Echolalia refers to the repetition of words, phrases, or sounds, either immediately or after a delay. It's often misunderstood as "meaningless," but for many Autistic and other neurodivergent people, echolalia serves important purposes.
For some, echolalia acts as a bridge to **communication** — a way to participate in conversation when generating original language in the moment feels effortful. For others, it offers regulation and comfort, helping organize thoughts or soothe the nervous system. Echolalia can also support language processing, allowing someone to rehearse, explore, or integrate meaning through repetition.
Like many neurodivergent communication styles, echolalia is highly context-dependent. The same repeated phrase may carry emotional meaning, social intent, or a need for self-regulation. When echolalia is recognized as meaningful rather than dismissed, it opens the door to more attuned and respectful communication.

Echolalia is the medical term for repeated speech and verbal imitation.
Scripting is a verbal tool used by many autistic people to assist with spoken interactions. Scripting may be considered a type of delayed echolalia, which we'll look at below.
Before we look at echolalia as it relates to autistic people, though, it's important to know that repeating sounds and words is a typical, expected, and necessary phase of language acquisition for young children. When repetition continues after a certain age or stage of development, echolalia may be an indication of a neurodiversity such as autism or Tourette's Syndrome. There are also instances – such as with some brain injuries or illnesses such as Alzheimer's – in which echolalia may occur, and are not related to autism.
For the purposes of this post, we're looking at echolalia as it relates to autistic children and adults. Much of the older medical literature considered echolalia among autistic people to be meaningless. However, starting with a few researchers in the 1980s, a gradual shift in perception about echolalia has occurred. The medical community in general still categorizes echolalia as a speech disorder. However, more recent clinicians and researchers view echolalia as a type of autistic communication:

Echolalia is divided into 'immediate' and 'delayed' types. Immediate echolalia happens within a very short amount of time and delayed echolalia can occur after a significantly longer gap (such as weeks or months). Speech-language-hearing pathologists, such as Kylie Grace Davis, advise that immediate echolalia is within "two conversational turns of [the] original language input, whereas delayed echolalia occurs after more than two conversational turns take place" (Davis, 2017). Understanding the meaning of the repeated words or phrases can be challenging at times, but keep in mind that the autistic person is communicating, even if the speech doesn't have apparent meaning to you (the listener).
One common example of immediate echolalia is when a parent/guardian asks an autistic child a question, such as "what do you want for lunch?" and the child repeats the question back to the adult. The child may be repeating the question as a way of saying "I heard your question and I'm thinking about it," or because they don't have (or know) an answer to the question.

How Is Autistic Scripting Related to Echolalia?

The idea of *scripting* goes hand in hand with delayed echolalia for autistic people. As Danielle talked about in episode 4 of the Neurodiverging podcast, scripting is a tool autistic people use in several ways.

Having a pre-planned or pre-rehearsed phrase in answer to a common question is one example of scripting. Using a script can give the autistic person time and space to process what was said to them and to come up with a response. Having to generate unique responses for casual comments and questions in a social or workplace settingcan be exhausting for autistic people, and/or can lead to a sense of isolation in social situations. As Danielle mentioned in the podcast, she has several standard scripts she uses in social situations – for instance, when talking about the weather – which help her save her processing energy for other things.

In adults, another example is when an autistic person rehearses what they're going to say prior to making a phone call. This can help the autistic person to organize their thoughts ahead of time as well as reduce anxiety related to making phone calls and/or speaking to strangers who are likely neurotypical.

Echolalia Is Meaningful Communication

While many medical professionals – not to mention online sources – view echolalia as a disorder that needs to be fixed or cured, it can be more useful to see echolalia and scripting as meaningful, valuable communication by the autistic person. Speech-language-hearing and mental health professionals can assist autistic children, their parents, and autistic adults in understanding echolalia and scripting, and to help communication be a less stressful and more rewarding experience for everyone.

If you've ever noticed yourself or a loved one repeating the same words or phrases—maybe something heard earlier in a conversation, from a favourite TV show, or even a question someone just asked—you might be curious about why this happens. This repetition, known as echolalia, is a form of communication often linked to autism. Echolalia can take many forms. It might involve repeating something someone else has just said (immediate echolalia) or bringing up phrases heard days, weeks, or even months ago (delayed echolalia). For some parents, it can be the first sign that prompts them to question whether their child may be on the autistic spectrum. If you or your child are exhibiting signs of echolalia and are wondering whether autism may be the cause, we can offer private autism assessments for London, Oxford and the West Midlands.

For many autistic people, echolalia is more than just repetition—it can serve as a way to process language, express emotions, or create a sense of comfort in the familiar. Perhaps you've noticed yourself or your child only demonstrating this behaviour at home and not at school or the workplace. If so, its likely that you or your child are masking in these environments. To find out more, take a look at our article Autism Masking.

Whether you're autistic and want to understand why you repeat phrases, or you're supporting someone you care about, this article will dive deeper into echolalia. Together, we'll explore what it is, why it happens, and how to handle it in a way that fosters understanding and connection.

What Is Echolalia And How Does It Relate To Autism?

Echolalia is the repetition of words, phrases, or sounds, often as a response to something heard. For many autistic individuals, this repetition can serve as a way to process language, communicate, or self-regulate. While it's commonly associated with autism, echolalia can occur in other contexts as well.

In autism, echolalia is not random—it often has a purpose. For some, it's a way to practice language skills or convey emotions when forming original sentences feels challenging. For others, it provides comfort through repetition of familiar phrases.

Types of Echolalia

Immediate Echolalia: This occurs when someone repeats something they've just heard. For example, if asked, "Do you want some juice?" they might respond by echoing, "Want some juice?" rather than giving a direct answer. Immediate echolalia can be a way to confirm understanding or stall for time to process the question.

Delayed Echolalia: This involves repeating phrases or sentences heard hours, days, or even months ago. For instance, someone might recall a line from their favourite movie and repeat it in a situation where it feels relevant—or simply comforting.

Echolalia can be a valuable tool for autistic individuals to learn language, express themselves, or even regulate emotions. Understanding its purpose is key to supporting those who experience it and helping them use it in ways that work for them.

What Are The Symptoms Of Echolalia?

Echolalia can present in various ways, and understanding its symptoms can help identify it as part of someone's communication style. For autistic individuals, recognising echolalia as a meaningful expression rather than simply repetition is key to fostering understanding and support.

Signs to Recognise Echolalia in Autistic Individuals

- **Repetition of Heard Words or Phrases**: This is the most common symptom of echolalia, where someone repeats something they've just heard (immediate echolalia) or something from the past (delayed echolalia). For example, after being asked, "Do you want a drink?" they may respond with, "Want a drink?"
- **Use of Scripted Phrases in Communication**: Familiar phrases from TV shows, books, or past conversations might be used in specific contexts to express emotions or make a point.
- **Consistency in Repeated Language**: Some individuals may regularly repeat certain phrases, particularly in moments of excitement, stress, or when trying to self-soothe.

Differentiating Echolalia from Other Repetitive Speech Patterns

While echolalia involves repetition, it's distinct from other forms of repetitive speech. For example:

- **Perseveration**: This is the repetition of words or ideas that are not directly tied to something recently heard. It's often related to difficulty shifting focus.
- **Palilalia**: This involves repeating one's own words or phrases, often under one's breath, and is not directly linked to external stimuli.

Echolalia is unique in that it often draws directly from external language sources and serves a specific purpose, such as processing information, expressing needs, or providing comfort. Recognising these symptoms can help parents, carers, and autistic individuals themselves better understand echolalia's role and significance.

What is an Example of Echolalia in Autism?

Echolalia is a lived experience for many autistic people. It's not just repeating words or phrases; it's a meaningful way to process thoughts, express emotions, or find comfort. For some, echolalia might be a tool for communication, while for others, it's a source of joy or calm in a chaotic moment.

Examples in Daily Life

If you've experienced immediate echolalia, you might recognise moments where you've repeated a question someone asked you, such as echoing "Go to the park?" when asked if you'd like to go. This repetition can help process the question, express agreement, or simply buy time to think.

Delayed echolalia may feel familiar too. Perhaps you often recall phrases from your favourite TV show or a comforting line someone said to you weeks ago, repeating them during moments of stress or excitement. These repeated words can serve as emotional anchors, providing reassurance or expressing your feelings in a way that feels safe.

Echolalia In Children Vs. Echolalia In Adults

If you grew up with echolalia, you may remember repeating words or phrases as part of your language development—repeating what you heard in the moment, practising new sounds, or using familiar words to communicate your needs. As an adult, echolalia might now be a tool for managing emotions, connecting with others, or simply enjoying language in your own way.

For those supporting someone with echolalia, it's helpful to view it as a meaningful form of communication and a natural part of many autistic people's lives. Recognising its purpose can lead to better understanding and support for how echolalia serves those who experience it.

How Does Echolalia Affect Children with Autism?

As a parent, hearing your child repeat words or phrases might leave you wondering what it means and how to best support them. For children with autism, echolalia is often a meaningful and purposeful part of how they communicate, process language, and navigate their emotions. Understanding its role can help you appreciate it as a positive step in their development while addressing any challenges it may bring.

A Step in Language Development

Echolalia can be a key part of how your child learns to use language. By repeating phrases they've heard, they're practising sounds, sentence structures, and meanings. Over time, these repetitions may evolve into original speech. For example, repeating "Want a drink?" might eventually become their way of requesting something independently.

A Way to Communicate

When your child uses echolalia, they may be trying to express themselves. Immediate echolalia, such as repeating your question, “Do you want to play outside?” could be their way of showing agreement or processing the question. Delayed echolalia—like quoting a line from a favourite TV show—may be their way of connecting emotionally or finding words to express how they feel.

A Tool for Emotional Comfort

For many autistic children, echolalia provides comfort. Repeating familiar phrases offers predictability in a world that can sometimes feel overwhelming. If your child echoes a comforting line when they’re upset, it’s likely their way of self-soothing and creating a sense of calm.

The Challenges It Can Bring

As a parent, you might sometimes find echolalia challenging. It can make it harder to understand what your child really wants or needs, leading to frustration for both of you. In social settings, repetitive speech might be misunderstood by others, which could affect how your child is perceived or included.

Lauren’s 12 year old son ‘Robert’ (diagnosed ASD) recently started to repeat various words at home that didn’t appear to make much sense when put together, such as ‘fish hat’ and ‘grape shoes’, while their 17 year old son ‘Harry’ likes to repeat one or two specific phrases in particular accents or intonations for several weeks before replacing with new ones.

“Our house can feel really stressful at times”, says Lauren. “We have two sons that demonstrate echolalia repeatedly, sometimes very suddenly or loudly, especially now they’re older. It can be very jarring and makes it hard to relax or concentrate on a task or phone call.”

“But they never do this in a school or social setting, so I try to remind myself that it’s an important outlet for them, and its nice that they feel relaxed enough at home to express themselves in this way, it can be quite creative!”

How You Can Support Your Child

Recognising the purpose behind echolalia is the first step to supporting your child. Instead of focusing on stopping the repetition, try modelling responses they can use in different situations. For example, if they echo, “Do you want to play outside?” you could respond with, “Yes, let’s play outside!” This gives them a framework to use in the future.

Speech therapy can also be incredibly helpful, teaching your child how to build on echolalia to expand their communication skills. Visual aids, picture cards, or written prompts can support them in finding new ways to express themselves.

Echolalia is more than just repetition—it’s a window into how your child processes language and emotions. By understanding and supporting it, you can help them feel confident, connected, and empowered to communicate in their own unique way.

How Does Echolalia Affect Adults With Autism?

Echolalia is often associated with childhood, but for many autistic individuals, it remains a part of their lives well into adulthood. Far from being just a childhood phase, echolalia can serve unique purposes in adulthood, offering both challenges and opportunities for adaptation.

Echolalia in Autism as a Lifelong Trait

For adults with autism, echolalia often continues to play a role in communication and self-expression. It may be used:

- **As a Communication Tool**: Repeating familiar phrases can provide clarity or structure in conversations, especially when forming original responses feels challenging.
- **For Emotional Regulation**: Repeating comforting phrases or sounds can help manage anxiety or stress in overwhelming situations.
- **To Process Information**: Adults may use echolalia to rehearse or understand spoken language, particularly when processing complex instructions or ideas.

Rather than viewing echolalia as a limitation, it can be seen as a creative way to navigate the world and connect with others.

Challenges and Adaptations in Adulthood

Echolalia in adulthood can sometimes present challenges, particularly in social or professional settings where repetitive speech might be misunderstood. For example:

- **Social Perception**: Repeating phrases may be seen as unusual, potentially leading to misunderstandings or judgement from others.
- **Communication Barriers**: Echolalia can make it harder to convey specific ideas or needs in a way that others readily understand.

To adapt, many adults develop strategies to manage echolalia in contexts where it might not be practical. These can include:

- **Tailoring Repeated Phrases**: Using scripts that are socially appropriate and functional.
- **Building Alternative Communication Skills**: Expanding vocabulary and practising phrasing for different situations.
- **Explaining Echolalia to Others**: Helping colleagues, friends, or family understand its purpose can reduce stigma and foster acceptance.

For many adults with autism, echolalia is not something to be “outgrown” but a meaningful part of their identity and interaction with the world. By recognising its value and addressing its challenges, echolalia can be embraced as a unique and powerful form of self-expression.

Echolalia In High-Functioning Autism

Echolalia is often experienced by individuals across the autism spectrum, including those with high-functioning autism. For many, it's not simply repetition—it's a purposeful and often creative way of engaging with the world around them.

How Echolalia May Present in High-Functioning Autism

If you have high-functioning autism, echolalia might show up in specific ways. For example, you may repeat phrases from conversations, media, or past experiences, not just as an echo but as a way to express thoughts, relate to others, or navigate complex situations. These phrases might be woven into conversations in meaningful or humorous ways, reflecting intelligence and creativity.

Echolalia can also act as a tool for learning and practising language. Repeating sentences you've heard might help you understand how they're used or experiment with tone and context. For some, echolalia offers a predictable way to communicate when spontaneous language feels overwhelming or difficult.

The Role Of Echolalia In Communication

Understanding how echolalia works and why it's used helps shift the focus from "how to stop it" to appreciating its value as a tool for connection and self-expression. For many, it's not just a quirk—it's a meaningful way of interacting with the world.

Echolalia is often misunderstood as simple repetition, but for many autistic individuals, it plays an important role in communication. Rather than being a meaningless habit, echolalia often serves specific purposes, helping individuals express themselves, process emotions, or engage in social interactions. It can help you express agreement, emotion, or a need when finding the right words feels challenging. For example, using a repeated phrase like "I don't know" might not indicate uncertainty but could serve as a way to pause or manage a social interaction.

In high-functioning autism, echolalia can also bridge gaps in social communication. By referencing familiar phrases or scripts, it's possible to engage with others, convey a sense of humour, or build connections in a way that feels manageable and authentic. For those who find spontaneous language challenging, echolalia can provide a reliable framework for interacting with others. Repeating a phrase like "Want a drink?" may not just mirror what was said but could also convey agreement or a need. Similarly, delayed echolalia—such as recalling and repeating a comforting phrase from a past conversation—can help navigate emotions or add meaning to a situation.

Echolalia can also be a way to acknowledge questions or participate in conversations. Repeating part of a question might indicate understanding, provide time to process the words, or even act as a bridge toward a fuller response. For some, it serves as a conversational opener, drawing on familiar scripts or references to connect with others in a manageable and authentic way.

Recognising the purpose behind echolalia allows for greater understanding and respect for how autistic individuals use it to communicate. Instead of focusing on stopping repetitive speech, it's helpful to see it as a meaningful tool for interaction and self-expression.

Is Echolalia Always Autism?

Echolalia is often associated with autism, but it isn't exclusive to it. While it's a common way for many autistic individuals to process and express language, echolalia can also appear in other conditions or situations, making it important to consider the broader context.

Exploring Echolalia Without Autism

If you or someone you know experiences echolalia but isn't autistic, it could still serve a similar purpose—processing language, expressing thoughts, or finding comfort in repetition. For example, young children who are learning to speak often echo phrases as a natural part of language development.

In adults, echolalia might appear temporarily during times of stress or exhaustion, where repeating familiar phrases feels easier than forming new ones. This doesn't necessarily indicate autism but may reflect a need for reassurance or cognitive processing.

Other Conditions Where Echolalia May Occur

Echolalia can also be a feature of other neurological or developmental conditions, including:

- **Tourette Syndrome**: Some individuals with Tourette's experience echolalia as part of their vocal tics [1].
- **Aphasia**: People recovering from brain injuries or strokes might use echolalia as a way to rebuild language skills [1].
- **Dementia**: Repetition of phrases can occur in some individuals with Alzheimer's as memory and cognitive abilities decline [1].
- **Schizophrenia**: In rare cases, echolalia may be present as part of disorganised speech patterns [1].

Understanding that echolalia isn't always linked to autism helps highlight its role as a broader neurological phenomenon. Regardless of the cause, echolalia often serves a purpose, whether it's processing language, coping with emotions, or maintaining connection. Recognising its function can lead to better support and understanding for anyone who experiences it.

Is Echolalia the Same Thing as Vocal Tics?

No, **echolalia** and **vocal tics** are not the same, although both involve verbal repetition or vocalisations. They differ in their causes, purposes, and how they manifest.

Echolalia

- **Definition**: Echolalia is the repetition of words, phrases, or sounds that someone else has said.
- **Purpose**: In autism or other conditions, echolalia often serves a communicative or emotional purpose. It can help process language, express thoughts, or provide comfort. For example, someone might repeat a phrase they heard earlier to understand it better or because it resonates with them emotionally.
- **Context**: Echolalia is typically intentional or semi-intentional and is linked to processing or expressing language.

Vocal Tics

- **Definition**: Vocal tics are involuntary sounds or vocalisations that occur in conditions like Tourette Syndrome. They can include grunts, coughs, throat-clearing, or even the repetition of words.
- **Purpose**: Unlike echolalia, vocal tics are not typically purposeful. They are sudden and involuntary, often caused by a neurological condition.
- **Context**: Vocal tics are unpredictable and not tied to processing language or communication. They are often accompanied by physical tics (e.g., blinking, jerking).

Key Differences

There's immediate echolalia and there's delayed echolalia.
Immediate echolalia, happens instantly, whereas delayed echolalia can happen hours days months or even years after.
Both can be interactive where the autistic person says them in a way to communicate.
They can also both be non-interactive - where they're used for things like self-regulation.
Some repeated things may depend on the context like somebody repeating phrases of movie that have the same emotional impact as what they're experiencing right now.
Examples:
A simple form of echolalia could be somebody asking: "Do you want cake?"
The autistic person may reply: "cake cake cake!"
A complex form of echolalia could be someone asking: "Do you want cake?"
and the autistic person responding with all the ingredients needed to make a cake which could seem like agreement or consideration but may lack the understanding.
“For my partner and I we randomly sing little jingles to each other or lyrics from musicals as we go about our days. If you were to listen you could tell how we feel from the lyrics, the songs, and our tones - which means we’re communicating a lot more than just the words!” - Loren Snow

Why do we see Echolalia?

- Stimming

It could be for a stim behavior. This is because it feels good to repeat those words.
Stimming is any self-stimulatory act and it can use for stress relief, it can help focus and calm.

- Obsessive-compulsive disorder

In OCD the person may repeat the words because they're afraid something happening and feel a lot of shame as a result.
They may do it because they think they're preventing harm and protecting those they care about.

- Sensory Needs

Also see our videos on each of the senses to understand what this may look like.It could also be due to sensory overload such as being close to shutdown or meltdown and this

can be because of your senses of pain, temperature, touch, taste, smell, sight, balance, your body awareness, and your digestion. That's a lot going on there.

- Tics, Tourette's, and Echopraxia

It can also be due to tics, but with tics it's generally referred to as something called echopraxia. Which means it's an involuntary repetition of words.

- Learning

It can also be due to learning because every person during their development repeats words in order to get a grasp for how they feel.

- Understanding

It could be because the autistic person doesn't actually understand what is being said or maybe they just understand a part of it so they're repeating something related to it meaning that they have some kind of understanding but not a full understanding.

- Communication

It can also be because they want to reply but don't know what to say, but it doesn't mean that we're not paying attention we could be very interested in what you have to say.

Talking About Your Sensory Needs
How to explain sensory experience to people who don't share it, at work, in relationships, with family, with healthcare providers.

You are not too sensitive! That framing has probably followed you your whole life in a dozen different disguises, from the teacher who told you to stop overreacting to the tag in your collar, to the partner who couldn't understand why a restaurant you loved last month suddenly felt unbearable, and it has never once been an accurate description of what's actually happening in your nervous system. It's what happens when the people around you don't have a framework for sensory processing differences, and when the medical and psychological systems that were supposed to hand you that framework defaulted instead to treating an accurate, appropriate nervous system response as a personal failing.
Sensory sensitivity is a difference in how the nervous system processes incoming information, whether you're autistic, you have ADHD, or you're AuDHD and carry both. In all three, that processing tends to run more intense, less filtered, more detailed, and more variable than the neurotypical default, though the exact pattern of what gets amplified and what gets missed can look different depending on which of those profiles fits you. An autistic nervous system might process detail and sensory nuance more thoroughly, catching the exact pitch of a hum that everyone else tunes out entirely. An ADHD nervous system might process filtering inconsistently across the day, fully able to screen out a ticking clock during a hyperfocused hour and then unable to screen out anything at all an hour later when attention has drained. An AuDHD nervous system often gets both patterns layered together, which is part of why AuDHD sensory experience can feel so changeable even to the person living inside it. You notice more, in your own way, and the problem was never that you were perceiving things wrong.

The problem is that the environments you were placed in weren't built with any of these nervous systems in mind, and then you got blamed for the mismatch.
This is the framework you should have had decades ago. It walks through all eight senses, how sensory processing differences show up across autism, ADHD, and AuDHD, and what to actually do with all of it in daily life, with real examples throughout so none of this stays abstract. I've expanded this well past the usual treatment of the topic, into sleep, aging, masking, and a few other angles that rarely make it into sensory writing. You're owed the full picture.

What Sensory Processing Actually Is

Your brain takes in information from the environment through your senses as raw data, and then it filters, prioritizes, integrates, and translates that data into something you can act on. In a neurotypical nervous system, a lot of that filtering happens automatically and consistently, so the hum of a refrigerator across the kitchen, the feel of a cotton shirt against skin, or the faint smell of yesterday's coffee in a mug on the counter all get classified as background and simply don't rise to conscious attention.
In a neurodivergent nervous system, that filtering process runs differently, and the threshold for what reaches conscious awareness shifts across different channels and different kinds of input in ways that can look almost contradictory from the outside. Picture someone sitting in an open-plan office who can't follow a conversation two feet away because the espresso machine across the room, the HVAC system, and a coworker's keyboard are all competing for equal attention in her head, while at the same time she hasn't noticed she's been gripping her pen hard enough to leave a mark on her palm. Some things that should stay background become foreground, the way a fluorescent light's flicker might dominate an entire afternoon for one person while going completely unnoticed by the coworker at the next desk. Some things trigger a much bigger response than they would in someone else, the way a light tap on the shoulder can feel like a jolt rather than a greeting. Some things simply can't get screened out at all, and some things that other people register as neutral get processed as actively unpleasant, because the nervous system receiving them is built differently in the first place. The misreading, if there is one, belongs to whoever assumes the reaction is a choice.
"Sensory processing differences" is a more accurate term than "sensory sensitivity" because it covers the full range of what's actually going on. Sensitivity, a heightened response to input, like flinching at a doorbell that a neurotypical roommate barely registers, is part of it. Sensory seeking is part of it too, the drive toward more or more targeted input, like the person who needs to chew gum constantly just to think clearly during a meeting. Sensory inconsistency belongs here as well, where the same stimulus produces a different response depending on your state that day, so the same cafe that felt fine on Tuesday feels unbearable by Friday afternoon. Sensory discrimination difficulty rounds it out, where the nervous system has trouble telling similar stimuli apart or locating exactly where a sensation is coming from, the way someone might not be able to tell if a sound is coming from inside their own apartment or the one next door.

