May avoid certain types of clothes and fabrics.
- Autism can often lead to issues with tolerance of certain textures.

### **Potential impacts on life**

- Avoidance or neglect of basic self-care.
- Everyday activities or inadvertent contact may cause pain or distress.

### **How to help and provide support**

- Try to avoid sensations which cause problems where possible.
- Find work arounds if possible – is the issue with washing the temperature of the water or the container it is in?

### **Reduced sensitivity to touch:**

- Types of issues possible
- May appear to have a high pain threshold.
- May need to seek out tactile stimulation.

- May self-injure or chew on everything e.g. inedible items or clothing etc.
- May seek out physical touch, enjoy hugs and seek out different textures to give their bodies what they need. This may include smearing faeces or seeking out other textures in their environment.







### **Potential impacts on life**

- Injury and inadvertent self-harm.
- Social issues in environments where contact is discouraged or inappropriate.
- Health issues for self and others of smearing.

### **How to help and provide support**

- Support and channel behaviours to a more socially accepted way, such as hugging family.
- Look for alternative activities which can give similar sensory feedback, such as regular sessions with play dough or jelly to replace smearing behaviours.
- Education of others who meet the person about possible tactile behaviours such as hugging.
- Try to identify the root cause of behaviours – what is being sought or avoided – and address that.

### **Vestibular (movement and balance)**

#### **Over responsive (avoider):**

Types of issues possible

Nausea and discomfort from motion (like travel sickness) that may persist for some time.

### **Potential impacts on life**

As well as the debilitating effects of the nausea itself, an autistic person may not understand the cause of the feelings which may lead to stress and anxiety.

### **How to help and provide support**

- Repetitive actions like mild rocking or swinging can help calm an over-stimulated vestibular system by gently controlling the movement. This can also build tolerance.

### **Under responsiveness (seeker):**

#### **Types of issues possible**

- May require more movement to their vestibular system to find the ideal balance that we all feel comfortable with in all our senses.
- May appear as hyperactivity, a desire to be on the move all the time, to eagerly accept experiences like fairground rides, swings, rough and tumble or gymnastics.

### **Potential impacts on life**

- Constant movement may be exhausting, possibly dangerous if not properly supervised, and cause social and practical problems when more settled behaviour is required.

### **How to help and provide support**

- Try to find activities that can provide the stimulation required in a safe and accessible manner. For example, as with over-responsiveness, rocking or swinging may be helpful.
- Allow time and space to deal with the feelings as required.

## **Proprioception (position of body)**

Proprioception is our body awareness system which unconsciously tells us where our bodies are in relation to other objects and space, and how our different body parts are moving. Proprioceptive receptors are in our joints and ligaments and they allow for this movement and posture. This system also helps us to regulate appropriate pressure for tasks such as cracking open an egg without crushing it in our hand and it even assists with the tone of our voice. There can be issues regarding proprioceptive feedback connected to autism, leading to those affected struggling to sense and control the position of their body.

### **Hyper-sensitivity (over sensitivity and responsiveness in body positioning):**

#### **Types of issues possible**

- May appear clumsy, knock things over, drop items, bump into things, or stand too close to others because they struggle with judging proximity and personal space.



- May have difficulty in regulating pressure so may break items or struggle with writing (their pressure on the pen can be too light or so heavy that they may even rip the paper).

### **Potential impacts on life**

- May hurt themselves or others, or damage objects.
- Can be difficult socially if condition not recognised or understood.
- Inability to write properly can cause significant difficulties with school or work if no adjustment or alternative is in place.

### **How to help and provide support**

- Simple guidance or practical assistance, such as advice on standing an arm's length away from others.
- Find alternatives to writing on paper if this is difficult, such as a tablet or chalkboard.

### **Hyposensitivity (under sensitivity and responsiveness in body positioning):**

#### **Types of issues possible**

- May seek out more sensory input by banging objects, jumping about, or bumping into people.

- May enjoy deep pressure such as tight bear hugs or weighted items such as heavy blankets or bags.
- May prefer tight clothing, bite or suck on fingers or stomp their feet when walking.

### **Potential impacts on life**

- May hurt themselves or others, or damage objects.
- May become stressed if no way to satisfy need for sensory input is available when required.

### **How to help and provide support**

- A weighted jacket or backpack may give the sensory feedback needed when out walking.
- Weighted blankets may be helpful when static.

Inevitably a resource of this type can only give an overview of the sensory issues which can be part of autism. Every person is different and will be affected in a unique combination of ways by sensory issues where present.

These will also combine with the natural strengths and weaknesses of the person alongside any autistic sensory traits. It is essential that every person is valued for who they are and allowed to be themselves.