The research on why neurodivergent nervous systems process sensory information differently is still developing, but a few things are already clear. The differences are neurological rather than behavioral, they're consistent features of how the nervous system is built rather than choices or overreactions, and they have real, daily effects on functioning and wellbeing that should be taken seriously instead of managed around in silence.

The Eight Senses

Most people got taught five senses in school, and there are actually eight, all relevant to understanding neurodivergent sensory experience. The five most people already know are sight, hearing, smell, taste, and touch, and these process information coming from outside the body. The three that almost nobody gets taught are the vestibular system, which handles movement, balance, and spatial orientation, proprioception, which tracks where the body's parts are in space relative to each other, and interoception, which reads internal state, things like hunger, thirst, temperature, pain, heartbeat, and fatigue. All eight can be dysregulated in a neurodivergent nervous system, and all eight affect daily functioning in ways that are easy to miss until you know to look for them. Someone who has spent years attributing constant fatigue to laziness might discover, once she understands interoception, that her body has simply never sent a clear "you're exhausted" signal until she's already crashed. The three internal senses are the ones most often missing from conversations about sensory experience, which means a lot of people spend years understanding some of their sensory reality while staying completely in the dark about the rest of it.

Sensitivity, Seeking, and Both at Once

Framing sensory experience as simply "too sensitive" misses one of its most important features, which is that neurodivergent sensory experience frequently involves both heightened sensitivity and sensory seeking at the same time, sometimes inside the exact same sensory system.

Sensitivity means the nervous system responds more intensely than average to incoming information, so the sound that's background noise for other people is foreground for you, the texture other people don't register is actively uncomfortable, and the smell other people notice briefly and move past sits with you, present and insistent, for the rest of the afternoon. Sensitivity produces avoidance, moving away from the input, reducing exposure, protecting yourself from things that cost more to process than they give back, the way someone might start taking the stairs permanently just to avoid the echo in one elevator at work.

Seeking means the nervous system drives toward certain inputs, often with real urgency, so you need to touch certain textures, you need certain sounds or music playing, you need movement, or deep pressure, or a precise type of input that regulates

rather than overwhelms. Seeking produces approach behavior, creating the input, pursuing it, finding it calming in ways that are truly hard to explain to someone who doesn't share the experience, like the person who runs her thumb along the ridged edge of a coin in her pocket during every stressful phone call without ever quite deciding to start doing it.

Both at once is the neurodivergent reality far more often than either extreme alone. Someone might be hypersensitive to unexpected touch and still deeply need deep pressure at the end of the day, wincing at a surprise hand on the shoulder in the morning and climbing under three blankets that same night for the weight of them. Someone else might be overwhelmed by ambient restaurant noise and still need music blasting through headphones to concentrate on a work task an hour later. A third person might be sensitive to most fabrics against her skin and still require the exact heaviness of one favorite weighted blanket to fall asleep. None of that is contradiction. It's the consistent output of a nervous system that's more responsive and more precise in its regulatory needs than the neurotypical default, and understanding your own reality means paying attention to where you're sensitive, where you're seeking, and where you're doing both in the same moment.

The Sensory Profile

A sensory profile is the pattern of sensory experience across all eight systems, and it functions less like a list of things a person can't tolerate and more like a map of how the nervous system receives and processes information, where it needs protection, where it needs input, and what conditions let it regulate instead of falling apart.

Most people build a sensory profile informally over decades without ever calling it that, the way someone might know she can't wear wool, know a restaurant has to be low-noise enough to hold a conversation, know she needs music on to concentrate, and know she has to get up and move during long meetings, all without ever connecting those observations into a single pattern. Seeing them as a profile instead of a pile of quirks means being able to spot the pattern, predict which environments and situations are going to cost the most before standing in the middle of them, and make decisions based on an actual nervous system instead of what someone thinks she's supposed to be able to tolerate.

A full sensory profile includes sensitivity level in each sense, from hypersensitive to hyposensitive, often paired with its own seeking behavior, along with the exact stimuli inside each sense that activate the most and the ones that regulate the most, how thresholds shift across the day and across a cycle for those who have one, early warning signals of overload in each system, and what reliably brings the nervous system back down. Formal sensory assessments exist and can be useful, and occupational therapists use validated tools like the Sensory Profile questionnaire developed by Winnie Dunn, but a significant amount of self-knowledge can also come from simply watching your own experience over time, noting what costs you and what regulates you across different contexts and different conditions, without needing a clinician in the room to do it.

Sound

Auditory processing differences are some of the most commonly reported sensory experiences among autistic, ADHD, and AuDHD people, and the assumption is usually that sound sensitivity means sensitivity to loud sound, when the reality runs a lot more complicated than that.

Volume is one dimension, and plenty of people are sensitive to sounds that are loud in a way that's real and significant, but frequency is often the bigger factor. Certain pitches or tonal qualities get processed as actively unpleasant however loud they are, the high whine of a fluorescent light in a waiting room, the exact frequency of one coworker's voice carrying across a shared office, the sound of a family member eating cereal at the breakfast table, a mechanical hum from an air conditioning unit that nobody else in the house seems to hear at all. None of that is simply loud. It has a quality the nervous system reads as intrusive at volumes other people would call background.

The filtering problem is what makes auditory differences so disabling in daily life. Neurotypical auditory processing includes a strong ability to prioritize one voice in a crowded room and screen out everything else, the way most people can follow a dinner conversation at a loud restaurant without much effort. In a lot of autistic, ADHD, and AuDHD nervous systems, that filtering is much less efficient, so every sound in the room arrives at roughly the same volume and priority. Picture sitting across from a friend at that same restaurant, trying to follow her story about her weekend while the music, the table behind you, the clatter of cutlery, the traffic outside, and the air conditioning are all competing for equal attention in your head at once, forcing you to piece her sentences together from fragments instead of hearing them as a whole. That isn't inattentiveness. It's processing all of it simultaneously, which is expensive, and it makes sustained attention and comprehension a lot harder than it looks from the outside.

That's why noisy environments wear a person out well beyond the immediate unpleasantness of the noise itself. The filtering that should be automatic takes active effort instead, and that effort doesn't let up for as long as the environment does. An hour in a loud restaurant can cost two hours of recovery afterward because of the processing load, not just the volume, which is part of why someone might come home from what looked like a pleasant dinner and need to lie in a dark, silent room before she can hold a conversation again.

The seeking side of this is just as real. A lot of neurodivergent people need sound to concentrate, chosen music, white noise, brown noise, nature sounds, a podcast running quietly in the background while doing something else entirely. The seeking is for a chosen auditory input that occupies the processing system enough that it can't fixate on the ambient environment instead, the way someone might put on the same three songs on repeat every single time she sits down to write, because the reliability of that same input gives her auditory system something steady to anchor to while the rest of her attention goes to the actual task.

Misophonia, the intense emotional and physical response to certain repetitive sounds like chewing, breathing, tapping, or clicking, shows up more often in neurodivergent

populations than in the general population. The response is involuntary and can include rage, disgust, anxiety, and an urgent need to leave the room, the type of reaction that makes a family dinner truly difficult when someone across the table is chewing loudly and everyone else at the table seems unbothered. It's a real, documented neurological response, and it's common among people with nervous systems like yours.
Hyperacusis, where sound gets experienced as physically painful rather than just unpleasant, also shows up more in neurodivergent populations, where a sound doesn't just register as too loud but registers as painful, the same way touching something too hot registers as painful. The auditory processing behind that is producing a real pain response, and it should be treated that way.

Touch and Texture

Tactile processing differences shape daily life in ways that stay invisible to everyone around a person, because most of the management happens silently, in the choices made about clothing and physical contact long before anyone else ever sees the outcome.
Clothing is the daily negotiation. A tag in a collar that other people forget within minutes can be tracked with insistent attention across an entire workday. A seam in a sock can be felt with every single step from breakfast to bedtime. The weight of a fabric, how rough or soft it is, how it moves against skin during movement, a waistband that presses, a strap that digs, a shirt with an inconsistent texture along one seam, none of that is a minor discomfort a person could simply choose to stop noticing. It's a continuous input the nervous system reads as intrusive, and processing it takes resources that could be spent elsewhere, which is part of why someone might come home from work and change clothes immediately, the relief of it visible on her face before she's said a word.
Temperature is a dimension of touch that gets underweighted in most conversations about tactile sensitivity. A lot of neurodivergent people have a narrower comfortable temperature range than neurotypical people, so temperatures other people call mild register as too hot or too cold, and the discomfort is immediate and doesn't fade, showing up as trouble with certain weather, trouble in spaces where the temperature can't be controlled, and strong, exact preferences about water temperature in the shower that a partner might find baffling.
Physical contact with other people runs on its own logic. A lot of neurodivergent people have strong preferences about the type of touch they can tolerate, the intensity, the location, who it's from, whether they saw it coming. Unexpected touch is often much harder to handle than touch that was anticipated, so a partner's hand suddenly on the shoulder during a still, unguarded moment can feel completely different than the same hand offered during a hug that was already coming. Light touch is often more activating than firm pressure, one person's touch registers completely differently than another's, and someone can love a person completely while still finding one form of contact from them uncomfortable in one exact setting, without that meaning anything about the relationship itself.

Deep pressure seeking often shows up alongside tactile sensitivity, drawing a lot of neurodivergent people toward weighted blankets, tight clothing, being held firmly instead of lightly, compression garments worn under regular clothes. Deep pressure engages the proprioceptive system in a way that actually regulates the nervous system, the way a teenager who can't sit still through dinner might settle almost immediately once a weighted lap pad is placed across her legs. The calming effect of deep pressure input is well documented, which is why weighted blankets and compression garments function as real tools rather than preferences.

Tactile discrimination difficulty, where the nervous system has trouble locating or identifying a sensation accurately, can produce experiences that are confusing without the right framework, not being sure whether a sensation is warmth or mild pain, not being able to pin down exactly where an itch is coming from, feeling a sensation present without being able to identify its source at all. These interoceptive and tactile discrimination experiences show up more often in neurodivergent nervous systems than in neurotypical ones.

Smell

Olfactory processing differences are probably the most underestimated dimension of neurodivergent sensory experience, likely because they're the hardest for someone who isn't experiencing them to take seriously, since the smell isn't objectively that strong to the person standing next to you.

Smell has a more direct pathway to the limbic system, the brain's emotional processing center, than any other sense, bypassing the thalamus, the brain's sensory relay station, and going straight to the amygdala and hippocampus. That means smell produces faster, more direct emotional and physical responses than any other sensory input, and it means olfactory sensitivity produces real emotional responses, nausea, anxiety, overwhelm, and distress, that aren't filtered through the cognitive processing that might otherwise soften them.

In a lot of neurodivergent nervous systems, olfactory sensitivity runs pronounced. Smells other people don't even register can be present and insistent, and smells other people call mild can be overwhelming. The response to an overwhelming smell isn't cognitive. It's physical, the nausea is real, the headache is real, the anxiety is real, and the need to leave the room is real, the way someone might have to step out of a family gathering entirely because an aunt's perfume has triggered a headache within minutes of walking in the door.

The categories that most often trigger a strong response include perfumes and fragrances, including scented cleaning products, candles, and air fresheners, food smells, especially strong or unfamiliar ones, body odor and other biological smells, chemical and industrial smells, and the smell of certain fabrics or materials fresh out of a store. What's tolerable and what isn't is highly individual, but the intensity of the response to whatever's intolerable is consistent across the population.

Environments that are functionally inaccessible because of smell almost never get recognized as an accessibility issue, the office that uses heavily scented cleaning

products every night, the restaurant where the kitchen smell overwhelms the dining room, the family member whose perfume produces a real physical response, the healthcare waiting room that smells like something that activates the nervous system before the appointment has even started. These function as real barriers, the same as any other kind, even though almost nobody treats them that way.

Olfactory seeking, the pull toward certain smells that regulate or comfort, is just as real, the smell of coffee brewing, old books, rain on concrete, a certain food or place or person, all capable of being deeply regulating and handing a real sense of safety and orientation. Knowing which smells regulate you is just as useful as knowing which ones overwhelm you.

Taste and Food

Food is where sensory processing differences become the most visible and the most socially loaded, because eating is a communal activity with real cultural weight attached, and having strong food preferences gets read by most people as difficult or picky or childish instead of what it actually is, a sensory experience that simply runs differently.

Texture aversion is the most common food-related sensory experience among neurodivergent people. Certain textures produce a real physical response, often a gag reflex or a strong urge to get the food out of the mouth immediately, the way a slimy mushroom or a stringy piece of celery can trigger a reaction a person has no control over at all. This isn't fussiness. It's a tactile processing response happening in the mouth, where the density of sensory nerve endings is among the highest in the whole body, and the same nervous system that processes clothing textures and skin contact processes textures in food with just as much intensity.

Temperature sensitivity in food is common too, so food that's slightly too hot or too cold can be actively unpleasant or flatly intolerable, and a narrower window of acceptable temperature can make restaurant eating harder since there's no control over when food shows up or what temperature it's at when it does. Flavor intensity plays a role as well. Some neurodivergent people are hypersensitive to flavor and find strongly seasoned food overwhelming, others are hyposensitive and find most food bland without a lot of extra seasoning, and others chase intense flavor as its own form of sensory input, drenching everything in hot sauce not out of preference but because it's the only way the dish registers as flavorful at all.

The safe food, the one or two things that always work and never trigger an adverse response regardless of state, functions as a regulated sensory experience in a day that isn't otherwise guaranteeing anything reliable at all, the plain buttered noodles a person has eaten several nights a week for a decade, or the exact same breakfast every single morning regardless of what else is happening in her life. The criticism that eating the same thing constantly is limited or unhealthy misses what the safe food is actually doing, providing reliable sensory and nutritional input when everything else in the day has been variable and demanding.

The social dimension carries its own cost, family meals where nothing on the table works, restaurants where the menu holds almost no safe options, social events built around food where a person's relationship to it gets read as a rejection of the host, work lunches where an eating pattern gets commented on by a well-meaning colleague. All of that requires management other people never have to think about.

The connection between food and interoception shows up here too. A lot of neurodivergent people have trouble reliably detecting hunger, so a person can go long stretches without eating, not out of choice, but because the hunger signal isn't registering clearly enough to notice, until she's suddenly shaking and irritable at her desk with no memory of the last time she actually ate. Add food sensory difficulty to unreliable hunger signals and eating enough, reliably, of things the nervous system can actually handle becomes a real logistical challenge that should be taken seriously instead of filed under self-neglect.

Sight and Visual Processing

Visual processing differences are common and frequently misread, because neurotypical culture treats vision as the most trustworthy sense, and the assumption tends to be that visual differences mean a problem with acuity, how sharp someone's vision is, rather than a difference in how the brain processes what it takes in.

Fluorescent lighting is the most commonly reported visual difficulty among neurodivergent people, and the response tends to run well past simple discomfort with brightness. Fluorescent lights flicker at a frequency most people's visual systems filter out automatically, and some neurodivergent nervous systems don't filter it, or filter it inconsistently, producing a flicker under the surface that builds into headaches, eye strain, rising anxiety, and difficulty concentrating the longer the exposure lasts, the way an eight-hour shift under office fluorescents can leave someone with a pounding headache by 3pm that a coworker at the next desk never experiences at all. Switching to natural or incandescent lighting isn't a preference. It's a real sensory accommodation.

Visual clutter is its own significant dimension. Spaces with a lot of competing visual information, multiple patterns, many objects at different distances, busy wallpaper or flooring, are truly hard to process, and the visual system trying to take in all of it at once carries a higher cognitive load in a neurodivergent nervous system than in a neurotypical one. Decluttered spaces often feel calming because they lower the processing demand rather than because of anything to do with aesthetics, which is why a home office that looks almost bare to a visiting friend might be the only room in the house where its owner can actually think clearly.

Movement in peripheral vision is often highly activating, a screen flickering in the corner of a room, people walking past in an open-plan office, anything moving at the edge of the visual field capable of repeatedly triggering the attention system and making sustained concentration a lot harder. That isn't distractibility in the way people mean it as a criticism. It's the visual system doing exactly what it's built to do, detecting movement, without the filtering that would let the brain register the movement as non-threatening and hand attention back to the task.

Color sensitivity runs in both directions. Some neurodivergent people find certain color combinations or intensities visually painful or overwhelming, while others find certain colors deeply regulating and spend real time arranging their environments around palettes that support their nervous system, which is why interior design choices that look like personal taste from the outside often reflect sensory regulation from the inside. Pattern processing in a lot of neurodivergent nervous systems is a strength and a source of overwhelm at the same time. Someone might notice patterns in visual fields that other people never register, which can mean being unable to stop seeing something once it's been noticed, being unable to look at a room without tracking its organizational structure, or a small visual inconsistency, one picture frame slightly crooked on an otherwise straight wall, producing a low, persistent discomfort that won't quit until it gets fixed.

For those on the autism spectrum and with other neurological differences, the world can often be an intense sensory experience. Everyday sights, sounds, smells, textures and tastes that may go unnoticed by neurotypical individuals can be amplified and overwhelming for neurodivergent people. This sensory overload can lead to meltdowns, shutdowns, and a desperate need to *stim* (self-stimulatory behaviour) to regain a regulated state. Understanding stimming and sensory issues is key to supporting the neurodivergent community.

Sensory Processing Differences
A landmark study by Dr. Grace Baranek et al. (2013) found that children with autism showed definite differences in sensory responsiveness compared to neurotypical controls. Sensory over-responsivity, under-responsivity, sensory seeking, and sensory cravers were all identified as patterns in autistic children. Bright lights, loud noises, strong smells, certain textures of food or fabrics – any of the senses can be exaggerated or dulled in autism.

These sensory differences start from a young age but tend to become more pronounced in autism as the brain develops differently. A study by Dr. Filliter et al. (2015) indicated that even infants later diagnosed with autism show diminished pupillary reaction to sensory stimuli, suggesting very early neurological differences in processing external inputs.

For many autistic adults, sensory issues remain a daily challenge. A large survey study by Dr. Elwin et al. (2012) found that 94.8% of autistic adults reported sensory hypersensitivity in multiple domains like sight, hearing, smell, taste and touch. Certain sensory experiences that may go unnoticed or seem unremarkable to neurotypical individuals can be perceived as painful and overwhelming for autistic people.

Stimming as a Coping Mechanism
In the face of sensory overload, autistic individuals often turn to repetitive behaviours known as "stimming" to regain a regulated sensory state. Stimming refers to self-

stimulatory behaviours like rocking, spinning, hand-flapping, echolalia (repeating words or sounds), and many other repetitive movements and vocalisations.

While these behaviours may seem odd or disruptive to neurotypical observers, stimming is an **important self-regulating function** and **coping mechanism, not to mention that it is sometimes a way to express emotions like joy or excitement or frustration**. A study by Dr. Boyd et al. (2012) found that suppressing stimming can increase anxiety, stress, and self-injurious behaviours in autistic individuals. On the flip side, allowing stimming leads to positive outcomes like improved attention, better academic performance, and reduced aggressive behaviour.

From my own professional experience working with autistic clients, I've seen how stimming provides a calming, regulatory effect during times of sensory overload and emotional dysregulation. A wide range of repetitive behaviours, including : Hand-flapping, rocking, tapping, stretching, puzzles, sorting things, lining things up / arranging things, singing, echolalia, reading, gaming, or reciting a familiar script can be an autistic person's way of re-centering themselves in an overwhelming situation.

The Need for Accommodation
Even with coping strategies like stimming, navigating a world of sensory extremes is an immense daily challenge for the neurodivergent individual. And all too often, public spaces, workplaces, and schools remain vastly ill-equipped to accommodate sensory needs.

A large study by Dr. Robertson and Simmons (2015) found that sensory sensitivity significantly impacted anxiety levels and ability to participate in activities for autistic adults and children. Sensitivity to lighting, noise levels, crowding and other sensory stressors severely limited environments that autistic individuals could navigate.

Simple accommodations like access to quiet spaces, noise-cancelling headphones, dimmed lighting, and avoiding overcrowding can drastically improve accessibility. And moreover, greater public education and acceptance of stimming as a coping mechanism is vital.

More Than Just Autism
It's important to note that sensory processing issues and the need for stimming behaviours extend well beyond just the autism community. Sensory differences are common in other neurological conditions like ADHD, anxiety disorders, OCD, PTSD, and more.

A comprehensive study by Dr. Hazen et al. (2014) found that adults with anxiety and depressive disorders showed significantly more sensory over-responsivity compared to neurotypical controls. Self-injury, emotional dysregulation, and impairment in daily functioning were closely linked to sensory overwhelm in these individuals.

For those with PTSD, certain sounds, smells, or other sensory inputs can trigger intense flashbacks or dissociation, as the brain struggles to differentiate between past trauma and present experience. A study by Dr. Hoffman et al. (2018) indicated that successfully integrating sensory input is a key part of PTSD recovery.

No matter the neurological difference, sensory processing issues and stimming behaviours represent a core need for accommodation, acceptance and understanding across the neurodiversity spectrum.

Moving Toward a Supportive Society
We must Continuing to raise awareness about the realities of sensory differences and the importance of stimming as a coping mechanism is a must. Educating employers, teachers, service providers, public venues and the general public is paramount.

Simple changes in lighting, sound mitigation, provision of quiet spaces, and acceptance of stimming behaviours can dramatically improve access and inclusion for neurodivergent individuals. Garnering support and understanding from the community to We must move beyond viewing neurodivergent needs as odd behaviours, and recognize them as vital functions for navigating an intense sensory world, is imperative. An Autistic person needs a lifestyle that does not lead to burnout and adequate supports as prevention are essential. Acceptance of stimming would go a long way towards supporting, not only neurodivergent individuals but individuals in general whom benefit from these behaviours.

With increased societal support, those with sensory processing differences can thrive, participate, and contribute in all areas of life – rather than being forced to constantly mask their needs or withdraw from overwhelming environments. True inclusion across the neurodiversity spectrum starts with validating diverse sensory experiences.

At STAR Institute, our mission is to advance knowledge and understanding of sensory health to support individuals and families navigating sensory differences.
Neurodiversity—a term celebrating the natural diversity in human neural processing—encompasses a wide range of cognitive, sensory, and emotional differences. Much like biodiversity, neurodiversity reflects the diverse ways our nervous systems and brains experience and process the world. By examining neurodiversity through a sensory lens, we aim to highlight the central role of sensory health in shaping the experiences and well-being of neurodivergent individuals.
Neurodivergent *(Also, neurodistinct, neurounique, neurominority, neuro-oppressed, neuroatypical.)*A way of processing/experiencing life that is outside the majority. Neurodivergent diagnoses include ADHD, anxiety, autism, depression, dyscalculia, dyslexia, dyspraxia, FAS, gifted, learning differences, OCD, SPD, Tourette's, twice exceptional.
Antonyms: neuromajority, neurotypical

What Does a Sensory Lens Mean?

Viewing **neurodiversity through a sensory lens** involves understanding how individuals perceive and process sensory information—sights, sounds, tastes, textures, moving and being moved—in ways that differ from the majority. It also encompasses how individuals respond intentionally and adaptively to sensory input. Sensory processing refers to the brain-body's ability to interpret and react to sensory stimuli, a process that varies significantly among individuals. For many neurodivergent people, sensory experiences may be amplified, muted, or processed uniquely, profoundly influencing their daily lives, preferences, and challenges. Additionally, they may experience differences in responding to sensations, affecting development of posture, motor skills, and motor planning.

The Spectrum of Sensory Experiences

Neurodivergent individuals often experience unique sensory modulation, which can manifest as heightened sensitivity (where sounds, sights, and other sensations feel overwhelmingly intense) or reduced sensitivity (where the world is experienced as muted). Some individuals may have a mixed profile, with heightened sensitivity in some sensory systems and reduced sensitivity in others, and their responses can be multi-faceted and fluid. Behavioral responses to these sensory differences vary widely, with some individuals seeking out strong sensations to feel grounded and others avoiding sensation to manage overload, and sensory processing can fluctuate based on factors like stress, fatigue, or environmental changes. The development of posture relies heavily on sensory integration, particularly through the vestibular and proprioceptive systems, which help maintain upright positions and coordinate movements. Effective motor planning, or praxis, is also dependent on the integration of tactile, vestibular, and proprioceptive systems, enabling the planning and execution of purposeful movements such as reaching, grasping, and navigating through the environment.
Learn More >>>

Sensory Differences and Daily Life

At STAR, we witness firsthand how **differences in sensory integration and processing** can profoundly impact daily life. Sensory challenges can affect everyday activities, from getting dressed to navigating social situations. For example, someone with heightened sensitivity might find the sound of a crowded café overwhelming, making it difficult to enjoy a meal with friends. Conversely, an individual with lower sensitivity may seek out intense sensations, like loud music or strong flavors, to feel more engaged with their environment.
Sensory differences also **influence how individuals interact with their surroundings**. A child may struggle to focus in a classroom filled with various stimuli, such as the ticking of a clock or the buzzing of an air conditioner, as these sounds compete for their attention. Alternatively, they might avoid activities that involve certain textures or

sensations, leading to challenges in social participation. Ultimately, understanding and addressing these sensory processing differences is crucial for inclusion.

Embracing Sensory Inclusivity

Recognizing sensory differences as a fundamental aspect of the human condition aligns with STAR's commitment to sensory health. Here's how we can foster inclusion:
Designing Inclusive Spaces:

- Creating low-sensory environments—with adjustable lighting, quiet zones, and noise-canceling options—can reduce stress and improve accessibility.
- Providing standing tables and seating that can be adapted/adjusted to support different shapes and sizes of body and different postural needs.
- Offering movement, supporting the use of headphones for people who need loud music, letting students/employees chew gum etc.

Promoting Awareness: Educating families, educators, and employers about sensory processing differences fosters empathy and understanding. Simple accommodations can make a significant difference.
Valuing Sensory Needs & Preferences: Honoring individual sensory needs as valid and important empowers not just neurodivergent individuals but all of us. We all thrive when we can support our bodies sensory needs, this benefits our energy expenditure, ability to selectively pay attention, social interactions and so much more.

Clinical environments are often organised around neurotypical/general population expectations of communication, attention, pacing, and sensory tolerance. For neurodivergent people, including autistic individuals, people with ADHD, these expectations can increase distress, reduce engagement, and shape how behaviour is interpreted by clinicians. McGreevy et al. (2024) propose an experience-sensitive approach that centres neurodivergent perspectives and frames behaviour in relation to different cognitive styles rather than as decontextualised deficit. This approach argues that many experiences commonly interpreted as emotion regulation deficits are better understood in relation to the upsetting, overstimulating, and stigmatising experiences young people face in everyday contexts (Pavlopoulou et al., 2025a, 2025b).
Why clinical environments can become barriers
Many current clinical pathways are organised around neuro-normativity: implicit assumptions about how a person should communicate, maintain attention, regulate emotion and tolerate sensory input. Clinical settings are not neutral: bright lights, background noise, unclear routines, long waiting times, rapid questioning, pressure to sustain eye contact, and vague expectations about what engagement should look like can all affect how a neurodivergent person behaves. Sensory processing differences are highly relevant: atypical sensory experiences are common and can shape attention, comfort, and participation across settings (Robertson & Baron-Cohen, 2017). In a systematic review and meta-synthesis, Brede et al. (2022) found that autistic adults

often experienced mental health services as lonely, difficult, and poorly adapted, with a strong need for flexibility, collaboration, and empowerment.

From deficit models to contextual understanding

The experience-sensitive framework represents a shift away from interpreting neurodivergent behaviour primarily through deficit-based models. Behaviours are approached as meaningful responses to situations rather than as isolated markers of impairment. This move is consistent with the double empathy problem, first articulated by Milton (2012), which proposes that communication difficulties between autistic and non-autistic people often reflect a mutual mismatch in understanding rather than a one-sided failure. This framework emphasis that not only to observe behaviour but also examine how their own assumptions and the clinical context shape what behaviour appears to mean. A person who avoids eye contact may be regulating cognitive or sensory load. A child who becomes agitated during an assessment may be responding to uncertainty, overload, or poorly scaffolded demands. An adolescent who appears withdrawn may be protecting themselves from social misunderstanding.

Extending the framework beyond autism

A recent study of neurodivergent adolescents' perspectives on emotion regulation in autism and ADHD found that accounts of dysregulation are often based on adult observations anchored in neurotypical expectations of emotional responding. Their findings suggest that emotional distress frequently emerges in the context of everyday burdens, including social conflict, pressure to mask, self-doubt, overstimulation, and sensory mismatch (Pavlopoulou et al., 2025a). A companion qualitative paper by Pavlopoulou et al. (2025b) similarly found that adolescents with ADHD and/or autism described upsetting experiences in terms of social dislocation, alienation, conflict, masking, embarrassment, and overstimulation. Together, these findings suggest that what looks clinically like poor regulation may often reflect the cumulative burden of repeated mismatch between person and environment. This is especially important in neurodivergent presentations, where sensory sensitivity, attentional variability, impulsivity, overwhelm, and fluctuating self-regulation can all interact.

Assessment and formulation

An experience-sensitive approach changes what assessment is trying to do: rather than documenting only what behaviours occur, it asks why these responses may have arisen in that context. It recommends looking at sensory load, cognitive demands, pace, predictability, relational safety, and environmental fit. Assessment becomes more than symptom counting, it becomes a process of understanding the interaction between neurodivergent characteristics and the immediate ecology of the clinical encounter.

Engagement and outcomes

When neurodivergent behaviour is repeatedly interpreted through a deficit lens, clinical encounters can become alienating, reducing trust, limit disclosure, and discourage future help-seeking. Autistic adults often report harmful service experiences when flexibility and collaboration are absent (Brede et al., 2022). Similarly, a study showed how stigma contributes to health and healthcare disparities for autistic individuals across the life course (Hotez et al., 2024). By contrast, a framework that centres lived experience, recognises environmental contributors to distress, and uses respectful

language is more likely to support engagement. Pavlopoulou et al. (2025a) found that neurodivergent adolescents emphasised the importance of accepting environments, flexible supports, co-regulation, and the ability to manage distress without stigma. These are not peripheral issues; they are central to whether care feels safe, usable, and effective.

What is sensory processing?
Sensory processing is how your brain interprets information received from your senses (this information is known as 'sensory input'). This process is how you feel and react to things in your environment and sensations in your body.
The five main senses are:

- **sight** (sensory inputs: light; colour; pattern)
- **hearing** (sensory input: sound)
- **smell** (sensory input: odour/scent)
- **taste** (sensory input: flavour)
- **touch** (sensory inputs: texture; pressure; heat/cold).

Other senses include:

- **balance** and **movement** ('vestibular') – keeping your body balanced and moving how you expect it to
- **spatial awareness** ('proprioception') – knowing where your body is in relation to other objects
- **awareness of internal states** ('interoception') – knowing whether you are hungry, thirsty, hot or cold, need the toilet, are ill or injured.

What are sensory processing differences?
Sensory processing differences mean you experience input from the senses differently to other people.
Sensory processing differences are not the same as having medical or physical problems with your eyes, ears, nose, tongue or skin. Sensory processing happens in the brain. It is how you make sense of the information coming from your senses.
For example, you can have no problems with your eyes or eyesight, but if you have sensory processing differences you may find bright lights overwhelming or struggle to process dense written information.

Types of sensory processing difference

- **Hyper**-sensitivity – this means you are much **more sensitive** than other people. You may avoid or become irritated or distressed by too much sensory input. Too much input can lead to 'sensory overload'. You may also enjoy your sensitivity to favourite sensory inputs.
- **Hypo**-sensitivity – this means you are much **less sensitive** than other people. You may not notice sensory inputs and may become bored, frustrated or distressed by too little sensory input. You may seek out more intense sensory experiences in order to get more input.

Some people have a **mixed and/or varying sensory experience**, including both hyper-sensitivity and hypo-sensitivity. This can mean you have different levels of sensitivity in different senses, or even to different inputs within the same sense. Your sensitivity may vary over time, in different environments or due to other factors, such as your mental and physical health. For more information about this, read ‘Mixed and varying sensory experiences’ in the next section.

Example: hearing

If you are **hyper-sensitive**, sounds may seem much louder and sudden noises may be more distressing to you than they are to other people. You may avoid loud places, cover your ears when you hear noise (this is known as ‘sensory-avoiding behaviour’) and become distressed by unexpected noises or if your environment is too loud for too long. You may also enjoy your sensitivity to pleasing sounds.

If you are **hypo-sensitive**, you may not notice sounds, for example people calling your name. You may become bored or distressed from not getting enough input. You may seek out more sound input by listening to loud music or by making noises yourself or banging/tapping things to make noise, for example (this is known as ‘sensory-seeking behaviour.)

If you have a **mixed and/or varying sensory experience**, you may be hyper-sensitive to sound in some situations or at some times and hypo-sensitive to sound in other situations or at other times.

Note that sometimes people refer to sensory processing differences as 'sensory processing disorder’ (‘SPD’), and some people may have this mentioned as part of a diagnosis. Although ‘sensory processing disorder’ is not a formal diagnosis in the medical literature, sensory differences can be identified and support provided.

Sensory processing differences in autistic people

Exactly how many autistic people experience sensory processing differences is not known. Research suggests it is between 53% (just over half) and 95% (almost all). People often describe sensory processing differences as ‘sensory issues’ or, for hyper-sensitivity, as ‘sensory sensitivity’.

Resources:

Autistic sensory experiences

Understand a wide range of sensory processing differences, covering:

- hyper-sensitivity and hypo-sensitivity
- common sensory triggers
- reactions and challenges faced
- self-management and support.

Get the resource

My sensory experience

You can type into or print off this ‘do-it-yourself' resource. It can help you think about:

- your experience of sensory inputs

- your triggers of hyper-sensitivity (if you experience this)
- your reactions to sensory inputs and challenges you face
- how you can manage sensory input and how other people can support you.

Get the resource

Why do autistic people have sensory differences?

Evidence suggests that differences in the activity and connections in the brain and nervous system of autistic people can lead to differences in processing sensory information.

Some research suggests having more activity and connections in some brain areas is linked to sensory hyper-sensitivity, and less activity and connectivity is linked to hypo-sensitivity. But this research often didn't include enough people to be sure.

Common triggers of hyper-sensitivity

Although the triggers of sensory sensitivity are not the same for everyone, common examples include:

- **sight**: bright and/or fluorescent lighting, bright sunlight, visually crowded or cluttered environments, patterned wallpaper/carpets, eye contact
- **sound:** loud speech, music, electrical technology 'humming', unexpected noises (e.g. alarms, sirens), background noise (e.g. in a busy office)
- **touch:** crowded places, unexpected touch, wind/rain on skin, fabric textures (e.g. clothing, furniture coverings, bedding), some food textures (e.g. soft or slimy foods)
- **smell:** perfumes/deodorants, body odours, cooking odours
- **taste:** certain flavours
- **awareness of internal states (interoception)**: feeling too hot or cold.

For more information about sensory triggers, see our Autistic sensory experiences resource.

Some environments can be particularly challenging, especially where there is a lot of sensory input that you have little or no control over.

Examples of challenging sensory environments

-

Shopping centres

Shopping centres can be overwhelming because they can:

- be very crowded and hot
- have bright, fluorescent lighting
- be visually chaotic, with different branding and displays from each shop
- play loud music, often clashing music from many different shops
- have busy food halls with many different smells

- be difficult to navigate, for example to find the exit or the toilets.

Our Too Much Information campaign film from 2019 shows an example of an autistic child experiencing sensory overwhelm in a shopping centre:

At school

Being at school can be overwhelming because:

- classrooms can be too hot or cold and have bright, fluorescent lighting or glare from sunlight
- walls can be visually crowded with screens, posters, notices and decorations
- hallways can be busy between classes, with lots of people pushing past
- playgrounds can be loud and busy at break times, with people shouting, running and playing sports
- school uniforms can be uncomfortable to wear.

Mixed and varying sensory experiences

Sensory processing is complex. It is common for an autistic person to have a mixed sensory experience, with both hyper- and hypo-sensitivity across their senses, or even within the same sense.

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Examples:

- **Person A** is much more sensitive to light and sound, and much less sensitive to smell and taste than other people.
- **Person B** enjoys listening to loud music and seeks out live music events but also finds unexpected loud noises alarming and sometimes overwhelming.

Some autistic people have said they can tolerate certain sensory triggers for a time, but their ability to do so is affected by factors including:

- being tired/having low energy
- it being the end of the day, week or school term
- not keeping up with self-care
- not eating properly
- masking for too long
- not being in good physical health
- being stressed, having anxiety and/or other mental health problems.

When these factors are affecting a person, sensory triggers may be more likely to lead to ‘sensory overload’.

Other sensory differences in autistic people

Some autistic people also experience:

- Irlen syndrome – where hypersensitivity to some frequencies of light causes the brain to process visual input incorrectly, with symptoms including distorted/ blurred vision and reduced attention span
- synaesthesia – where sensory input from one sense triggers an experience in a difference sense (e.g. hearing a sound triggers a taste)
- hyperacusis – where everyday sounds seem much louder than they should and can sometimes cause pain.

What is sensory overload?
Sensory overload is when a person has become overwhelmed by sensory inputs. They have taken in too much sensory information, and they cannot process any more.
'Sensory overload' is not a clinical term. It is used by autistic people to describe how sensory hyper-sensitivity combined with experiencing sensory triggers can lead to overwhelm and distressed behaviour.
Although sensory overload can involve more than one sense, some people find that being overwhelmed in just one sense (such as smell or sight) can be enough to cause a sensory overload.

Signs of sensory overload

Autistic people have said the signs of sensory overload include:

- not speaking or communicating
- appearing disengaged or 'closed off'
- having difficulty focusing
- stimming
- feeling over-excited
- pacing or rocking
- higher than usual sensitivity to sensory input
- strong physical and emotional responses (crying, shouting, running away or hiding, resisting touch).

The impact of sensory processing differences
Sensory processing differences can impact every area of life, including:

- eating
- sleeping
- learning and working
- socialising, family life and relationships
- navigating the environment and being in public places
- self-care, including washing and cleaning
- physical health (e.g. migraines, nausea, discomfort, injury, pain)

- mental health and emotional wellbeing (e.g. anxiety, stress, masking, burnout).

For more detailed information about common challenges, see our Autistic sensory experiences resource.

Autistic people say their sensory processing differences can be misunderstood by others. For example, if they are hyper-sensitive and avoid a source of sensory input, others can assume they simply dislike it and may describe their behaviour using unhelpful labels such as 'picky' or 'fussy'.

Sensory processing differences mean autistic people can feel the same thing very differently to other people. Sensory inputs that other people barely notice can cause discomfort and even pain, and they may need to leave places or avoid things because of this. This is not the same as choosing to avoid something you dislike.

Identifying sensory processing differences

Autistic people, their parents/carers and professionals such as teachers may notice certain reactions in response to sensory processing differences. For examples of common reactions, see our Autistic sensory experiences resource.

Sensory differences in the criteria for an autism diagnosis

In an autism assessment, how a person reacts to sensory input (sensory-seeking or sensory-avoiding behaviour, or not noticing or reacting to sensory input) is considered when assessing the person's behaviours and interests.

It is one of the four examples of what the diagnostic criteria call 'restricted and repetitive behaviours and interests' (RRBIs):

- focused and dedicated interests
- repeated movements and behaviour
- preference for order, predictability and routine
- sensory differences.

Two of these four examples must be present for an autism diagnosis. Sensory processing differences are not required for an autism diagnosis but may count towards a diagnosis.

Autistic people generally talk about the four 'behaviours and interests' characteristics separately rather than grouping them together as the diagnostic criteria do.

Self-management and support strategies

Self-management strategies

Keep a sensory diary

Keep a diary to identify patterns in your/your child's sensory experience, including:

- sensory triggers
- hyper- or hypo-sensitivities and/or any related behaviours noticed
- times of the day you/they experience high or low energy
- what helps during sensory overload
- what helps with recovery after sensory overload.

The diary may help you to understand your/your child's sensory profile, so you can answer questions including:

- What do you/they need more or less of?
- What sensory inputs do you/they like and dislike?
- Could routines or scheduling help to manage sensory differences?
- What activities calm you/them, and/or help to manage sensory differences?

You may also find our 'do-it-yourself' My sensory experience resource helpful.

Use sensory items and activities

Autistic people have found these items and activities helpful:

- ear-defenders or noise-cancelling headphones (though using these a lot may increase sensitivity over time)
- sunglasses or tinted glasses
- sensory or 'fidget' toys
- weighted blankets/vests (the Royal College of Occupational Therapists recommends that an occupational therapist assesses the use of these by adults and children to help you make an informed choice, though they are widely available)
- swinging
- wobble cushions.

Some autistic people have a 'sensory kit' or 'sensory box' to gather together the items they use to manage their sensory experience.

General support strategies

Evidence from autistic people, research and professionals suggests some general approaches to supporting an autistic person with sensory differences:

- try to understand the person's sensory profile and help them to understand it (which may also help them to know when to ask for help):
    - identify their triggers and the early signs of sensory overload
    - find ways to reduce or remove triggers, accommodate the person's sensory needs and help the person to manage their sensitivities
    - learn what helps when the person is experiencing sensory overload
- provide a 'safe space' away from sensory triggers
- tell the person what to expect before going to places or doing activities that may have a lot of sensory triggers (such as a shopping centre)
- do not judge or question an autistic person's sensory experience or need for sensory tools
- understand that a sensory sensitivity and avoidance is not the same as disliking something, and exposing the person to known triggers can be distressing and painful

- be aware that avoidance can sometimes be a ‘double-edged sword’ – if the person gets used to low sensory input, they may become even more sensitive to the trigger
- having their pet with them may help them to feel calm and manage sensory differences.

If the person is distressed or experiencing sensory overload:

- remove any trigger(s) you can – this could mean turning off lights, music or a TV, stopping other sources of noise, removing things that smell
- if you cannot remove the triggers (in a public place, for example), try to move the person to a quieter environment with fewer or no triggers – this may be a dedicated quiet space, another room or outside
- reassure the person that they are safe
- if a person is stimming to self-regulate, do not try to stop them unless they are hurting themselves
- provide sensory tools or use calming activities from their sensory kit/box or ‘sensory diet’ (see Professional support for sensory differences below)
- keep speech and information to a minimum (they are already overloaded by sensory information and may not be able to process any more, or doing so may overwhelm them further)
- try not to touch them if they are sensitive to touch, or only do so in ways you know are helpful (for example, if deep pressure is known to soothe them)
- give them enough time and space to recover.

Professional support for sensory differences

Sensory assessment by an occupational therapist
If sensory processing differences are constant and having a negative impact on your (or your child’s) everyday life, you may wish to seek professional support from an occupational therapist (OT).
It is recommended that any therapy or intervention for sensory processing differences should be informed by a clinical assessment carried out by an occupational therapist. This will identify your (or your child’s) sensory differences and allow for individual adjustments and support to be put in place.
However, it can be difficult to access an occupational therapist assessment due to waiting times and the cost of private services.

Therapies and interventions
It isn’t clear how effective current sensory therapies and interventions for autistic people are. Research shows mixed results, with both positive and negative findings.
More research is needed, but therapies and interventions should always follow basic best practice principles.
Best practice principles
When considering a therapy or intervention, it is important:

- to ensure the autistic person is central to all decision-making
- to consider potential negative effects on the autistic person
- that the therapy is adapted to meet the autistic person's specific needs and delivered by professionals with good autism knowledge
- that the impact of the therapy is carefully monitored and regularly reviewed.

Sensory integration therapy

Sensory integration therapy is a clinic-based intervention using sensory activities that aim to introduce the person to a range of sensory inputs to help increase their comfort zone. For example, the person gradually gets used to the feeling of new sensations and textures against their skin, or different smells, sounds, and tastes. It is important that this therapy is delivered by a trained therapist with knowledge of autism.

Limited research suggests sensory integration therapy is generally effective in supporting autistic people with sensory differences. It may reduce distressed behaviour related to sensory differences in autistic children. More research is needed.

Sensory diets

Led by an occupational therapist, a sensory diet is a set of planned sensory-motor activities scheduled throughout the day. It focuses on working with the person to increase their level of comfort around different sensory inputs and helping them to regulate their sensory experience.

Sensory circuits

Led by an occupational therapist, sensory circuits are a series of activities designed to help with balance, movement and spatial awareness, such as:

- activities to stimulate the central nervous system – e.g. spinning, skipping, and star jumps
- organising activities in which the brain and body work together – e.g. balancing
- calming activities to provide awareness of the body in space – e.g. deep pressure and muscle work.

Have you ever felt like your nervous system is firing on all cylinders, amplifying every sensation around you? In those moments, even the slightest touch or sound that would typically be bearable catalyzes you over the edge. To those on the outside, it may seem like a simple emotional outburst, but there's more than meets the eye. It's a glimpse into the hidden world of sensory overwhelm. When sensory overload and emotions collide, it can be utterly disorienting.

As someone who has personally navigated the disorientation of sensory overload, I know the profound impact it can have on our emotions. It can feel like being caught in a whirlwind of confusion, chaos, and agitation. The overwhelming nature of sensory overload often leads to feelings of isolation and a sense of not truly understanding oneself. Before I gained a deeper understanding of these experiences through a sensory lens, I struggled to make sense of those moments. All I knew was that I would have periods of feeling disconnected from myself, and my emotional responses seemed amplified beyond my control. This often led to self-criticism and the creation of new rules to follow in an attempt to regain a sense of stability.

Since gaining a sensory lens, I've discovered valuable strategies to navigate the challenges of sensory overwhelm while maintaining a sense of groundedness. Through this journey, I've realized the fundamental connection between sensory regulation and emotional regulation. Without achieving sensory regulation, it becomes challenging to achieve emotional regulation. This newfound understanding has empowered me to embrace the following practices:
Cultivating self-compassion during sensory hot moments, recognizing that my reactions result from sensory dysregulation rather than personal shortcomings.
Prioritizing and honoring my sensory needs, acknowledging their significance, and incorporating them into my daily routines and environments. By giving them the attention they deserve, I am better equipped to navigate the world with greater ease and well-being.
While sensory sensitivities can be challenging to live with, there are strategies and practices we can use to manage these experiences. In this blog post, we'll:

- Explore the intricate relationship between sensory overload and emotions
- Uncover practical strategies to help you conquer the sensory storm

So let's dive in with some basic definitions.
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What Is Sensory Overload?
Within the depths of our intricate neural pathways lies the phenomenon known as sensory overload—an experience that exists within the interplay between our brains and the sensory world. Sensory overload happens when our brains are overwhelmed by too much sensory input, such as sights, sounds, smells, tastes, and touch. It's a world where every sight, sound, smell, touch, and taste takes on an intensity that can be overwhelming.
When sensory overload occurs, our nervous system becomes bombarded by a surplus of sensory information, disrupting its delicate balance. It's as if the volume dial on our senses is cranked up to the maximum, flooding our brains with overwhelming stimuli. When we are in a state of sensory overload, regulating our behaviors and emotions becomes much more difficult. Our stress response takes over until we can get back to sensory safety.
Sensory Overload Triggers
Sensory overload triggers can vary from person to person, as each individual has unique sensory sensitivities. Common triggers include:

- loud noises
- bright lights
- strong smells
- crowded spaces
- high-frequency sounds or too many sounds
- certain textures

- extreme temperature (heat and cold)
- too much information at once
- intense emotions in the atmosphere
- too much task switching in a short period of time

For some, a single trigger can be enough to push them into a state of overload, while others may require a combination of sensory stimuli to reach that point.

Symptoms Of Sensory Overload

Sensory overload can show up differently in each person. Some common experiences include:

- heightened anxiety
- irritability
- restlessness
- difficulty concentrating
- physical discomfort
- difficulty regulating emotions
- paralysis or difficulty making decisions
- meltdowns, or shutdowns

Note in the case of shutdowns a person may become incredibly tired, foggy, and disconnected from their experience

These symptoms are the body's way of reacting to an overwhelming sensory experience, and they can significantly impact an individual's emotional well-being.

Sensory Overload And Emotions

The relationship between sensory overload and emotions is deeply intertwined. When sensory input overwhelms the brain, it can lead to emotional responses ranging from frustration and anger to anxiety and sadness to emotional numbness. Sensory overload can intensify these emotions, making it challenging for neurodivergent people to regulate our emotions. It's essential to understand that emotional responses during sensory overload are not a sign of weakness but rather a natural reaction to an overwhelming situation and an agitated nervous system!

Sensory Overload's Impact On Emotions

When we are sensory overloaded, our nervous system is like a flaming engine running on all cylinders. We are:

- Have a lower patience threshold
- More likely to experience reactionary emotions quickly
- Have more difficulty tuning down our emotions to a tolerable

Sensory overload can cause several negative emotions, such as anxiety, anger, and frustration. This is because when we are overwhelmed by sensory input, our nervous system goes into a state of hyper or hypo arousal, which activates the fight-flight-or-freeze response. This can lead to feelings of panic, agitation, and a sense of being out

of control. Additionally, when the brain receives too much information from the senses, focusing, concentrating, and making decisions can be challenging. This can exacerbate feelings of confusion, anxiety, and frustration.
Alternatively, if we respond to sensory overload by dipping into a hypoarousal state, we may experience a wave of exhaustion and feel as if life feels less real or foggy. This can result in a state of faux regulation where we look emotionally calm, but the body is actually frozen in a stressed state.

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Sensory overload can have a significant impact on emotional well-being. The relentless onslaught of sensory stimuli can disrupt our internal harmony and leave us struggling to process and manage our emotions effectively. Over time, this can manifest as:

- heightened stress
- increased anxiety
- a diminished capacity to navigate the demands of everyday life

Understanding the intricate connection between sensory overload and our emotional landscape is paramount in nurturing our emotional resilience and fostering overall well-being. For neurodivergent people, integrating sensory regulation into our emotion regulation strategies becomes crucial for finding balance and thriving in a beautifully diverse world.

Navigating Sensory Overload

Nurturing our sensory system plays a key role in taming emotional dysregulation. By mindfully managing our sensory environment, identifying triggers, and implementing soothing strategies, we can create a haven of calm amidst the storm. Equally important is cultivating awareness of the subtle signals that warn us of impending sensory overload, enabling us to take proactive measures to prevent our nervous system from reaching its tipping point.
Though the path of navigating sensory overload may be winding, there are a multitude of strategies and techniques that can help us navigate the intricate dance between sensory sensitivities and emotional well-being. Embracing the power of a sensory safety plan can serve as a guiding light in this transformative journey.

Creating A Sensory Safety Plan

When sensory overload threatens to overpower our senses and emotions, having a well-crafted sensory safety plan can provide a much-needed lifeline. By understanding our specific sensory needs, identifying triggers, and implementing personalized strategies for managing sensory input, we can create a sanctuary amidst the chaos.
In this section, we delve into the art of crafting a sensory safety plan, offering guidance and insights to foster a harmonious relationship with the sensory world while nurturing a sense of agency along the way.

What Is A Sensory Safety Plan?

A sensory safety plan serves as a valuable tool, empowering us to navigate the intricate world of our sensory experiences with greater ease. It allows us to delve deep into our

unique sensory preferences, uncover potential triggers, and identify effective sensory soothers that bring us comfort and respite.
This personalized plan equips us with strategies and accommodations to manage our sensory needs effectively, ensuring we can navigate and thrive in even the most challenging sensory-intense environments. By having a sensory safety plan in place, we gain the confidence and reassurance that, in moments of overwhelming sensory dysregulation, we have a roadmap to guide us and readily accessible resources to support us on our journey.
The steps to building a sensory safety plan can be broadly broken up into two umbrella steps: 1) Developing a sensory lens and 2) Implementing this information and taking action!
Developing A Sensory Lens

Building a sensory safety plan first involves developing what I call a “sensory lens.” Having a sensory lens means seeing and understanding the world through the filter of your sensory experiences. It brings awareness to how your senses shape your perception and impact your daily life. It’s about recognizing the profound influence of sensory inputs on your emotions, thoughts, and overall well-being.

A Sensory Lens Enables You To:

- Distinguish between sensory overwhelm and anxiety
- Recognize when you’re feeling irritable or sensory overloaded
- Identify your specific sensory needs, preferences, triggers, & soothers
- Understand how sensory experiences impact your emotions
- Navigate challenging environments by being aware of sensory factors
- Advocate for yourself & communicate your sensory needs to others
- Implement strategies to regulate your sensory system & find balance find balance
- Incorporate sensory activities & rituals into your daily routine for self-care
- Foster a greater appreciation & understanding of the diverse sensory experiences in yourself & others
- Cultivate a mindful & present awareness of your sensory environment
- Find ways to create sensory-friendly spaces & modify your surroundings to support your sensory needs

This is why the first and crucial step to creating a Sensory Safety Plan is to develop your sensory lens and gain a deep understanding of your sensory profile, including your Sensory Likes, Triggers, and Soothers.

1. Get Clear About Sensory Needs
Crafting your own sensory safety plan begins with an exploration of your sensory preferences and needs. While this initial step may appear deceptively simple, it holds immense significance for many neurodivergent individuals. Disconnection from our

bodies or the perpetual act of masking our true selves can obscure our awareness of our authentic sensory preferences and needs.
In such circumstances, investing time and effort into unraveling and embracing our unique sensory landscape becomes even more vital. By dedicating ourselves to this process of self-discovery, we lay the groundwork for a robust and effective sensory safety plan. This exploration of self-awareness marks the gateway to a world where our sensory needs are acknowledged, understood, and accommodated, setting the stage for greater sensory regulation and sensory safety.

2. Identify Sensory Triggers

Understanding our unique sensory triggers is a crucial step in developing a sensory safety plan. These triggers can arise from various sensory channels, such as sights, sounds, smells, tastes, and physical sensations.
By identifying our sensory triggers, we gain a greater sense of control over our sensory experiences. This knowledge allows us to anticipate and prepare for challenging moments in our daily lives. Through proactive planning and consideration of suitable accommodations, we can effectively manage sensory overload and create opportunities for sensory detox after intense sensory encounters.
Recording our sensory triggers in a journal or documenting them in some way enhances our self-awareness and empowers us to take preemptive measures. With this heightened awareness, we can navigate our sensory-rich world with greater ease and find strategies that promote a harmonious sensory experience.

Grab the Free Sensory Checklist

3. Create Trigger Management Strategies

Next, it's time to develop personalized strategies for managing your sensory triggers. Once you have identified your specific triggers, consider two essential aspects:

-
- **Discover your sensory soothers:** Take note of the activities or experiences that help you soothe your sensory system after it has been triggered. This could be taking a hot bath, going for a walk, engaging in repetitive movements like pacing or stimming, or any other self-soothing techniques that work for you.
-
- **Identify helpful accommodations:** Explore the accommodations that assist you in managing your triggers more effectively. This may involve using noise-canceling headphones to reduce sensitivity to loud noises, wearing sunglasses or tinted glasses to mitigate the impact of bright lights, carrying sensory fidgets for grounding, or listening to music through earbuds in crowded places. Find the accommodations that align with your sensory needs.

As you engage in this process, embrace experimentation and self-discovery. Everyone's sensory profile is unique, so what works for one person may not work for another. By exploring different strategies and observing their impact on your sensory experience, you can develop a personalized toolkit for managing your triggers more effectively.

4. Find Sensory Safe Spaces

Consider establishing a sensory-friendly space in your environment, whether it's at home or in the workplace, where you can retreat to relax and recharge. This space should be designed to minimize sensory input and promote a sense of calm and tranquility. Think of creating a quiet room with gentle lighting and few distractions, or find a peaceful outdoor spot that brings you comfort. These sensory-safe spaces play a vital role in providing relief for individuals who experience sensory overload.

However, if creating a dedicated sensory-friendly space is not feasible, you can still cultivate a sensory-detox routine. After a day filled with sensory overwhelm, you can engage in activities that help you decompress and restore balance. This might involve taking a long brisk walk, indulging in a hot shower, or wrapping yourself in a weighted blanket to provide deep pressure. By incorporating these sensory spaces and rituals into your daily life, you can create a sense of safety and relaxation, allowing your body and mind to unwind from the day's stressors.

5. Create A Plan For Emergencies

When anticipating events that may trigger sensory overload, it's common to experience anxiety on top of our sensory sensitivities. This can make it even more challenging to navigate these situations. Having an exit strategy and plan in place can help alleviate some of the anxiety and enable us to manage our sensory needs in sensory-rich environments effectively.

Being prepared for situations where our sensory triggers may be difficult to avoid, such as medical procedures or large events, is important. Creating a sensory soothing kit can be beneficial, including items or tools that help regulate our sensory experiences, like noise-canceling headphones, stress balls, or essential oils. Additionally, having a trusted friend or family member who understands our sensory needs can provide valuable support and assistance during these times.

Having an exit strategy is essential in emergencies or overwhelming situations. This could involve using a code word or signal with our trusted person to indicate when we need to leave or take a break. Preparing a script, such as "I need to leave to regulate," can help us effectively communicate our needs when verbal abilities may be compromised during sensory overload. Carrying an "Overload card" or visual cue can also serve as a non-verbal way to convey our state of overload to our trusted person.

By proactively planning and implementing these strategies, we can feel more empowered and supported in managing sensory overload and navigating challenging situations with greater ease.

6. Create A Sensory Kit

A sensory soothing kit is a helpful resource for managing sensory overload inside and outside your home. It provides a collection of items that cater to each of your senses, helping you feel grounded and calm in challenging environments. To create your sensory kit, reflect on your favorite sensory soothers and accommodations, considering how each of the five senses contributes to your well-being. Select an item for each sense that resonates with you and helps regulate your nervous system in public settings.

Consider the following ideas for each sense:

- **Sight:** Choose a small, portable item that brings you visual comfort and joy, such as a calming image, a favorite photograph, or a small object with soothing colors.
- **Sound:** Include a set of noise-canceling earbuds or headphones to help reduce auditory stimuli. Alternatively, you may prefer to have your favorite playlist with calming or familiar tunes nearby.
- **Touch:** Select a sensory fidget or textured object that you can discreetly use to channel energy or provide tactile comfort. This could be a stress ball, a textured keychain, or a soft fabric swatch.
- **Smell:** Include a travel-sized container of your preferred essential oil or a scented hand lotion. These aromatic cues can help create a soothing and familiar scent environment wherever you go.
- **Taste:** Pack a small supply of your favorite calming snack, such as mints, chewing gum, crunchy snacks, or a piece of dark chocolate. This can provide a comforting sensory experience and help regulate your oral sensations.

By gathering these items in a portable bag or container, you'll have your sensory toolkit readily available whenever you need it. Remember to periodically review and update your sensory kit to ensure it reflects your current needs and preferences. Having this personalized collection of sensory tools at your fingertips empowers you to navigate overwhelming situations with greater ease and comfort.

Personal Workbook ➡

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Summary: Sensory Overload And Emotions

Sensory overload can deeply affect the emotional well-being of neurodivergent people. Recognizing the impact of sensory overload is key to fostering supportive environments. By acknowledging the intricate relationship between sensory overload and emotions, we can develop effective strategies to navigate overwhelming situations.

The process of developing a sensory safety plan empowers us to actively manage our sensory sensitivities and emotions. By gaining clarity on our specific sensory needs, identifying triggers that lead to overload, and creating personalized strategies for managing those triggers, we can regain a sense of agency and control during overwhelming moments. Additionally, creating sensory safe spaces and establishing emergency plans can provide vital support during times of heightened sensory overload.

If you're looking for detailed guidance on implementing these steps and crafting a personalized sensory safety plan, I invite you to explore the Sensory Safety Plan workbook available here. As part of the ongoing Sensory Regulation Series, the workbook is currently on sale until the end of May 2023. This workbook provides step-by-step directions, practical exercises, to support you on your journey toward sensory regulation.

This extensive guide is designed to delve deep into the complex relationship between sensory processing difficulties and autism spectrum disorder (ASD). From hypersensitivity to hyposensitivity, the sensory experiences of individuals with ASD cover a broad spectrum.
In this resource, we aim to provide a thorough understanding of these sensory challenges, the latest research findings, available treatment options, and supportive strategies, among others.
Navigate through our “Sensory Superpage” to gain an understanding of sensory issues in autism and arm yourself with the knowledge and tools to make a positive difference.

What percentage of people with autism have sensory issues?

The prevalence of sensory issues among individuals with autism is considerably high. Although the specific percentages can vary depending on the studies, it’s generally agreed that most individuals with autism experience some form of sensory processing difficulties.

Research studies suggest that this figure is over 90%.

These sensory issues can manifest as hypersensitivity (over-responsiveness to sensory stimuli) or hyposensitivity (under-responsiveness), affecting how individuals experience sensory inputs such as touch, sound, taste, and light. Research by Leekam et al. explains these manifestations in more detail.
Therefore, understanding and accommodating these sensory sensitivities is critical to providing effective support and care for individuals with autism.

Sensory Sensitivity
Sensory sensitivity refers to how a person’s senses react to stimuli. In individuals with autism, sensory sensitivity is often heightened. They may experience sounds, textures, tastes, and smells more intensely than others. This heightened sensitivity can lead to difficulties processing and responding to environmental information and can significantly impact daily life.

What Is Sensory Processing Disorder?

Sensory Processing Disorder (SPD) is a condition where the brain has difficulty processing information taken in through the senses. Recognized initially in the 1960s by occupational therapist and psychologist A. Jean Ayres, SPD is sometimes seen as a standalone disorder but is also commonly associated with autism. People with SPD may be oversensitive or undersensitive to sensory input or both. They can find it challenging to process and act upon information received through the senses, which can affect daily functioning.

Types of Sensitivities

Hypersensitivity

Hypersensitivity is when an individual experiences an exaggerated or intense reaction to sensory stimuli. This can cause discomfort or even pain. For those with autism, hypersensitivity can make everyday environments feel overwhelming, leading to anxiety and difficulties with social interactions.

Food Sensory Issues

Food sensory issues can be particularly challenging for those with hypersensitivity. Tastes and textures that seem normal to most people can be perceived as extreme and even unbearable. This can lead to a very restrictive diet and nutritional challenges. Coping strategies may include introducing new foods slowly and using behavioral techniques to increase tolerance gradually.

1. **Hypersensitivity to Textures:**Certain textures can be highly aversive for individuals with food sensory issues. This might include foods that are crunchy, slimy, or have a mixed texture. This texture aversion can lead to avoidance of a wide range of foods, often making the diet less varied.
2. **Taste Sensitivity:**Hypersensitivity can also be related to tastes. Some individuals might find specific tastes particularly strong or aversive. This can include an aversion to bitter foods, very sweet foods, or foods with a strong flavor, like garlic or onion.
3. **Smell Sensitivity:**The smell of foods can also be a sensory issue. Some individuals are incredibly susceptible to the smell of food, and strong odors can cause distress or avoidance.
4. **Visual Sensitivity:**For some, the visual appearance of food can be a factor. This might include a preference for foods of a particular color or a dislike of mixed foods.

Clothing Sensory Issues

People with hypersensitivity may find certain clothing materials and tags extremely irritating. The texture and fit of clothes can cause discomfort or pain.

1. **Texture Sensitivity:**One of the primary aspects of clothing sensory issues is sensitivity to textures. Materials that may feel soft and comfortable to most people can feel extraordinarily rough or scratchy to someone with hypersensitivity. Some individuals may prefer certain fabrics like cotton and avoid others like wool or synthetic materials.
2. **Tags and Seams:**One of the primary aspects of clothing sensory issues is sensitivity to textures. Materials that may feel soft and comfortable to most people can feel extraordinarily rough or scratchy to someone with hypersensitivity. Some individuals may prefer certain fabrics like cotton and avoid others like wool or synthetic materials.

3. **Fit and Tightness:**One of the primary aspects of clothing sensory issues is sensitivity to textures. Materials that may feel soft and comfortable to most people can feel extraordinarily rough or scratchy to someone with hypersensitivity. Some individuals may prefer certain fabrics like cotton and avoid others like wool or synthetic materials.
4. **Temperature Regulation:**Sensitivity to the temperature and the weight of the fabric can also be a concern. Some individuals might be very sensitive to being too hot or cold and have strong preferences regarding the weight and warmth of clothing.
5. **Sensory-Friendly Clothing:**Individuals might prefer wearing soft materials and avoiding clothes with tags or tight elastics to cope. Some brands specialize in sensory-friendly clothing. These garments often feature flat seams, tagless designs, and soft, stretchy fabrics.

Texture Sensitivity

This form of sensory hypersensitivity involves an intense reaction to the feel of different surfaces and materials.

1. **Broad Range of Textures:**Texture sensitivity is not limited to just fabrics or food but can extend to any tactile experience, including surfaces like carpet, sand, grass, or even the pages of a book.
2. **Intensity of Reaction:**For someone with texture sensitivity, textures that seem benign to others can cause extreme discomfort or distress. This might range from a mild annoyance to feeling overwhelmed or in pain.
3. **Impact on Social Interaction and Learning:**Texture sensitivity can impact social interactions and learning, especially for children. For instance, a child might avoid playing with certain toys or participating in arts and crafts, which can be isolating and limit learning experiences.
4. **Sensory Integration Tools:**Sometimes, sensory integration tools like brushes can help desensitize the skin and improve tolerance to different textures.

Touch Sensitivity

Touch sensitivity, or *tactile defensiveness*, refers to an unusual or increased sensitivity to touch or physical contact. Touch sensitivity can cause normal sensations, like a light touch on the shoulder or a tag in a shirt, to feel uncomfortable or even painful. This overreaction can be mild or severe, and the contact that triggers it can be from a person, an object, or even the individual's own movements. This condition can significantly impact daily routines and quality of life.

1. **Physical Manifestation:**Individuals with touch sensitivity can have a variety of physical reactions, ranging from withdrawing from touch to experiencing an emotional meltdown or feeling physical pain.

2. **Impact on Daily Life:**Touch sensitivity can affect many aspects of life, such as personal hygiene, clothing, and social interactions. Individuals might have difficulty with tasks that involve touch, like brushing teeth or hair, bathing, or being in crowded spaces.
3. **Impact on Relationships:**Touch sensitivity can also affect relationships, as individuals might withdraw from affectionate touch or avoid physical contact, making interpersonal relationships challenging.
4. **Coping Strategies:**Coping strategies for touch sensitivity can involve managing the environment and building tolerance. Managing the environment might include using special clothing, adjusting the room temperature to avoid sweating or shivering, or even avoiding crowded spaces. Building tolerance often involves a gradual exposure approach, where the individual is slowly introduced to different types of touch in a controlled, non-threatening way. Some prefer deep pressure to light touch and may benefit from pressure garments or weighted blankets.

Noise

Noise hypersensitivity, or *hyperacusis*, refers to an increased or abnormal sensitivity to ordinary environmental sounds. Loud or sudden noises can be particularly distressing for individuals with hypersensitivity. Ordinary sounds, like the hum of a refrigerator, traffic, or people talking, are perceived as uncomfortably loud or even painful. Some individuals might also have difficulty filtering out background noise, making it hard to focus on a single conversation or task.

1. **Physical and Emotional Reactions:**Physical reactions to noise hypersensitivity can range from covering the ears to experiencing pain. Emotional reactions can include anxiety, agitation, and even panic attacks. Over time, the anticipation of loud noises can lead to heightened anxiety and avoidance behaviors.
2. **Impact on Daily Life:**Noise hypersensitivity can affect many aspects of life, from school or work performance to social interactions. Individuals might avoid noisy environments like restaurants, school cafeterias, or busy streets, which can lead to isolation. The sound of a vacuum cleaner, a dog barking, or a car horn can cause anxiety or fear.
3. **Coping Strategies:**There are several strategies for managing noise hypersensitivity. These might include using noise-canceling headphones, creating quiet spaces at home or school, or gradually desensitizing to certain sounds. Even soft or high-pitched sounds can be intense and distressing for those with sound sensitivity. Sound therapy, which involves listening to certain sounds to help the brain improve its processing of auditory stimuli, can be beneficial.

Light

Light hypersensitivity, or *photophobia*, is a condition in which individuals are sensitive to certain types of light or brightness levels. Light hypersensitivity involves discomfort or

pain from exposure to light sources that most people would find normal or tolerable. This could range from sunlight to fluorescent light, from the glow of a computer screen to the harshness of a headlight. It may lead to severe migraines, eye strain, or other physical discomfort.

1. **Impact on Daily Life:**Light hypersensitivity can significantly impact daily life. It may lead to avoidance behaviors, such as shying away from outdoor activities during daylight hours, working in dimly lit spaces, or avoiding places with fluorescent lighting, like supermarkets or classrooms. This avoidance can, in turn, impact social interaction, school performance, and overall quality of life.
2. **Coping Strategies:**Strategies for coping with light hypersensitivity often involve modifying the individual's environment to reduce exposure to problematic light sources. This might include wearing sunglasses or hats outdoors, using light-dimming screens on electronic devices, or replacing fluorescent lights with softer, indirect lighting. Sunglasses, hats, and natural light can help alleviate discomfort.

Visual

Visual hypersensitivity, or *hypersensitivity to visual stimuli*, can significantly impact how individuals perceive their environment and interact with others. Visual hypersensitivity involves an intense reaction to visual stimuli, such as bright lights, rapid movements, or visually complex environments like crowded rooms or patterned wallpapers. Individuals may be susceptible to specific colors or have difficulty filtering out irrelevant visual information, making it hard for them to focus on the task at hand.

1. **Impact on Daily Life:**This sensory issue can influence many aspects of daily life. For example, individuals may find it hard to concentrate in visually busy environments, have difficulty with tasks requiring visual discrimination, or be easily overwhelmed by rapid visual stimuli, such as action-packed movies or video games. This can impact academic performance, social interactions, and leisure activities.
2. **Coping Strategies:**Strategies for managing visual hypersensitivity may involve minimizing exposure to overwhelming visual stimuli, providing visual breaks throughout the day, and creating visually calm spaces at home or school. Visual schedules or organizers can also help individuals plan and predict their day, reducing anxiety. Creating a visually calm environment, using solid colors, and avoiding patterns, can be helpful.

Water Hypersensitivity (Being Wet)

People with water hypersensitivity have an intense reaction to the sensation of being wet. This might include discomfort or distress when their skin comes into contact with water, whether from rain, bathing, swimming, or even sweat. For some, even the feel of damp clothes or towels can be unbearable.

1. **Impact on Daily Life:**This sensory issue can influence many aspects of daily life. It can make personal hygiene tasks like bathing and brushing teeth very stressful

and cause anxiety about outdoor activities when it's raining or when there's a possibility of getting wet. It also has the potential to hinder a person's ability to learn to swim or participate in water-based activities.

2. **Coping Strategies:**Strategies for managing water hypersensitivity may involve gradual exposure to the sensation of being wet, starting with brief, positive experiences involving water, such as playing with water toys or using a spray bottle. For bathing, it can help to ensure the water temperature is comfortable, use soft towels for drying, and allow the individual to enter and exit the water at their own pace. Distraction techniques can be helpful, like singing a song or playing a game during bath time. Waterproof clothing and quick-drying fabrics can make rainy days more manageable. Gradual exposure and making the experience enjoyable by adding toys or using a favorite towel can be beneficial.

Balance (Vestibular Sensitivity)

Vestibular sensitivity, often experienced by individuals with autism spectrum disorder (ASD), refers to a heightened sensitivity to movements and changes in head position. The vestibular system, located within our inner ear, helps us maintain our balance and understand our body's position in space. People with vestibular hypersensitivity may have an intense reaction to movement activities like swinging, sliding, or even simply walking or running. They may also feel overwhelmed by quick changes in head position, such as looking up or down.

1. **Impact on Daily Life:**This sensitivity can influence many aspects of daily life. Activities that might seem fun and pleasurable to most people, like playing on playground equipment or participating in sports, might feel scary or uncomfortable. It may also affect an individual's balance and coordination, making them seem clumsy or fearful of certain activities.
2. **Coping Strategies:**Therapeutic interventions, such as vestibular rehabilitation therapy, can help manage vestibular sensitivity. This form of treatment involves activities that expose the person to controlled movements and changes in head position, allowing them gradually build tolerance and become more comfortable with these sensations. Sometimes, providing alternative options for physical activity that don't trigger the vestibular system can be beneficial. Yoga or gentle stretching can provide physical activity without triggering intense vestibular responses. Therapies like physical and occupational therapy can help patients build skills in balance and coordination.

Proprioception

Proprioceptive hypersensitivity involves a heightened sensitivity to the sense of body position and movement. The proprioceptive system provides information about the relative position of our body parts and the force we're applying through our muscles and joints. Individuals with proprioceptive hypersensitivity may find it difficult to gauge the force or pressure required for tasks or struggle to navigate their bodies through space.

1. **Impact on Daily Life:**Proprioceptive hypersensitivity can lead to clumsiness, difficulty with fine and gross motor tasks, and even unusual posturing. Simple activities like eating with utensils, writing, or playing sports can become challenging. Individuals might appear clumsy, bump into objects more often, or have difficulty judging distances. Those with proprioceptive hypersensitivity might struggle to gauge the force needed for tasks such as holding a pen or hugging.
2. **Coping Strategies:**Therapy for proprioceptive hypersensitivity often involves providing plenty of opportunities for 'heavy work' activities. These activities provide deep pressure to the muscles and joints, such as lifting, pushing, or pulling heavy objects, jumping on a trampoline, or even doing chores like vacuuming or carrying groceries. Using tools like weighted blankets or vests, exercise resistance bands, or chewy toys can help provide the proprioceptive input these individuals need.

Interoception

Interoceptive hypersensitivity pertains to heightened sensitivity to internal bodily sensations like hunger or the need to use the bathroom. Interoception is the sense that helps us understand and feel what's happening inside our bodies. This includes sensing hunger, thirst, digestion, temperature, heartbeat, and more. Individuals with interoceptive hypersensitivity may have heightened awareness of these internal sensations, which can lead to discomfort or confusion. Individuals with interoceptive hypersensitivity may have difficulty recognizing or interpreting these inner signals.

1. **Impact on Daily Life:**Interoceptive hypersensitivity can cause significant distress. It may manifest as anxiety or panic due to the heightened awareness of internal body processes like heartbeat or breathing. It can also lead to difficulties recognizing and interpreting signals like hunger or fullness, needing to use the restroom, or feeling hot or cold.
2. **Coping Strategies:**Coping strategies for interoceptive hypersensitivity often involve learning to interpret body signals accurately. Individuals can benefit from treatments like cognitive behavioral therapy (CBT), for instance. This treatment helps individuals understand their body signals and manage the associated anxiety. Strategies such as scheduled eating or bathroom breaks can help.
3. **Mindfulness Techniques:**Mindfulness and grounding techniques can help manage interoceptive hypersensitivity. This can involve focusing on external sensory experiences, like what one can see or touch, to help draw attention away from overwhelming internal sensations.

Sensory Avoidance

Sensory avoidance acts as a coping mechanism for sensory overload. Individuals will often go to lengths to avoid sensory stimuli that they find distressing. This can include avoiding crowded places, loud environments, or specific textures.

1. **Understanding Sensory Avoidance:**Sensory avoidance refers to behaviors meant to decrease exposure to sensory stimuli perceived as overwhelming or unpleasant. This could involve covering ears to avoid noise, refusing to eat foods with certain textures, or avoiding crowded places.
2. **Impact on Daily Life:**Sensory avoidance can significantly impact an individual's daily life. It may limit
participation in social activities, lead to a restrictive diet, or cause difficulties in settings like school or work where avoiding certain stimuli is not always possible.
3. **Coping Strategies:**Coping strategies for sensory avoidance often involve gradual exposure to uncomfortable sensory experiences paired with positive reinforcement. This helps the individual to build up tolerance slowly. Sensory tools such as noise-canceling headphones or weighted blankets can also be helpful.
4. **Environmental Modifications:**Adapting the environment to reduce unpleasant sensory stimuli can also be effective. For example, using soft lighting, minimizing background noise, or creating quiet spaces where the individual can retreat when feeling overwhelmed.

Hyposensitivity
Hyposensitivity is a sensory processing issue where an individual is under-responsive or has a lower-than-average response to sensory stimuli. Hyposensitivity can manifest in many ways. An individual may seem unaware of their surroundings, appear clumsy, or may not respond to pain or extreme temperatures as expected.
They may also have a high pain threshold, not realize when they're being touched, or not notice certain smells or tastes. They may not react to danger as quickly as others due to their muted response to sensory inputs. For example, they might not pull their hand away quickly if they touch something hot.

Sensory Seeking
Sensory seeking refers to behaviors that individuals, especially those with sensory processing disorders, exhibit to satisfy their need for sensory input. Sensory-seeking behaviors are often seen in individuals who are under-responsive or hyposensitive to sensory information. These individuals often crave more intense or varied sensory stimulation.
This means they might constantly touch things, enjoy spinning or jumping, or crave intense flavors or loud noises to fulfill their need for sensory input. Provide safe and acceptable ways for individuals with hyposensitivity to satisfy their need for sensory stimulation.
This might involve using fidget toys, allowing time for physical activities, or incorporating stronger flavors into meals.

1. **Common Sensory Seeking Behaviors:**Sensory seekers may engage in behaviors like constantly touching things, chewing on non-food items, spinning,

jumping, or making loud noises. They might also seek out intense tastes, smells, or textures.

2. **Impact on Daily Life:**Sensory-seeking behaviors can significantly impact an individual's daily life. The constant need for stimulation can sometimes lead to difficulties in school, work, or social environments.
3. **Coping Strategies:**Strategies for managing sensory-seeking behaviors often involve providing safe and appropriate ways to fulfill sensory needs. This could include regular breaks for physical activity, access to sensory toys or tools (like chewable jewelry or fidget toys), or creating opportunities for sensory experiences within daily routines.
4. **Understanding and Patience:**Sensory-seeking behaviors can be misunderstood as acting out or lack of discipline. However, understanding that these behaviors are a way of self-regulating can help foster patience and create supportive environments for individuals with sensory processing disorders.

What do Sensory Sensitivities Feel Like?

Sensory-seeking behaviors can be misunderstood as acting out or lack of discipline. However, understanding that these behaviors are a way of self-regulating can help foster patience and create supportive environments for individuals with sensory processing disorders.

Sensory Overload

When people with sensory processing disorders receive too much sensory information, they can experience sensory overload. This might be a loud environment, a crowded space, or a situation with too many different types of stimuli. It can cause severe anxiety, meltdowns, or physical symptoms like nausea or headaches. This is why many people with sensory issues find it beneficial to have a quiet, controlled environment to retreat to when needed.

Difficulty Interpreting Sensory Information

Sometimes, the challenge is not just the intensity of sensory inputs but also their interpretation. Individuals with sensory processing disorders might have trouble determining where a touch is coming from or distinguishing between different sounds in a noisy environment. This could lead to motor coordination, balance, and spatial awareness difficulties.

These sensory challenges can affect social interactions, academic or work performance, and general well-being. They might lead to anxiety or distress, create barriers to participation in typical activities, and even result in social isolation.

What is Stimming?

Stimming, or self-stimulatory behavior, is a term used to describe repetitive body movements or movements of objects, often seen in individuals with autism. This behavior is believed to be a way to self-soothe, manage anxiety, or help focus attention. While stimming is common in people with sensory issues, it's important to recognize that it is a natural behavior and can be a crucial coping mechanism for them.

Sensory issues can differ depending on whether an individual is hypersensitive or hyposensitive to sensory input. Stimming is a common way individuals with sensory issues cope with their environment. Family members, educators, and friends need to understand and respect these behaviors as often necessary coping mechanisms. Providing a supportive environment that allows for safe stimming is vital for the well-being of those with sensory issues.

What is Sensory Overload?

Sensory overload occurs when an individual receives too much sensory input at once, making it difficult for the brain to process and respond accordingly. People with sensory processing issues or autism spectrum disorder, sensory overload can happen more easily as they might be hypersensitive to certain stimuli.

This could include loud noises, bright lights, or crowded spaces. When in a state of sensory overload, individuals might experience panic, anxiety, irritability, or a strong urge to escape the environment.

1. **Anxiety**Anxiety is a typical response to sensory overload. When an individual with sensory sensitivities is exposed to too much sensory input, the nervous system often goes into a state of high alert. This can manifest as increased heart rate, sweating, shaking, and feelings of fear or panic. Strategies for managing anxiety might include identifying triggers, using calming techniques such as deep breathing, and gradually desensitizing to certain stimuli through exposure therapy.
2. **Dyspraxia**Dyspraxia, often associated with sensory processing disorders, is a neurological condition that affects motor skill development and coordination. Individuals with dyspraxia may have trouble with tasks that require movement and coordination, such as tying shoes, writing, or riding a bike. This can be incredibly challenging when combined with sensory sensitivities, as overstimulation can exacerbate difficulties with motor control. Occupational therapy can benefit individuals with dyspraxia, as it helps them develop motor skills and learn strategies for managing sensory input.

What Do Sensory Issues Look Like?

Sensory-seeking behaviors can be misunderstood as acting out or lack of discipline. However, understanding that these behaviors are a way of self-regulating can help foster patience and create supportive environments for individuals with sensory processing disorders.

Understanding the severity and impact of these sensory issues can help provide appropriate support and interventions. These sensory challenges can be categorized into three levels based on the degree of support required by the individual.

This categorization aligns with the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5), used by mental health professionals to diagnose and classify mental disorders. The DSM-5 categorizes the severity of ASD into three levels, s based on the amount of support required. Level 1, “Requiring Support,” Level 2, “Requiring Substantial Support,” and Level 3, “Requiring Very Substantial Support,”

each corresponds to the increasing severity of symptoms and the need for support in social communication and restrictive, repetitive behaviors, which can include sensory behaviors.

Level 1: Requiring Support
Individuals at this level generally have milder symptoms. They can carry out day-to-day activities independently but often struggle with social situations and communication. Sensory issues may manifest as mild discomfort or distraction in response to certain sensory stimuli, but it typically does not interfere significantly with daily functioning. Sensory sensitivities might involve a preference for certain food textures, aversion to certain sounds or touch, and needing to wear specific types of clothing due to sensitivity.

Level 2: Requiring Substantial Support
Individuals at this level exhibit more pronounced difficulties with social interactions and communication. These difficulties are evident even with supports in place. The sensory sensitivities at this level are usually more intense and can affect everyday life.
For instance, the person might be unable to tolerate crowded places due to noise sensitivity or have a limited diet due to specific food texture aversions. Sensory-seeking behaviors can also be more common at this level, with individuals actively seeking certain sensory experiences for comfort or stimulation.

Level 3: Requiring Very Substantial Support
This level includes individuals with severe symptoms who require significant support daily. Social communication is extremely limited, and engagement in restrictive and repetitive behaviors is high. Sensory sensitivities at this level can be so severe that they significantly disrupt daily functioning.
For example, the individual may become overwhelmed or distressed in environments with unexpected or intense sensory stimuli. Their food preferences might be so limited it affects their nutritional health, or their tolerance for certain materials may limit the clothing they can wear.
The severity of sensory issues can vary significantly from person to person, regardless of their level of autism. Furthermore, these sensory sensitivities can also change over time due to various factors such as age, therapy, and adaptive strategies. An individualized approach that respects each person’s unique sensory profile is critical to effectively supporting individuals with ASD.

Sensory Issues in Adults
While sensory issues are often associated with children, they can persist or even emerge in adulthood. Adults with sensory issues might find specific work environments

challenging due to bright lights, loud noises, or the need to wear specific clothing. They might have particular eating habits based on texture or taste preferences.
Coping strategies for adults can include creating a sensory-friendly living and working environment, utilizing sensory tools such as noise-canceling headphones, and engaging in occupational or sensory integration therapy therapies.

Treatments for Sensory Sensitivities

Treatment for sensory issues aims to help individuals manage and cope with sensory sensitivities and to improve their ability to function and participate in daily activities. It's important to note that treatment should be tailored to the individual's unique needs and sensitivities. Let's review the most popular approaches to managing sensory sensitivities: Sensory Integration Therapy, ABA Therapy, hypersensitivity recommendations, hyposensitivity recommendations, and Occupational Therapy for Sensory Processing.

1. **Sensory Integration Therapy**

1. **14 ABA Therapy**

1. **29 Hypersensitivity Recommendations**

1. **50 Hyposensitivity Recommendations**

1. **71 Occupational Therapy for Sensory Processing**

Emotional Regulation and Sensory Processing
Emotional regulation strategies are integral to managing sensory issues. This might involve teaching individuals to recognize their emotional states and use techniques such as deep breathing, taking breaks, or using sensory tools to manage their emotions. Here are eight ways emotional regulation can be managed through sensory processing:

1. **Understanding Sensory Triggers:**The first step in emotional regulation is understanding which sensory stimuli act as triggers. For instance, some individuals may become anxious or agitated in response to loud noises or crowded places. Recognizing these triggers is the first step toward managing them effectively.
2. **Teaching Self-Awareness:**Emotional regulation involves self-awareness. Individuals are taught to recognize their own emotions and understand the link between sensory input and emotional responses. For example, they might learn that a particular texture makes them uncomfortable and can lead to frustration.

3. **Use of Calming Techniques:**Various techniques can be used to calm oneself in response to overwhelming sensory input. This may include deep breathing exercises, counting, or engaging in a preferred calming sensory activity such as rocking or listening to soft music.
4. **Sensory Tools for Regulation:**Sensory tools can sometimes help emotional regulation. For instance, weighted blankets or vests can provide deep pressure, which is calming for many individuals with sensory processing disorders. Similarly, fidget toys can be helpful for those who need to keep their hands busy to concentrate.
5. **Creating a Safe Space:**Having a designated safe space where one can go to escape overwhelming sensory input is essential. This space should be tailored to the individual's sensory preferences and be a place where they can engage in self-regulation strategies.
6. **Building Coping Skills:**Teaching individuals how to cope with sensory challenges is critical to emotional regulation. This might involve learning how to ask for a break, communicate one's needs, or use problem-solving skills to figure out how to avoid or modify distressing sensory experiences. Sometimes, emotional regulation involves seeking support from trusted individuals. It is essential to teach people with sensory processing issues how to communicate their experiences and ask for help.
7. **Professional Support:**In some cases, working with a psychologist or therapist specializing in sensory processing and emotional regulation is beneficial. These professionals can help develop personalized strategies for managing sensory challenges.
8. **Practicing Mindfulness and Meditation:**These practices can also be helpful for some individuals in managing their emotional responses to sensory stimuli. Individuals can learn to stay present and reduce anxiety through mindfulness and meditation.

Classroom Strategies

Classroom accommodations are as necessary as academic instruction for children with sensory issues. This might include providing a quiet space for breaks, using visual schedules, providing seating options such as stability balls, and incorporating movement breaks. Some of the more common strategies include:

Diet

Diet can play a role in managing sensory issues. Some individuals might have sensitivities to certain foods or find certain textures aversive. Working with a nutritionist to develop a balanced diet that considers these sensitivities can be beneficial.

1. **Sensitivities and Allergies:**Some individuals with sensory issues might also have food sensitivities or allergies, such as to gluten or casein, which are proteins found in wheat and dairy products, respectively. There is some evidence

to suggest that a gluten-free and casein-free diet might alleviate some symptoms in children with autism and sensory processing disorders.

2. **Texture and Taste Sensitivities:**Certain textures or tastes can be unbearable for individuals with hypersensitivity. This can lead to a very restricted diet, as they might only accept foods with a specific texture or flavor.
3. **Nutritional Balance:**It must be ensured that individuals receive a nutritionally balanced diet despite the restrictions. Consulting a dietitian or nutritionist familiar with sensory issues can be highly beneficial. They can help devise meal plans that are both acceptable to the individual and nutritionally complete.
4. **Incorporating New Foods Gradually:**Introducing new foods should be a slow and gradual process for those with sensory issues. It can be helpful to introduce new foods alongside familiar ones in small portions and without pressure.
5. **Sensory Activities Around Food:**Sensory play activities involving food can sometimes be helpful. For example, having a child help with cooking can expose them to new textures and smells in a non-threatening way.
6. **Consideration of Food Color and Presentation:**Sometimes, the issue might not be taste or texture but the color or way the food is presented. Paying attention to these aspects might make certain foods more acceptable.
7. **Supplements:**In cases where dietary restrictions are significant, a healthcare professional might recommend vitamin or mineral supplements to ensure that individuals get the necessary nutrients.
8. **Hydration**Sometimes, sensory sensitivities can cause aversion to certain beverages; it's important to find alternatives to ensure adequate hydration.

Gut Health

The connection between gut health and sensory issues, particularly in individuals with autism spectrum disorders, has been a growing area of interest and research. The gut-brain axis, which refers to the bidirectional communication between the gut and the brain, plays a crucial role in modulating behavior and sensitivity to environmental stimuli. Some aspects of this topic include:

1. **Gut Microbiome:**The gut microbiome comprises trillions of microorganisms, including bacteria, that live in our digestive tract. It plays a significant role in digestion, immune function, and mental health. Evidence suggests that the gut microbiome of individuals with autism is different from neurotypical individuals.
2. **Gastrointestinal Issues:**Many individuals with sensory processing disorders and autism experience gastrointestinal issues such as constipation, diarrhea, and abdominal pain. These issues might exacerbate sensory sensitivities and affect behavior.
3. **Probiotics:**Probiotics are live microorganisms that aid with digestive health. Some studies have suggested that taking probiotics to promote a healthy gut flora balance can be helpful for individuals with autism and sensory processing

disorders, possibly by reducing gastrointestinal issues and modulating the immune system.

4. **Diet and Gut Health:**As previously mentioned, diet plays a significant role in gut health. A diet that is high in fiber and includes a variety of fruits and vegetables can promote a healthy gut microbiome. On the other hand, a diet that is high in processed foods and sugar can harm gut health. There is some evidence to suggest that improving gut health can have apositive impact on behavior and sensory processing. For example, reducing gastrointestinal discomfort might result in reduced pain and irritability, which could, in turn, reduce sensory sensitivities.
5. **Ongoing Research:**It's important to note that research on the gut-brain axis and its role in sensory issues and autism is ongoing. While there is promising evidence, more research is needed to understand the connection fully and to develop effective interventions.

Vitamins

Specific vitamins and supplements have been suggested to have a role in managing sensory issues, especially among individuals with autism spectrum disorder (ASD). This is based on the understanding that nutritional components can affect brain function, behavior, and sensory processing. Some supplements to consider include:

1. **Omega-3 Fatty Acids:**Omega-3 fatty acids, like EPA and DHA, are known for their role in brain health. Some studies have suggested that Omega-3 supplements can improve symptoms of ASD, including sensory issues. These fatty acids might affect neuronal function and reduce inflammation, which could be beneficial.
2. **Vitamin D:**Some evidence suggests that Vitamin D can play a role in autism and sensory issues. Vitamin D is known to have many functions in the brain, and a deficiency in Vitamin D has been observed in many children with ASD.
3. **Magnesium and B6:**Some studies have suggested that combining magnesium and vitamin B6 can reduce irritability and improve social responsiveness in children with ASD, which might indirectly affect sensory processing.
4. **Multivitamins and Minerals:**A general multivitamin and mineral supplement might benefit some individuals with sensory issues, especially if there are any nutritional deficiencies. While vitamins and supplements can be beneficial, having too much of a good thing is possible. Some vitamins can be harmful in excess, and some supplements can interact poorly with other medications or supplements. As always, consult a healthcare provider before starting any new supplements. This is especially true for individuals with sensory issues or ASD, who might be more sensitive to changes in diet or supplements.
5. **Individual Differences:**There is significant individual variability in how people with sensory issues or ASD respond to vitamins and supplements. What might be helpful for one person might not have the same effect on someone else.

6. **Holistic Approach:**Supplements should be part of a holistic approach to managing sensory issues, including behavioral interventions, accommodations, and other therapies. While some evidence suggests that certain vitamins and supplements can be beneficial for sensory issues, use them with caution and under the supervision of a healthcare provider. They can be one component of a comprehensive approach to managing sensory issues in individuals with ASD.

INTERESTING TO KNOW: What Are “Super Senses” In Autism?

The term “super senses” refers to the heightened sensory sensitivities and perceptions that many individuals with autism experience. This can manifest as an acute awareness of sounds, lights, smells, textures, and tastes. For example, some individuals with autism have exceptional abilities in terms of hearing and can hear frequencies that are inaudible to most people.

Similarly, some might have an enhanced sense of smell or be extremely sensitive to the texture of fabrics or foods. These heightened senses can sometimes contribute to sensory overload, but in other cases, they can also contribute to exceptional abilities or talents in areas such as music, art, or memory. It’s important to recognize and support these sensory differences in individuals with autism.

The “super senses” that some individuals with autism possess can be both a challenge and an asset. In the context of the workforce, these heightened sensory sensitivities can be channeled into fields and professions where acute sensory perception is an advantage.

1. **Music and Sound Engineering:**Those with heightened auditory sensitivities, a condition sometimes referred to as hyperacusis, might excel in careers related to music or sound engineering. Their ability to detect nuances in sound that others might miss can be invaluable in composing music, tuning instruments, or refining the audio quality in recordings or live performances. This can also lead to innovative soundscapes and unique musical compositions.
2. **Quality Control:**Individuals with enhanced olfactory or gustatory sensitivities, known as hyperosmia and hypergeusia, can be excellent in roles requiring quality control, such as in the food and beverage industry. Their ability to discern subtle differences in flavors and aromas can contribute to maintaining high standards for products, ensuring consistency and quality in every batch.
3. **Art and Design:**Heightened visual sensitivities, or hyper-visual sensitivity, can be particularly beneficial in careers in art and design. An acute awareness of color, texture, and spatial relations can lead to remarkable painting, drawing, graphic design, or photography skills. Some individuals may even experience synesthesia, where when one sensory channel is stimulated, the brain automatically and involuntarily sends signals to the other sensory pathways, such as seeing colors when hearing music.
4. **Textile Industry:**Those with heightened tactile sensitivities, or tactile hyper-responsiveness, can excel in careers in the textile industry. Their ability to discern minute differences in fabric textures and materials can be useful in quality

control, product development, or as fabric and apparel manufacturing consultants. This can lead to the creation of more comfortable and high-quality clothing and textiles.

5. **Data Analysis and Pattern Recognition:**People with autism often have an exceptional ability to recognize patterns and focus on details for extended periods. This skill, often associated with hyper-systemizing, can be utilized in fields such as data analysis, where scanning large data sets to detect patterns and anomalies is essential. This can lead to significant breakthroughs in data-driven fields.
6. **Memory Competitions and Libraries:**Some individuals with autism have exceptional memory abilities; a phenomenon sometimes referred to as hyperthymesia. They can use this skill in memory competitions or careers that require cataloging and retrieving information, such as library science. This can lead to more efficient systems of organization and retrieval.
7. **Naturalists and Environment Observers:**Heightened senses can also be used in environmental or animal studies where observing subtle changes in environments or behaviors is significant. This heightened sense of awareness can lead to more accurate observations and findings, contributing to our understanding of natural and environmental sciences.

We must move toward essential supportive work environments for individuals with heightened sensory sensitivities. Employers and colleagues should be educated about sensory sensitivities, and accommodations, such as providing noise-canceling headphones or allowing for flexible work schedules, should be considered.

What Resources Are There to Help With Sensory Issues?

A wealth of resources is available to assist individuals and their families. Connecting with others through online forums or local support groups can offer firsthand advice and emotional support. Finding local resources for sensory issues can be a valuable step in managing these challenges.

Start by contacting your local health department, schools, and universities, as they often have information about therapists, support groups, and educational resources. Your local library can also be a helpful resource, providing access to relevant books and materials. Online searches tailored to your location can yield additional options, and local support groups can offer firsthand recommendations.

Don’t forget to consult with healthcare providers for their expert advice. Remember, asking questions to ensure the resources meet your specific needs is key.

- **01**
  SPD Foundation The Sensory Processing Disorder Foundation focuses on research, education, and advocacy related to sensory processing disorder, a condition closely associated with autism. SPD Foundation Website
- **02**
  Autism Speaks This organization promotes solutions for individuals with autism

and their families. They offer a wide range of resources, including toolkits and information on sensory issues. Autism Speaks Website

- **03**
  UnderstoodThis website offers resources for learning and thinking differences and has a section dedicated to sensory processing issues. Understood Website
- **04**
  The STAR Institute This institute is considered one of the leaders in the treatment, research, and education of Sensory Processing Disorder. They offer occupational therapy services, including a sensory integration approach. STAR Institute Website.

Has your child suddenly screamed when you turned on the vacuum cleaner or tried to brush their hair? Gagged at the odor of certain foods? Refused to wear clothes? Or had an out-of-the-blue meltdown at the store?These and other oversized emotional reactions and behaviors arise from sensory sensitivity.Most people have a hard time understanding sensory challenges because they quickly and naturally adapt to the constant barrage of daily sensations. But sensory issues dramatically affect the daily life of children with autism.Can you imagine being overwhelmed by common environmental stimuli that others don't notice? How can a child pay attention in school if they can't tune out the buzz of fluorescent lights, the odors wafting from the cafeteria, the room's temperature, or the feel of their shirt?These uncomfortable sensations become overwhelming, leading to reactions that are usually sudden, extreme, and don't seem to have an obvious cause.Sensory sensitivity is an expected challenge in children with autism. Though other children may have sensory issues, including those with conditions like attention-deficit/hyperactivity disorder (ADHD) and developmental delays, the problem affects up to 90% of autistic children.Our team at THINK Neurology for Kids includes Shaun S. Varghese, MD, Cristina R. Marchesano, MD, Michelle E. Nwosu, MD, Lorena Herbert, MD, Barbara Kiersz-Mueller, DO, Lauren Weaver, MD, Alicia Walls, MD, Sundeep Mandava, MD, James P. Mayo III, M.D., MPH, Una Childers, PA-C, MPAS, Jennifer E. Martin, CPNP-PC, Tammy DeLaGarza, FNP-C, and Robby Korah, FNP-C. Our physicians and advanced practice providers understand sensory challenges in their many forms and variations. We can identify your child's sensory issues, recommend personalized treatments, and give you tips for supporting your child and helping them overcome sensory sensitivities.About sensory sensitivitiesSensory issues occur when children can't tolerate the information received through their senses. Though the exact cause hasn't been identified, the experts believe that sensory sensitivity occurs when the brain misinterprets or can't integrate the information it receives from sensory nerves.Problems can affect one or more of your child's senses, including:

- Taste
- Smell
- Touch
- Vision

- Hearing
- Balance and posture (vestibular senses)
- Body position and movement (proprioception)
- Internal senses such as hunger and thirst (interoception)

There are two types of sensory challenges: Your child may be over-sensitive (hypersensitivity) or under-sensitive (hyposensitivity).Signs your child has sensory sensitivityThese are the most common signs found in both types of sensory issues:HypersensitivityChildren with hypersensitivity essentially feel too intensely or strongly. They're hyperaware of everyday sensory input. Sensory overload can make children feel overwhelmed, irritated, scared, nauseated, frustrated, and angry. In some cases, it may be painful.Sensory overload may occur in response to a single stimulus like a loud noise, or it can build up throughout the day due to the effort required to cope with overpowering sensory information.Hypersensitive children may:

- Not tolerate bright lights or loud noises
- Refuse to wear certain clothes
- Refuse to eat certain foods (due to taste, texture, or smell)
- Be distracted by background noises others don't hear
- Become overwhelmed by crowds or a crowded room
- Avoid touching things most children love (like clay or paper mâché paste)
- Avoid being touched (not wanting to be hugged or sit near other kids)
- Have difficulty recognizing sensations like hunger
- Not tolerate scents commonly found in room sprays, fabric softeners, shampoo, etc.

These children try to avoid the experiences that trigger their hypersensitivity, which often turns into daily struggles.HyposensitivityChildren with hyposensitivity don't feel enough. As a result, they do the opposite of those with hypersensitivities and seek activities that stimulate them.Hyposensitive children may:

- Love loud sounds
- Desire firm hugs and deep pressure
- Want to touch different textures
- Want to engage in jumping or bumping activities
- Enjoy foods with strong flavors and odors
- Have a high tolerance for pain
- Enjoy intense, fast movements
- Not realize their own strength

Children who are under-reactive to sensory input may not recognize environmental stimuli, which can cause social problems or even be dangerous. For example, they may talk over others or seek sensory stimulation that could injure their body. Treatment can

helpSensory sensitivities are complex issues affecting many aspects of your daily life, but they can improve with treatment. For example, we often recommend accommodations that support your child's success despite sensory challenges. Occupational therapy is another effective option for overcoming sensory issues.If you have questions about your child's behaviors or want to learn more about treatments, call THINK Neurology for Kids or connect online to request a sensory evaluation appointment.

9 in 10 autistic people process sensory information differently. For some, it can cause challenges in everyday life.

A person can be over-sensitive, under-sensitive or both. Someone can experience sensory differences with sights, sounds, smells, tastes, touch, balance or body awareness. Sensory experiences can change how someone feels physically, where they can go and how they interact with others.

Hypersensitivity

If someone is hypersensitive, they may experience a very strong reaction to sensory information in their environment. Their senses can feel overloaded and that can cause anxiety, stress and real physical pain. Sensory overload can lead to distressed behaviour, meltdowns or a need to escape.
I think it's hard for people to understand how challenging an environment can be. It's not a matter of just feeling uncomfortable. When my senses are overwhelmed, environments can cause physical pain and make it impossible to think clearly.
Autistic adult

Ways to manage hypersensitivity:

- Wearing noise-cancelling headphones.
- Dimming the lights.
- Varied food options to match food preferences.
- Wearing sunglasses.
- Walled workspaces for easier control over the environment.

Ways to help someone with hypersensitivity:

- **Check your environment** - What may be causing someone sensory difficulty? Can you change it to make things more comfortable?
- **Change your environment -** Is there something that you know brings comfort to the person you're with? What can you bring to make the environment more positive?
- **Plan for your environment -** Let the person know in advance what the sensory environment will be like. Let them know that they can bring along anything that they may need to make their environment more comfortable.

Hyposensitivity

If someone is hyposensitive, they may experience weak sensory information. People who have a low sensitivity to sensory information may be less sensitive to pain and may be less able to control balance or physical coordination as they are less aware of their body's position. People who are hyposensitive may be more susceptible to physical injury, and they may have difficulty sensing or paying attention to their environment.
People always assume that autistic people need to be in calm, plain environments, but my brain needs controlled chaos to function. To be able to focus, I need lots of sound and activity. Libraries were my worst nightmare in college!
Cat - an autistic adult

Ways to manage hyposensitivity:

- Movement, such as pacing, stimming rocking.
- Weighted blankets.
- Varied food options that include intense flavours and different textures.
- Spaces that are arranged to reduce the likelihood of bumping into hard surfaces.
- Sensory stimulating toys.

Professional support

Occupational therapy
An occupational therapist can help you to understand your own sensory profile. They can help you to understand how you can positively use your senses and how you can, to some extent, adapt the environment to your specific needs.

Cognitive Behaviour Therapy
You may have had particularly negative experiences with some types of sensory information or in some environments. A cognitive behavioural therapist may be able to help you reduce the feelings of anxiety about these experiences and to develop strategies to deal with them.

Peer support
Sharing your experiences with others may help you to feel less anxious. It may be a way to learn new practical strategies to help you negotiate the sensory environment from people who have experienced something similar.

Where can research take us next?

Research around autism and sensory differences has largely focused on early sensory development and what the senses may tell us about the origins of autism. More recent research has focused on practically understanding how the senses may impact mental health and how environments can be adapted to better fit sensory needs.

Our research Research gives us better tactics for managing sensory challenges, whether someone is feeling overwhelmed or under-stimulated. It is also teaching us the sorts of environments that can support autistic people to thrive.

To know more about sensory differences, we:

- Co-funded a study with MQ looking at how sensory reactivity may be linked to anxiety in young children.
- Created a space for autistic people to share information about good and bad sensory environments. Through our Citizen Science project, community members will be able to share positive and negative experiences of their physical environment, so the community can build a virtual understanding of how an environment might fit their sensory needs.
- Are partnering on a research project training businesses about making public spaces more sensory-inclusive.

The more we learn about the small changes that can make life more comfortable for autistic people, the more opportunities employers, educators and businesses have to create a world that fully embraces autistic people.

The first clinical descriptions of autism from the late 1960s mentioned sensory dysregulation as one of the commonly reported findings among autistic individuals, yet, it was not until 2013 that they were included as part of the core symptoms of autism spectrum disorder (ASD) in the diagnostic profile, as per the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5). Abnormal sensory responses are known to be an early clinical feature of ASD, which can severely impact social functioning and also cause some deficits in brain maturation. The lack of understanding of the mechanisms underlying these abnormalities may have caused them to be overlooked in common clinical practice. This review discusses the current knowledge regarding the manner in which different sensory modalities are affected, and the implications they have on the daily functioning of autistic individuals, as well as the possible neural mechanisms underlying them. It was concluded that certain changes can be made in the environment of these individuals that may provide comfort and help them adjust better into society, and further research should be done in this field in order to improve the quality of life of autistic individuals.
Key Points

- Sensory processing abnormalities are among the most prevalent features in autistic individuals, affecting up to 87%–95% across age groups.
- Atypical responses occur across all sensory domains, including visual, auditory, tactile, gustatory, and olfactory, and influence behavior and daily functioning.
- Environmental adaptations such as light modification, noise reduction, flexible seating, and sensory-based interventions can significantly improve participation and quality of life.
- Early identification of sensory abnormalities can inform targeted interventions and enhance developmental outcomes.

1 Introduction

Autism spectrum disorder (ASD) is a neurodevelopmental condition characterized by persistent deficits in social communication and interaction and restricted, repetitive patterns of behavior, interests, or activities. Sensory abnormalities are highly prevalent among individuals with ASD, reported by up to 87% of them [1, 2]. Up to 95% of parents of children with ASD also report some atypical sensory behavior in their child (e.g., seeking certain visual experiences of lights or movements, and avoidance of certain sounds or textures) [3]. These sensory differences have been found to alter other functions, including cognitive, social, and motor abilities.

The first scientific report of ASD also mentions altered sensory perception as a characteristic feature [4]. Yet historically, social impairments have been the primary focus of ASD research. This is because of several factors, including difficulty in characterizing sensory function in an empirical manner and a greater focus on the more easily noticeable social and cognitive symptoms.

However, research focusing on the sensory domain in recent years have found that these sensory processing abnormalities are prevalent among all ages and levels of symptom severity [5], and across all sensory modalities [6]. They fail to build an accurate and significant perception of the world, as an accurate integration of information across all senses is an important process in the construction of healthy perceptual representations. These abnormalities are thus likely to cause certain higher-order deficits, severely affecting the daily functioning and academic performance of an individual, as seen in individuals with ASD [7]. This review was conducted to understand the manner in which the various sensory domains are affected, in terms of sensory sensitivity, processing, and responses to abnormal processing, and to understand how these abnormalities affect an individual's daily functioning.

2 Methodology

PubMed was used to search for relevant articles to be included in the study. The key words used were “autism spectrum disorder”, “sensory profile”, “sensory processing”, “sensitivity”, “auditory”, “tactile”, “autism”, “sensory issues”, and “sensory difficulties”. A total of 265 results were obtained, which were compiled on a google-sheets document. The inclusion criteria applied were as follows: Selection of papers that were based on severity and/or prevalence of abnormal sensory responses in autistic individuals as compared to their typically developing peers, selection of papers that were written in English, selection of studies conducted between 2005 and 2022, and selection of studies that were based on the theme of autism spectrum disorders and associated sensory abnormalities. Papers written in other languages were excluded. Studies that did not specifically focus on autism spectrum disorder but on sensory abnormalities that were present in other developmental disorders were excluded.

Studies chosen for this review are those that focus on autism spectrum disorders and their associated abnormal sensory symptoms in diagnosed patients. A total of 18 studies were included after applying the relevant inclusion criteria. For the purpose of better understanding, we have presented our findings in five sensory domains—visual, auditory, tactile, gustatory, and olfactory domains.

3 Results

3.1 The Visual Domain

Individuals with ASD were found to have certain abnormal responses to visual stimuli. Abnormalities were detected in basic functions like contrast sensitivity [8, 9], field of view size [10] and color perception [11], and boundary detection [12], and also in advanced forms of processing, such as decreased susceptibility to illusion [13, 14], abnormal oculomotor function [15] and superior visual search [16, 17]. Difficulties in sensory processing also increase as the complexity of visual stimuli increases, for example, autistic individuals show better responses while discriminating visual stimuli based on first-order features (like luminance), as compared to second-order features (such as texture) [18]. Similar results were seen for visual motion detection, with difficulties seen only for moving stimuli defined based on second-order cues [7]. They have also been known to struggle with facial recognition [19, 20]. These differences may play a role in social impairments that are common among individuals with ASD, as perception of social cues are essential in driving visual attention patterns, which further affect social development and interpersonal interactions [17]. Social deficits such as avoiding eye contact and inappropriate use of referential gaze are fairly common among individuals with ASD [6, 21-23]. These processing abnormalities also negatively affect classroom participation and education, e.g., children with ASD seem to show better concentration with usage of less intense lighting (i.e., halogen lights in place of fluorescent lights) in classrooms [24]. These children also seem to display increased attention to visually presented information [25, 26]. Thus, alteration of visual stimuli to suit the needs of autistic individuals can lead to increased participation and academic/ workplace performance.

3.2 The Auditory Domain

Abnormal auditory processing is a very common and consistently reported feature among autistic individuals, which stems from altered sensation and perception, and lack of preferential attention to auditory stimuli. These features directly impact successful social interactions and engagement. Increased pitch perception [27-29], hypersensitivity to loud sounds [30], decreased auditory orientation [31], impaired perception of prosody [32], and stream segregation [33] are some of the common complaints [17]. Atypical responses to auditory stimuli, such as covering of ears to seemingly normal sounds, are also frequently noted [34]. Similar to the findings seen in visual processing, autistic individuals showed better responses while processing the less complex features of an auditory signal (loudness) [28, 35] as opposed to more complex features [7]. Structural imaging studies of adults with ASD reveal increased cortical thickness within Heschl's gyrus, which is the main hub of auditory processing located in the superior temporal gyrus [17, 36]. This suggests the neural mechanism behind altered auditory processing seen in ASD. School-going autistic children were found to be most affected by auditory stimuli. Increased background noise levels in the classroom caused significant stress to them, leading to an increase in restricted repetitive behaviors, which further affect academic performance [26, 37].

3.3 The Tactile Domain

Individuals with ASD show both hyper- and hypo-reactivity to tactile stimuli, depending upon the type and context of stimuli. Abnormal detection [38], decreased habituation [39], and an abnormal sensation of touch and pain are some of the common responses noted [17]. Hyper-responsiveness to tactile stimuli is frequently reported. Some describe being touched as an “intense sensation that can be overwhelming and disorienting” [40]. They show lowered detection thresholds to both high [38] and low frequency [41] vibrations, indicating that they are hypersensitive to vibration stimuli [7]. Some autistic adults show lower tactile perceptual thresholds for 200 Hz vibrotactile stimuli, indicating that there may be a specific hypersensitivity in the receptor pathway of Pacinian corpuscles [38]. Usual clinical findings include avoiding normal stimuli such as light touch to the head and body, such as the textures of particular clothing and normal grooming practices [34]. Certain fabrics and textures have also been reported to cause anxiety, distress, and restlessness among autistic individuals [40]. In a classroom setting, tactile stimuli were the second most reported negative sensory modalities [42]. Classroom environment changes, such as the introduction of flexible seating arrangements improved engagement and attention among autistic children [26, 43-45]. Tactile sensation in adults with autism when compared to controls on the palm and forearm, which were innervated by low-threshold unmyelinated afferents, showed an increase in sensitivity to vibration on the forearm, and an increase in sensitivity to thermal pain at both sites. This suggests that autistic individuals have normal perception along with certain areas of enhanced perception [41].

3.4 The Gustatory and Olfactory Domain

Autistic individuals also show patterns of difficulty in eating behavior and olfactory sensitivity. Abnormalities in taste sensations have been reported, such as aversions to certain flavors, textures, or brands [7, 46]. They show higher levels of food refusal as they are found to be more selective when it comes to texture, taste, and temperature of food [47]. In case of olfactory processing, autistic individuals have been found to report some common odors as irritable or unpleasant, as compared to other typically developing individuals. Olfactory bulb dysgenesis resulting in reduced vasopressin and oxytocin receptor binding (related to social bonding) is also considered to be one of the neural foundations of ASD [17, 48].

3.5 Multisensory Integration

Individuals with autism spectrum disorder (ASD) often experience difficulties integrating sensory information from multiple modalities, a process known as multisensory integration (MSI) [34]. This can lead to atypical perceptual experiences, as they may struggle to filter and process simultaneous visual, auditory, and tactile inputs [49]. EEG studies reveal that individuals with ASD show reduced and delayed brain responses during MSI tasks, particularly after the initial stages of sensory processing. For example, Courchesne et al. suggest that the response amplitude in individuals with ASD is reduced when concurrent auditory and visual streams are presented to them [50, 51]. Brain regions involved in sensory integration—such as the prefrontal cortex, temporal lobe association areas, and cerebellum [52]—exhibit structural and functional

differences in ASD, which may contribute to these deficits. Post-mortem studies of ASD have also suggested that the columnar density of the neocortex is dense, which may aid in local processing [53]. Furthermore, many of these regions are part of the mirror neuron system, suggesting a link between impaired MSI and core features of autism like difficulties with imitation and empathy [54]. Behaviorally, individuals with ASD show less benefit from combined auditory–visual stimuli [55, 56], reduced susceptibility to multisensory illusions [57], and challenges integrating visual input with motor actions [58]. These MSI differences are exemplified in tasks like the McGurk effect, where individuals with ASD are less likely to perceive the fused audiovisual illusion, typically favoring the auditory component [59].

3.6 Neurobiology of ASD and Source of Abnormal Sensory Responses

The social, cognitive, and communication difficulties observed in autistic individuals have been increasingly attributed to their sensory processing abnormalities [7, 60]. This includes preference to certain kinds of sensory stimuli and a difference in reactivity to different components of a sensory landscape. Various studies have been conducted to identify the neural origin of these abnormalities, including the examination of sensory systems in autistic individuals. Common findings suggest that the site of lesion is located centrally, rather than peripherally. For example, in autistic individuals with auditory abnormalities, the locus of impairment seemed to originate in the brainstem or higher, and not the cochlea [40]. One possible explanation for these symptoms is the increased cortical thickness in Heschl's gyrus observed by structural imaging studies among adults with ASD [17]. Some studies suggest the causation of abnormalities in auditory processing to be rooted in the increased conduction time between cranial nerve VIII (Vestibulocochlear nerve) and the lateral lemniscus [61-64]. Measurable differences in conduction time have also been found in early auditory pathways, and those interpreting more complex stimuli [34]. Some studies also suggest increased concentrations of Glutamate (primary excitatory neurotransmitter in the cerebral cortex) and decreased concentrations of GABA (primary inhibitory neurotransmitter in the cortex) to be associated with some of the symptoms of ASD [65]. An excess of glutamate paired with the scarcity of GABA could cause hyperexcitability of the neurons in the cortex. Some of the functions of GABAergic neurons, such as temporal processing and coordination of cortical networks are likely to be affected by decreased GABA concentrations in the brain, which happens to be a common finding in ASD [66, 67]. Abnormalities and dysfunctions of the cerebellum [68] have also been regularly implicated to have a causal role [40].

Another important theory linked to the pathophysiology of ASD is the predictive coding theory. Previous studies have shown that during interactive activities, one agent's actions can predict another's—a process known as interpersonal predictive coding. In line with this, healthy participants used the communicative actions of one agent to anticipate the actions of another. However, individuals with high-functioning autism (HFA) did not demonstrate this ability, showing no improvement when communicative context was provided compared to non-communicative scenarios. Despite being able to explicitly recognize communicative intentions, autistic participants struggled to use this

information to predict others' responses. This suggests a specific impairment in using social cues for prediction, rather than a general difficulty in processing social stimuli—consistent with computational modeling findings linking autistic traits to reduced use of social information in decision-making [69].

3.7 Dunn's Quadrants of Sensory Processing and Their Connection to ASD

Dunn [70, 71] proposed a model of sensory processing that explains differences in the way people respond to sensory input. It is based on two dimensions: Neurological threshold - individuals with high threshold need a lot of input to notice/respond and those with low threshold respond quickly to small input—and self-regulation strategy—individuals with passive regulation let sensory inputs happen, do not actively manage input and those with active regulation take steps to increase or decrease input. Crossing these creates 4 sensory processing patterns:

1. Low registration (High threshold + passive)—these individuals may appear uninterested, slow to notice, and miss cues. For example, they may not react when their name is called, and may not notice pain. Some autistic individuals tend to under-respond to sensory inputs and may appear “in their own world” [70].
2. Sensation seeking (High threshold + active)—these individuals actively look for stimulation, are energetic, and crave movement/sound/touch. For example, many autistic children engage in sensory-seeking behaviors like spinning, jumping, or chewing for extra input [71].
3. Sensory sensitivity (Low threshold + Passive)—these individuals are easily distracted, highly aware of sensory input, may get upset, but do not actively avoid sensory stimulation. Many autistic individuals are highly attuned to sensory details and can become overwhelmed by faint noises, scratchy clothing, etc. [72].
4. Sensation avoiding (Low threshold + Active)—these individuals actively limit exposure, prefer routines, and avoid sensory overload. Autistic individuals often withdraw from overwhelming environments to self regulate, by covering their ears in noisy rooms, avoiding crowded rooms, and restricting foods [70].

3.8 Sensory Subtypes and Their Correlation With Functional Levels of ASD

Sensory subtypes such as sensory avoidance and sensory seeking correlate with specific functional levels of autism spectrum disorder. Sensory avoidance (hyper-responsivity) is often seen in autistic individuals with higher cognitive functioning. These individuals typically have lower thresholds and higher sensitivity to certain sensory stimuli, and hence tend to avoid them. However, they are known to have better adaptive and communicative skills and thus better behavioral outcomes. In contrast, lower functioning autistic individuals (with intellectual disability) tend to adopt sensory seeking patterns (hypo-responsivity) to certain sensory stimuli. They tend to have higher sensory thresholds and are under-responsive to stimuli, hence actively seek sensory input. They

tend to have poor adaptive behavior and socio-communication challenges [73, 74]. However, even within ASD, mixed profiles are known to occur: the same child may show simultaneous over- and under-responsivity across domains (e.g., under-responsive socially or over-responsive to textures) [73].

3.9 Cultural Influences in Autism

There are 4 categories under which cultural and socioeconomic factors can influence symptoms of ASD:

1. Qualitative differences in expression of autism symptoms: Whereas symptoms such as social-communication deficits and restricted repetitive behaviors appear to be universally recognized, some specific presentations can vary significantly because of cultural norms. For example, in Chinese culture, it is considered impolite for children to make direct eye contact with adults. Hence, communication difficulties characteristic of autism may manifest as atypical eye-contact, rather than lack of eye-contact, in the Chinese cultural context [75].
2. Quantitative differences in expression of autism symptoms: Cultural differences have been reported in the frequency and severity of certain autistic traits or symptoms. For example, a study reported that non-functional routines or rituals and preoccupation with parts of objects were more significantly reported amongst white American autistic children as compared to those of African American descent [76]. Similarly, lower levels of restrictive and repetitive behaviors were found amongst autistic Latino participants in a study comparing them with their non-Latino counterparts [77].
3. Differences in whether symptoms result in clinical impairment: A study by Chen et al. [78] suggested that autistic individuals in Taiwan with a certain level of symptom severity were more likely to stay at home, as compared to Australian participants at the same severity level, suggesting that the degree of participation in day-to-day activities may be shaped by cultural backgrounds.
4. Differences in the factor analytic structure of autism symptoms: A study in Korea [79] used the ADI-R and ADOS diagnostic tools and checked whether the two-factor model of autism symptoms described in DSM-5 (social communication/ interaction + restricted, repetitive behaviors) and ICD-10 could also be applied in Korea, and found that the two-factor structure was replicated in the Korean sample. Another study done in Taiwan [80] tested the Chinese version of the Autism-Spectrum Quotient (AQ), a questionnaire for autistic traits, and examined its psychometric properties (reliability, validity, and factor structure). They found that the factor structure (how traits cluster together) was similar to Western studies, meaning that the AQ works in a comparable way in Taiwanese populations as it does in Western high-income countries. This demonstrates that autism has cross-cultural validity in its core features.

3.10 How Unusual Sensory Responses Affect Autistic Individuals in Day-to-Day Life

Individuals with ASD are known to struggle with facial recognition and display certain social deficits like avoiding eye contact and inappropriate use of referential gaze [6, 21-23]. They are also known to be more selective when it comes to texture, taste, and temperature of food and thus show higher levels of food refusal [17, 47]. Some report common odors as irritable or unpleasant, as compared to other typically developing individuals [7].

In a classroom setting, children with ASD were found to be most affected by auditory stimuli, in terms of engagement and academic performance. Repetitive behaviors were found to be closely associated with increased noise levels in the classroom, owing to their increased pitch perception and hypersensitivity to loud sounds, which caused them significant stress [26, 37]. Decreased concentration was also a frequent complaint, often owing to uncomfortable sensory stimuli that focus attention away from key elements of the environment (class presentations) and instead focus them on distracting sensory stimuli. They may also perform poorly in academics owing to their difficulties in auditory filtering, sensory under-responsivity, and sensory seeking [42, 81].

3.11 Changes in the Environment of Autistic Individuals That Have Helped Them Adjust Better In Society

Classroom environment changes such as the introduction of flexible seating arrangements improved engagement and attention among autistic children [43-45]. Intense lighting in classrooms also negatively affects participation and education, and children with ASD have shown better performance with usage of less intense lighting, for example, using halogen lights in place of fluorescent lights in classrooms showed significant improvement in concentration and participation [24]. Visually presented information also demonstrated increased attention among autistic children [25, 26]. Environmental modifications such as installing sound-absorbing walls, using carpets, noise-monitoring tools, and noise-reduction headphones can help reduce auditory distractions and improve the signal-to-noise ratio (SNR), facilitating better communication and social engagement [24, 82]. Tools such as sound-field amplification (SFA) systems further enhance classroom listening by amplifying the teacher's voice and reducing the auditory listening stress [83-85]. For high-noise areas like hallways and cafeterias, access to quieter spaces and strategic locker placement can reduce sensory overload [82]. Visual distractions can also be minimized by covering irrelevant displays, using room dividers, adjusting desk placement, and providing individual screens, as suggested by Saggers and Ashburner [82]. Beyond environmental adjustments, targeted attentional and executive function interventions have shown promise. Computerized programs such as CPAT [86, 87] and Braingame Brian [88, 89] have led to improvements in attention, cognitive function, and even ASD-related behaviors, although effectiveness can vary by individual. Mindfulness-based interventions have also shown mixed but promising results, with some studies reporting improved attention and executive control [90]. These approaches underscore the importance of tailored multi-modal interventions to enhance learning and daily functioning for students with ASD [26].

3.12 Role of Sensory Intervention Protocols in Treatment of Sensory Processing Difficulties in ASD

The sensory Integration (SI) theory suggests that adaptive behavior results from the interaction between behavior and neurological processes in the central nervous system. Studies show that SI-based interventions improve sensory-related outcomes in children more than usual care or other treatments. Improvements were noted in motor skills, memory, and combined sensory-motor and cognitive abilities, though not in spatial positioning, touch, or verbal skills. One high-risk bias RCT found that children with low-functioning ASD had fewer sensory issues after SI therapy compared to usual care. Other findings include: environmental enrichment—which showed improved nonverbal cognitive skills, auditory integration approaches—showed no significant language improvements, but some parent-reported gains in hearing sensitivity and behavior, and massage therapy—reduced sensory challenges and ASD symptom severity compared to no massage [91].

Table 1, summarizes 18 articles that were reviewed for this manuscript.

TABLE 1. Summary of articles on sensory processing issues in autism.

3.13 Limitations

Many of the studies included in this review article analyzed participants based on self-review measures and care-taker questionnaires. These are not standardized measures with established reliability. Several studies included were also retrospective, which may have caused bias, such as recall bias. Moreover, this study purely aims to focus on the sensory processing difficulties faced by autistic individuals and hence may fail to incorporate the other significant challenges that they tend to face in their day-to-day lives.

4 Conclusion

Sensory processing abnormalities are the most commonly reported symptoms among individuals with ASD. These include hypersensitivity, hyposensitivity, and sensory seeking across various sensory domains such as the visual, auditory, and tactile domain. These abnormalities significantly impact the sensory experiences of school-going children with autism, in terms of engagement, concentration and academic performance. They also cause difficulties in social interaction, cognition, and communication with peers. Tactile processing abnormalities such as under-responsivity to tactile stimuli were also found to affect sleep quality in ASD - causing shorter total sleep time, longer sleep latency, and decreased sleep efficiency, further precipitating concentration difficulties and learning problems. They have also been shown to affect overall emotional development and self-image.

Therefore, abnormal sensory processing associated with autism spectrum disorders seem to cause significant problems in daily interaction and communication, and thus interfere with the overall development of the affected children, leading to social and cognitive deficits.

In order to alter or reduce the progress of these symptoms, efforts must be made to identify early signs of sensory abnormalities, so that early interventions can be provided and their severity can be controlled. Neurobiological and other predictors of autism spectrum disorder in infants and young children must be identified in order to aid this purpose. This will improve the overall developmental and social outcomes of individuals diagnosed with ASD. Further research must also be done to understand the basic underlying mechanisms behind the etiology of this disorder, and also to identify strategies of controlling symptom severity, such as making minor changes in the environment of autistic individuals, that would allow them to be more comfortable and improve their quality of life.

Author Contributions

Anisha Kaundinya: conceptualization, literature review, and data curation, writing – original draft preparation, table preparation. **Sowmyashree Mayur Kaku:** conceptualization, supervision, writing – review and editing, critical revisions for intellectual content, final approval of the manuscript. Both authors reviewed and approved the final version of the manuscript.

Acknowledgments

The authors have nothing to report.

1.

Ethics Statement

The authors have nothing to report.

Autistic people process the world around them in a different way, particularly when it comes to sensory information.

Some people may be overly sensitive, perhaps to loud noises or bright lights, while others may be under-sensitive and will engage in sensory-seeking behaviour, such as listening to loud music on repeat. Children with autism require support from their families and educators to navigate their sensory sensitivities safely so they can participate in their learning and other activities.

Understanding sensory sensitivities

Sensory sensitivities, or sensory processing issues, refer to how some individuals perceive sensory input differently. Autistic people are typically over-sensitive (hypersensitive) or under-sensitive (hyposensitive) to sensory information.

Hypersensitivity
Hypersensitive individuals may find certain sensory stimuli, such as bright lights, background noise or scratchy clothing, very overwhelming. This overstimulation can lead to discomfort or pain, causing the individual to avoid certain stimuli. They might cover their ears to block out sound, squint or retreat from bright lights, or remove clothes made from certain materials.
Hyposensitivity
Hyposensitivity is when an individual is under-responsive to sensory information. This might mean they seek out intense sensory experiences, such as putting their ear next to a speaker playing music or staring directly at bright lights. They might also enjoy jumping or bumping against objects. Some people who are hyposensitive may enjoy extreme heat or cold or have a high pain threshold, which can create safety issues (e.g., wanting to touch a hot stove).
Sensory sensitivities impact autistic children's safety, learning experiences and interactions with places and other people. Changes to an autistic person’s environment or emotional state can influence how severe these sensitivities are; when an autistic person is anxious or overwhelmed, they usually have heightened sensitivity to their environment. It’s also uncommon for autistic children to ‘grow out of’ their sensory sensitivities; rather, they and their families become better at navigating them as they age.
Here is how the different senses might be impacted by sensory sensitivities:
Sound

Sight

Touch

Taste

Smell

The two overlooked senses

Vestibular
The vestibular system helps control balance and spatial orientation. Children with autism might have a hypo-reactive vestibular sense, allowing them to spin or swing for many minutes without dizziness. They might also be hyper-reactive, making them prone to motion sickness even in short car rides.
Proprioceptive
Proprioception involves being able to sense the position of your body parts. Children who struggle with proprioceptive processing might have difficulty with fine motor skills or

experience a constant need to exert pressure on their joints and muscles, often through jumping, bumping, or crashing into objects.

The impact of sensory sensitivities

Sensory processing typically occurs without us thinking about it; our sensory systems process and adapt to our environment without conscious effort. However, for people with autism, sensory processing can be challenging or require significant effort and attention to stay regulated. Certain sensory information can impact how an autistic person processes information, responds to requests, participates in social and physical activities, and maintains calm.

Understanding the impact of sensory sensitivities on an autistic child's behaviour is crucial. Behaviours that might appear disruptive or inappropriate, such as meltdowns in public spaces or refusal to participate in seemingly simple activities, are often direct responses to sensory overload. These reactions might seem irrational from the outside looking in, but they are often the child's attempt to manage or escape from overwhelming sensory input.

If appropriate accommodations aren't made to help autistic children navigate sensory sensitivities, particularly in early learning settings, they will struggle to learn, socialise, and participate in the classroom or playground. This can lead to learning gaps, social isolation, and behavioural issues, which, without proper awareness among early childhood educators, can be misinterpreted as 'bad behaviour.'

Safety is a particular concern for children who may be under-sensitive to sensory information. For example, a child might touch a hot surface and burn themselves if they crave warmth and have a low pain threshold.

Support for sensory sensitivities

Supporting a child with sensory sensitivities begins with understanding and recognising the unique ways they experience their environment. Parents, educators, and others who support the child can use various strategies to accommodate sensory needs:

Environment

Adapting an environment to reflect a child's sensory needs at home, in early learning settings or in the community is an important first step. This might include dimming the lights, creating designated quiet spaces, or creating opportunities for sensory play that allow the child to engage with sensory stimuli safely.

Early childhood educators and staff must have an awareness of potential sensory issues a child may experience in early learning settings to modify the environment accordingly. Simple adjustments, such as encouraging the use of noise-cancelling headphones or using unscented whiteboard markers, can make an enormous difference.

Seating arrangements and social interactions also need to be considered carefully. Seating students with autism in quieter areas of the classroom or with quieter students can help them remain engaged in their learning without separating them from their peers.

Routines

Creating activities specifically designed to provide the sensory experiences that an autistic child craves can help them manage their sensitivities. This could involve scheduled time for pressure exercises, tactile play, or listening to specific types of music. These activities should be approached consistently in therapy, in early learning settings and at home.

Peers and siblings

Educating other children who interact with the child about sensory sensitivities in an age-appropriate way can encourage understanding and empathy, reduce stigma, and create a more supportive social environment (e.g., encouraging children to use 'inside voices' in the classroom can reduce noise levels).

Professional support

Occupational therapists play an important role in helping families and educators support autistic children with sensory sensitivities. They can offer evidence-based interventions and sensory processing techniques and guide families and educators in creating environments that reduce sensory overload and behaviours of concern.

Often, sensory sensitivities in children with autism cause very young children to protect themselves from what they, because of their heightened sensory sensitivity, perceive as excessive stimulation. This is especially true when that perceived excessive stimulation comes from other people, even if those other people are the autistic child's parents or caregivers.

Maybe the child on the autism spectrum turns away from touch, sound, bold colors or patterns, strong smells or tastes. Maybe it's only interpersonal intimacy that the child turns away from. On page 14 of *Engaging Autism: Using the Floortime Approach to Help Children Relate, Communicate, and Think*, Dr. Greenspan writes that "studies are showing that many children with autism can be very emotional but become so overwhelmed by their feelings that they avoid contact."

Many children with autism can be very emotional but become so overwhelmed by their feelings that they avoid contact.

Dr. Greenspan

Children on the autism spectrum with sensory sensitivities close off their potential ability for expressive action and meaningful language as they deal with this perceived onslaught of the sensory environment around them and the chaos of their inner world. But, and this should give hope to parents of children with autism, they can and have been persuaded to join their parents' people world when they feel understood and protected.

Children with autism have sensory sensitivities. Dr. Stanley Greenspan's Floortime Approachcan help.

Parents, please remember that your child's autism diagnosis is dynamic not static! There is hope!

What is Greenspan Floortime?

Greenspan Floortime is a comprehensive, evidence-based approach developed by Dr. Stanley I. Greenspan that uses emotionally meaningful play interactions to support children's social-emotional, cognitive, and communication development. It is the foundation of the DIR™ model.

What are sensory sensitivities in autism?
Sensory sensitivities in autism refer to heightened or reduced responsiveness to sensory input — sounds, textures, lights, tastes, or movement. Many children with autism experience sensory processing differences that affect their behavior, attention, and ability to engage with others and the environment.
How does the Greenspan Floortime approach address sensory sensitivities in autism?
The Greenspan/DIR™ model places individual sensory processing differences at the core of understanding each child. Rather than treating sensory sensitivities as behaviors to eliminate, Greenspan Floortime works with the child's unique sensory profile to support regulation and engagement.
How do sensory sensitivities affect development and therapy in children with autism?
Sensory sensitivities can make it harder for children with autism to stay regulated, engage socially, and focus on interaction. By understanding and accommodating a child's sensory needs, caregivers and therapists create the conditions in which Floortime and developmental progress can occur.

Introduction

Autism spectrum disorder (ASD) is more than just a medical diagnosis; it represents a unique way of experiencing the world. Autistic individuals offer perspectives that challenge conventional ways of seeing and interacting with reality. In this article, we delve into the distinct sensory, cognitive, and social perceptions that characterize the autistic experience, aiming to provide a comprehensive understanding of how autistic individuals perceive the world.

Sensory Perceptions: A World Without Filters

What are the unique sensory, cognitive, and social perceptions of autistic individuals?

Individuals diagnosed with autism spectrum disorder (ASD) often experience unique sensory perceptions characterized by hypersensitivity and hyposensitivity across various modalities, including touch, sound, sight, taste, and smell.

Hypersensitivity and Hyposensitivity in Autistic Individuals

Around 90% of autistic individuals exhibit atypical sensory processing.

- **Hypersensitivity**: Some may find loud noises painfully overwhelming or perceive bright lights as excessively intense.
- **Hyposensitivity**: Others may require stronger stimuli to feel sensations, often leading to sensory-seeking behaviors.

This sensitivity can cause significant discomfort in everyday situations, such as crowded places or busy streets.

Impact of Sensory Differences on Daily Life

The sensory differences experienced by autistic individuals affect their ability to filter out irrelevant information. Everyday experiences become overwhelming due to the inability to distinguish important from unimportant stimuli.

- **Daily Functions**: Many autistic people might use strategies like wearing noise-canceling headphones or sunglasses as a coping mechanism while navigating public spaces.
- **Social Interactions**: The resultant emotional distress may complicate social interactions, making conversations and relationship-building particularly challenging.

Role of Sensory Processing Pathways

Neurobiological factors play a crucial role in the sensory perceptions of autistic individuals. Altered sensory processing pathways within the brain can lead to significant differences in how sensory information is interpreted and responded to, ultimately affecting both cognitive functions and social skills.
Understanding these sensory perceptions not only highlights challenges faced by autistic individuals but also showcases their unique cognitive abilities and creativity in interpreting the world around them.

Daily Life Challenges for Autistic Individuals

How does autism spectrum disorder impact everyday life?

Autism Spectrum Disorder (ASD) significantly alters daily life through its effects on communication, social interaction, and behavior. Many autistic individuals find initiating and maintaining conversations difficult, often leading to feelings of isolation. They may interpret non-verbal cues differently, which can make social situations feel exhausting and create misunderstandings.

Sensory processing and emotional regulation challenges

In addition to communication hurdles, sensory processing differences complicate everyday experiences. Autistic individuals might experience hypersensitivity to sensory inputs like loud noises or bright lights, leading to distress in crowded environments. This sensory overload can greatly heighten anxiety and impact their ability to navigate public spaces comfortably.
Emotional dysregulation is another frequent challenge; many autistic individuals may feel overwhelmed by their emotions, complicating relationship-building and contributing

to mental health struggles such as anxiety or depression. Coping strategies, such as using noise-canceling headphones or engaging in self-regulating behaviors (like stimming), can provide some relief but may not be practical in all situations.

Barrier in executing daily tasks

Furthermore, executive function difficulties often hinder autistic individuals' ability to plan and execute daily tasks. Organizing responsibilities, remembering appointments, or even making decisions can feel like insurmountable challenges. These barriers can leave individuals feeling frustrated and overwhelmed, thereby affecting their overall quality of life.

Understanding Autistic Communication Challenges

What communication challenges do autistic individuals face?

Autistic individuals face a variety of communication challenges that can significantly hinder social interactions. They often struggle with both verbal and nonverbal communication. This includes difficulties in developing language skills and understanding social cues, gestures, and facial expressions.
Common communication issues include **echolalia**, where they repeat phrases or words without context, and **pragmatic language difficulties**, which make it hard to navigate the implicit social norms of conversations. Some may be non-verbal, necessitating alternative communication methods that can facilitate interaction.

Alternative communication methods

For individuals who are non-verbal or have severe communication difficulties, alternative methods such as:

- **Speech-generating devices**
- **Picture Exchange Communication Systems (PECS)**
- **Sign language or gestural communication**

can be beneficial. These tools help bridge communication gaps, allowing autistic individuals to express their needs and thoughts more effectively.

Role of sensory sensitivities in communication

Sensory sensitivities play a significant role in communication challenges. Many autistic individuals experience sensory overload from environmental stimuli like loud noises or bright lights, making it difficult to focus during conversations. This increased sensitivity contributes to **difficulty processing verbal information**, further complicating interactions.
Addressing these communication challenges requires patience and understanding, taking into consideration the individual's sensory needs and preferred methods of expression.

Linking Sensory Processing to Social Interactions

What are the sensory processing differences in autism and how do they affect social interactions?

Sensory processing differences in autism spectrum disorder (ASD) can manifest as hypersensitivity or hyposensitivity to various stimuli, such as sounds, lights, and textures. This can create challenges in filtering essential sensory information, making it difficult for individuals to interpret crucial social cues like tone of voice, facial expressions, or body language.

Many autistic individuals experience sensory overload in social situations, leading to discomfort or anxiety. Altered perceptions can hinder their ability to engage effectively, contributing to social misunderstandings and feelings of isolation. Research shows a significant correlation between these sensory challenges and social difficulties, suggesting that individuals with more pronounced sensory processing issues often exhibit poorer social functioning.

Interventions such as sensory integration therapy are designed to enhance an individual's capacity to process sensory information. By addressing sensory processing difficulties, these therapies can improve social skills and adaptive behavior, ultimately facilitating better communication and engagement in social contexts. Understanding sensory processing differences is crucial for supporting individuals on the autism spectrum in navigating social environments.

Complex Emotional Experiences and Sensory Overload

How do emotional experiences and sensory overload manifest in autistic individuals?

Emotional experiences and sensory overload in autistic individuals present unique challenges. Many autistic individuals show heightened sensitivities to sensory stimuli, while some may have less sensitivity, complicating daily interactions.

When faced with excessive sensory input, they often encounter emotional dysregulation. This can manifest as anxiety, frustration, or even sadness. Overwhelming environments—like crowded spaces or loud noises—can trigger reactions such as stimming, withdrawal, or meltdowns. This reflects their struggle to process multiple sensory impressions simultaneously.

What strategies can help manage sensory and emotional challenges?

Coping strategies are vital for managing both sensory overload and emotional responses. Here are some effective techniques:

- **Sensory Safety Plans:** Tailoring a personal plan to identify triggers and responses can be beneficial.
- **Creating Calming Environments:** Modifying spaces with reduced stimuli—like dim lights or soft textures—can minimize overwhelm.
- **Use of Sensory Tools:** Tools such as noise-canceling headphones or fidget toys help manage sensory input proactively.
- **Mindfulness and Self-regulation Techniques:** Practicing deep breathing or meditation can support emotional regulation.

By recognizing these triggers and employing coping mechanisms, autistic individuals can navigate their environments more effectively, leading to improved emotional well-being.

Imagination and Inner Worlds in Autism

How do imaginative capabilities and inner worlds differ in autistic individuals?

Imaginative capabilities and inner worlds in autistic individuals can be quite rich and varied, contrary to common misconceptions. Approximately 90% of autistic individuals report having inner worlds that serve numerous functions, such as alleviating stress and facilitating social interactions.

These inner worlds are often described as elaborate and meaningful spaces where autistic people can express themselves without fear of judgment. This contrasts with the idea that autistic individuals lack creativity or imagination. While some may find social imagination challenging, many have a unique ability to create complex scenarios and engage in imaginative play differently than neurotypical children.

For instance, some autistic individuals may engage in repetitive play or sorting objects, which can be interpreted as a lack of imagination, yet these activities often reflect intricate narratives unfolding in their minds.

Below is a summary of how imaginative capabilities in autistic individuals differ from general perceptions:

Overall, the diverse imaginative experiences of autistic individuals reveal a nuanced understanding of their creative potential and cognitive processes, challenging the conventional views on autism and creativity.

Conclusion

Autistic individuals perceive the world through a lens often shaped by unique sensory and cognitive experiences, offering insights that can enlighten and innovate societal understandings of the human mind. By exploring the depths of their perceptions, challenges, and strengths, we foster an inclusive dialogue respectful of the diverse ways in which everyone experiences the world. Acknowledging and embracing these differences not only enhances our interactions but also enriches our collective worldview.

For many autistic people, the hardest part of the day is not socialising, schoolwork, or even change.
It is the invisible load of sensory input.
A buzzing light. A humming fridge. A scratchy shirt seam. The smell of someone's perfume. The echo inside a crowded store. The feeling of being touched unexpectedly. The way multiple sounds stack until your brain cannot sort them anymore.
This is what **sensory sensitivities autism** can look like. It is not being dramatic. It is not being difficult. It is the nervous system processing input in a different way, often with less filtering.
Understanding sensory differences matters because sensory stress can shape everything: mood, energy, focus, behavior, sleep, eating, social participation, and mental health. When the environment becomes manageable, people often function better without needing to "try harder."
This guide explains sensory processing in autism, what sensory overload is, how it shows up across ages, and practical supports that make everyday life easier.

What sensory sensitivities mean in autism

Sensory sensitivities are differences in how the brain processes sensory information. This includes the eight sensory systems:

- Sight (visual)
- Sound (auditory)
- Touch (tactile)
- Taste (gustatory)
- Smell (olfactory)
- Movement (vestibular)
- Body awareness (proprioception)
- Internal sensations (interoception)

When people talk about **sensory processing autism**, they are often describing how sensory input can feel amplified, unpredictable, distracting, or even painful. Some autistic people are more sensitive to certain sensations, while others seek them out because they help regulation.
A key point: sensory needs are not the same every day. Stress, sleep, health, and environment can change sensory tolerance.

Sensory differences can show up as "too much" or "not enough"

Sensory differences are not only hypersensitivity. They can also include hyposensitivity.

Hypersensitivity (input feels too intense)

Examples:

- Lights feel harsh
- Noise feels painful or chaotic
- Certain fabrics feel unbearable
- Strong smells trigger nausea
- Busy spaces make it hard to think

Hyposensitivity (input feels muted)
Examples:

- Not noticing cold or heat quickly
- Seeking strong movement or pressure
- Needing louder sound to register it
- Craving crunchy or spicy foods for stronger sensation

Both can exist in the same person, sometimes in different senses.
This is why autism sensory challenges can look “inconsistent.” The nervous system is not inconsistent. It is responding to the type and intensity of input in that moment.

What autism sensory overload looks like in real life

Autism sensory overload happens when sensory input exceeds the person’s capacity to process it.
It can build quickly or slowly. Sometimes the person knows it is happening. Sometimes they only realise after they are already overwhelmed.
Sensory overload can look like:

- Irritability or sudden emotional flooding
- Shutting down (going quiet, withdrawing, losing speech)
- Trying to escape the environment immediately
- Covering ears, squinting, or pushing away touch
- Pacing, rocking, or increased stimming
- Headaches, nausea, dizziness, or fatigue
- Meltdowns when the system cannot hold it in anymore

A meltdown is not a tantrum. It is a loss of regulation.
Many families notice that overload shows up as “behavior.” But the behavior is often the last stage. The sensory stress started long before anyone saw it.

How sensory issues shape everyday life

Sensory experiences affect daily routines more than people expect.

1) Getting dressed can feel like a battle

Clothing is constant sensory input. Tags, seams, tight waistbands, socks, bras, certain fabrics, and even wet hair can be overwhelming.
Some people need:

- Soft fabrics
- Seamless socks
- Predictable outfits
- Cutting tags or choosing tagless clothing
- Time to adjust before leaving the house

What looks like stubbornness is often discomfort that does not switch off.

2) Eating can be about texture, temperature, and predictability

Food sensitivity is often sensory-based, not defiance.

Common triggers include:

- Mixed textures (yogurt with chunks, sauces with pieces)
- Slimy or mushy textures
- Strong smells
- Temperature differences on one plate
- Unexpected flavours

Supporting eating often means creating safety and predictability around sensory input.

3) Daily errands can be exhausting

Many environments are sensory-heavy: supermarkets, malls, public transport, busy waiting rooms.
Common stressors include:

- Fluorescent lighting
- Loud music and echo
- Strong cleaning products
- Crowds and unpredictable movement
- Multiple conversations happening at once

This is why sensory issues autism adults experience can look like avoidance or fatigue. The task is not just the task. It is the sensory environment wrapped around it.

4) School and work performance can drop under sensory load

A person can be capable and still struggle if the environment drains their capacity.
Examples:

- Trying to focus in noisy classrooms
- Learning under harsh lighting
- Processing spoken instructions in busy rooms
- Managing group work with constant sensory interruptions

When sensory load decreases, attention and performance often improve because the brain is no longer fighting the environment.

5) Relationships and social life can be affected

Sensory stress can make socialising harder, even when the person wants connection.
Social environments often include:

- Unpredictable noise levels
- Bright lights
- Touch (handshakes, hugs, crowded seating)
- Strong smells
- Rapid conversation shifts

When someone avoids events, it may not be a lack of interest. It may be a capacity issue.

Practical ways to support sensory sensitivities

Sensory support should be about reducing harm and increasing participation, not forcing tolerance.

1) Identify patterns without judgement

Track what happens before overload:

- Time of day
- Environment
- Noise, light, smell, crowds
- Hunger, sleep, stress level

Patterns help you prevent overload instead of reacting to it.

2) Build a "sensory toolkit"

A toolkit can include:

- Ear defenders or noise-cancelling headphones
- Sunglasses, hats, or visors
- Fidgets or safe stims
- Water and snacks
- Comfort items
- Clothing backups (socks, shirts)

The goal is to give the body tools that reduce sensory stress quickly.

3) Offer control and choice

Small choices reduce sensory threat.

Examples:

- "Do you want the fan on or off?"
- "Do you want to sit near the door or the window?"
- "Do you want to leave in 10 minutes or 15?"

Choice supports nervous system safety.

4) Plan decompression time as part of the day

If a day includes sensory-heavy settings, recovery should be expected.

Decompression can look like:

- quiet time in a darkened room
- special interests
- movement that feels regulating
- low-demand time without questions

5) Use accommodations in school and work

Supports can include:

- Seating away from noise sources
- Written instructions in addition to verbal
- Flexible lighting where possible

- Breaks during long meetings or classes
- Permission for sensory supports (headphones, fidgets)

Accommodations are not special treatment. They are access.

How the Dan Marino Foundation can help

Sensory challenges are not minor details in autism. They can shape daily functioning, learning, independence, and mental health.

The **Dan Marino Foundation** provides resources and programs that support practical skill-building and real-life participation. When sensory overload is part of the picture, structured supports can help individuals and families build routines, identify triggers, and develop strategies that make everyday environments feel safer and more manageable.

If sensory stress is affecting school, work, or daily life, support can begin with small changes that reduce overload and protect capacity.

FAQs: Sensory Sensitivities and Autism

1) What does sensory sensitivities autism mean?

It refers to differences in how autistic people process sensory input, which can make sounds, lights, touch, and other sensations feel more intense or harder to filter.

2) What is sensory processing autism?

Sensory processing autism describes how sensory information is interpreted and regulated. Some autistic people are hypersensitive to certain sensations, while others seek sensory input to feel regulated.

3) What causes autism sensory overload?

Overload occurs when sensory input exceeds the person's capacity. Factors like stress, fatigue, busy environments, and lack of recovery time can increase the likelihood.

4) Are sensory issues autistic adults experience different from children?

The sensory systems are similar, but adults often mask discomfort and push through until they crash later. Work environments and daily responsibilities can also increase sensory load.

5) How can I tell the difference between a tantrum and sensory overload?

A tantrum is goal-driven. Sensory overload is regulation-driven. Overload often includes distress signals like covering ears, escaping input, shutdowns, or a meltdown when capacity is exceeded.

6) Can sensory support help with autism sensory challenges at school?

Yes. Tools like noise reduction, written instructions, predictable routines, and breaks can reduce sensory load and improve participation.

7) Do sensory differences between autism vary day to day?

Yes. Sleep, stress, health, and environment can change sensory tolerance, which is why needs may look inconsistent.

8) What are practical first steps for sensory support at home?

Start by identifying patterns, reducing the most painful inputs, building a simple sensory toolkit, and planning decompression time after high-demand settings.

In general, a lot of DBT grounding techniques can help regulate sensory problems

responds to sensory input, such as sounds, smells, touch, etc. Some may feel overwhelmed with the amount of senses they are encountering, or the opposite,

underwhelmed or under-reactive to sensory input. For example, a busy and loud environment can be overwhelming and make one feel uncomfortable. Or, on the contrary, lack of sound might make someone feel uneasy, and they may make sounds themselves as a way to self-regulate and find balance.

- Those with **Dyspraxia**, which affects motor skills, might encounter sensory processing difficulties that make coordination and navigating their environment more challenging.
- Those with **Attention Deficit Hyperactivity Disorder (ADHD)** may experience heightened sensitivity to noise, touch, or movement, which can make it difficult to focus or stay regulated in stimulating environments.
- **Sensory Processing Disorder (SPD),** is a condition characterized by trouble receiving and responding to information from the senses.
- Individuals who've experienced a **Traumatic Brain Injury (TBI)** may develop sensory processing differences, such as difficulty tolerating bright lights, loud sounds, or certain textures.

Who has "Sensory Processing Issues"?
Difficulty with sensory processing is not exclusive to autism. Additionally, not all Autistic people experience difficulty with sensory processing. Sensory differences can appear in a variety of other conditions -

It is essential to note that while sensory processing can play a role in **Autism Spectrum Disorder (ASD)**, it is not required for a diagnosis. The DSM-5 (Diagnostic and Statistical Manual of Mental Disorders, 5th edition) includes sensory differences as one possible indicator of autism under its criteria for restricted, repetitive patterns of behavior. Only 2/4 indicators need to be present for a diagnosis.
Here's how the DSM-5 includes sensory differences Under Criterion B (restricted, repetitive patterns of behavior) - *Hyper- or hyporeactivity to sensory input or unusual interest in sensory aspects of the environment (e.g. apparent indifference to pain/ temperature, adverse response to specific sounds or textures, excessive smelling or touching of objects, visual fascination with lights or movement).*
Hyper- vs Hyporeactive

Hyper-reactive:
Hyper-reactivity refers to heightened responses to sensory input, also known as "overstimulation", "hyper-sensitive" or "sensory overload."
Overstimulation is a state of being that is caused by too much sensory input. Being overstimulated occurs when one is overwhelmed by information from their senses and struggles to process their environment.
This might show up as music feeling too loud, lights seeming too bright, or smells becoming overwhelming. When this happens, it might feel like a traffic jam of information, where one's brain can't process everything fast enough. One might react by covering their ears, squinting, or withdrawing to cope.
Some examples are:

- Being bothered by bright lights

- Feeling overwhelmed with sounds on the train
- Having a negative reaction to strong smells

Hypo-reactive:
Hypo-reactivity refers to feeling under-reactive to sensory stimuli. This might be referred to as “under-stimulation” or “hypo-sensitive.” In response, one might be “sensory seeking,” or have a craving for more sensory input, feeling the need to constantly explore and seek out more sensory information from the world around them.
Those experiencing hypo-reactivity may seek out loud music, feel the need to touch textures constantly, or stare at lights. They need more stimuli to feel engaged or stay focused.
Some examples are:

- Spinning around
- Rocking back and forth
- Staring at lights
- Going to concerts with loud music
- Exploring extremely spicy or new flavors

How Sensory Processing Differences Can Affect the 8 Senses:

- **Vision**
    - Bright lights can feel overwhelming.
    - Some people may seek out flashing or moving lights.
- **Smell**
    - Strong odors like smoke can be uncomfortable.
    - Others may not notice or react much to strong smells.
- **Touch**
    - Clothing tags or rough fabrics can feel painful.
    - Some people may seek extra pressure or touch.
- **Taste**
    - Certain foods may taste too strong or unpleasant.
    - Others may crave very strong or spicy flavors.
- **Hearing**
    - Loud or sudden sounds can be distressing.
    - Some people may prefer very loud music or specific sounds.
- **Vestibular (sense of gravity, inner ear, balance)**
    - Swings, slides, or roller coasters may feel uncomfortable.
    - Others may enjoy spinning, jumping, or intense movement.

- **Proprioception (awareness of body positions & movement**, or, the ability to know where your body parts are without needing to look)
    - Difficulty sensing where your body is and appearing clumsy.
    - Purposely bumping into things.
- **Interoception (internal body awareness)**
    - The sensation of your heart beating or breathing feeling overwhelming.
    - Not realizing you're hungry, thirsty, or need the bathroom.

What is the Autistic Sensory Experience?
Many of us don't like to view our experience through the deficit lens or through medical terminology like "sensory processing issues." Additionally, our experience goes beyond just difficulty with being overstimulated. Being hyper-sensitive to certain senses can have some benefits! Autistic people are three times as likely to experience synesthesia. Autistic people have an increased auditory perceptual capacity, meaning we might be better at music or certain auditory tasks. Some autistic people view our sensory differences through the lens of monotropism, meaning we may best thrive by processing 1 source of input (this case, sensory input) at one time.
There are a lot of different ways to experience sensory input as Autistic people. Read the articles below, and we explore you to define your own Autistic sensory experience!
Exploring the Intriguing Connection Between Synaesthesia and Autism - Reframing Autism
A sound advantage in autism- Embrace Autism
Hypersensitive, Hyperfocused and Ready for 'Hijack': An Autistic Experience of Sensory Anxiety - Reframing Autism
Managing your Sensory Experience
Sensory differences can make the world feel overwhelming. Bright lights, loud sounds, strong smells, or certain textures may be hard to manage, while other times we might not get enough sensory input. Adjusting the environment, such as dimming the lights or using an air purifier, can help, but it's not always possible.
When you can't change the environment, it's useful to have techniques to regulate either sensory overload or under-stimulation. It's good to create a personal list of strategies that work for you.

- **With tools:** Items you can carry with you in case of sensory overload.
- **Without tools:** Strategies you can use anytime, even if you don't have anything on hand.

Regulating With Tools:
Without any special equipment, there are simple ways to help ground oneself. For example:

- **Yoga** can help center the mind and body.

- **Meditation** and **breathing exercises** are excellent for calming the nervous system.
- **Body scan** techniques, where you check in with each part of your body, can help reduce anxiety.
- Going **outside** and enjoying a quiet walk can also be a great reset.

Sensory challenges in autism refer to differences in how the brain receives and processes input from the environment. Many autistic individuals experience the world through heightened or reduced sensitivity to sounds, light, touch, smell, taste, and movement. These differences are not a personal failing or a behavioral problem; they are a neurological reality that shapes how everyday life feels.

Understanding autism and sensory issues is an important step toward building environments, relationships, and routines that work for autistic people rather than against them. Research suggests that up to 90% of autistic individuals experience some form of sensory difference, making sensory processing one of the most common and significant aspects of the autism experience.

What Are Sensory Issues in Autism?

Sensory processing refers to the way the nervous system takes in information from the world and translates it into perception and response. For autistic individuals, this process often works differently than it does for neurotypical people.

There are two primary patterns of sensory difference:

- **Hypersensitivity (over-responsiveness):** The nervous system amplifies sensory input, making sounds, lights, textures, or smells feel overwhelming or even painful.
- **Hyposensitivity (under-responsiveness):** The nervous system receives less input than expected, which can lead to seeking out stronger sensory experiences or appearing unaware of sensory stimuli.

It is also common for the same person to be hypersensitive in some areas and hyposensitive in others. These are not fixed traits; they can shift depending on stress levels, fatigue, environment, and time of day.

The DSM-5 formally recognizes sensory processing differences as part of the autism diagnostic criteria, acknowledging that sensory reactivity is a core feature of the autism experience, not a secondary symptom.

The Eight Senses and How They Are Affected

Most people are familiar with the five traditional senses. In sensory processing, there are actually eight sensory systems that can be affected in autism:

- **Auditory (hearing):** Sounds may feel physically painful, distracting, or impossible to filter. Background noise in a grocery store or classroom can be just as loud as a foreground conversation.
- **Visual (sight):** Fluorescent lighting, bright colors, or visually busy environments can cause significant discomfort or distraction.
- **Tactile (touch):** Clothing tags, certain fabrics, light touch, or unexpected physical contact may feel unbearable. Some individuals seek deep pressure instead.
- **Olfactory (smell):** Strong or unfamiliar scents, including perfume, cleaning products, or certain foods, can trigger distress or nausea.
- **Gustatory (taste):** Sensitivities to food textures, temperatures, or flavors can lead to a limited diet that is often misunderstood as picky eating.
- **Proprioception (body awareness):** Difficulty sensing where the body is in space can affect coordination, posture, and the desire to seek out heavy work or pressure.
- **Vestibular (movement and balance):** This system governs how we respond to movement. Some autistic individuals crave spinning or swinging; others feel easily overwhelmed by motion.
- **Interoception (internal body signals):** This lesser-known sense involves awareness of internal states such as hunger, thirst, temperature, or the need to use the restroom. Difficulty here can make it hard to identify or communicate physical needs.

For a broader look at how sensory differences show up in daily life, our article on sensory overload in neurodivergent adults explores what happens when sensory input becomes too much to manage.

How Sensory Challenges Affect Daily Life

Sensory differences do not exist in isolation. They ripple through nearly every area of daily functioning.

Emotional regulation

When sensory input becomes overwhelming, the nervous system can move into a state of dysregulation. This may look like a meltdown (an involuntary loss of behavioral control), a shutdown (withdrawal or emotional numbness), or intense anxiety. These responses are not tantrums or manipulation; they are the result of a nervous system that has exceeded its threshold.

Social participation

Many social settings, such as parties, classrooms, restaurants, and workplaces, are also high-stimulation environments. For someone with sensory sensitivities, the combination of noise, lighting, movement, and unpredictability can make social participation genuinely exhausting or inaccessible.

Daily routines and self-care

Tasks like bathing, haircuts, teeth brushing, dressing, and eating can all become difficult when sensory sensitivities are involved. These are not matters of preference or

defiance. Our post on sensory-friendly approaches to food and gastrointestinal sensitivities addresses how these challenges show up around eating in particular.

School and work performance

Sensory challenges can affect concentration, productivity, and the ability to stay regulated throughout a structured day. This is often misread as inattention, laziness, or behavioral issues, especially when the underlying sensory needs are not identified or accommodated.

Strategies for Supporting Sensory Needs

There is no single approach that works for everyone. Effective support starts with understanding each person's unique sensory profile.

1. Create sensory-friendly environments

- Reduce harsh or flickering overhead lighting; use natural light or adjustable lamps instead.
- Offer quiet areas or noise-reduced spaces in homes, classrooms, and workplaces.
- Minimize visual clutter and allow for predictable, organized environments.
- Be mindful of strong scents from cleaning products, air fresheners, or food in shared spaces.

2. Use sensory tools and supports

- Noise-cancelling headphones or earplugs for auditory sensitivity.

- Weighted blankets or vests for proprioceptive input and calming.
- Fidget tools to support focus and self-regulation.
- Sunglasses or tinted lenses for visual sensitivity in bright environments.

Our resource on sensory-friendly spaces and how to design calming environments offers practical guidance for home and daily settings.

3. Build in sensory breaks

- Schedule regular pauses during high-stimulation activities or environments.
- Create a designated calm space where a person can decompress without judgment.
- Normalize stepping away from overwhelming situations as a healthy coping strategy, not a failure.

4. Develop an individualized sensory profile

A sensory profile is a personalized map of a person's sensitivities, tolerances, and regulatory strategies. It helps caregivers, educators, and clinicians offer support that is actually calibrated to the person rather than based on assumptions.

5. Support self-advocacy

- Encourage autistic individuals to name and communicate their sensory needs, at whatever developmental stage is appropriate.
- Respect limits without requiring explanation or justification.
- Validate sensory experiences rather than minimizing them.

6. Work with qualified professionals

Occupational therapists who specialize in sensory processing can conduct formal assessments and develop a sensory diet, a personalized plan of sensory activities designed to help the nervous system stay regulated. The American Occupational Therapy Association maintains a directory of practitioners. Mental health professionals experienced in autism can also support emotional regulation, anxiety, and the psychological impact of navigating a world that was not designed with sensory differences in mind.

For families and individuals exploring a formal evaluation, our Adult Autism Diagnostic Evaluations page outlines how we approach this process.

You Do Not Have to Navigate This Alone

Sensory challenges are real, valid, and manageable with the right support. Whether you are an autistic adult trying to understand your own sensory needs, a parent supporting a child, or a caregiver looking for better strategies, working with a clinician who understands neurodiversity can make a meaningful difference.

At Neurodiverse Counseling, our work is grounded in a neurodiversity-affirming approach. We help autistic individuals and their families better understand sensory needs, reduce overwhelm, and build routines and environments that actually fit the person.

Frequently Asked Questions

Why do sensory challenges happen in autism?

Sensory differences in autism are related to how the nervous system processes and integrates information from the environment. Neurological research points to differences in how the autistic brain filters, prioritizes, and responds to sensory input. This is not something a person can simply choose to override; it is a fundamental aspect of how their nervous system is wired.

What is sensory overload, and how does it feel?

Sensory overload happens when the amount or intensity of sensory input exceeds what the nervous system can process comfortably. It can feel like intense distress, physical pain, panic, or an urgent need to escape. For some people it builds gradually; for others it comes on quickly. The aftermath often includes exhaustion, even when the trigger event was brief.

What are the signs of sensory issues in autism?

Common signs include covering ears in response to everyday sounds, distress around certain textures or foods, strong reactions to smells, avoidance of bright lights, difficulty with unexpected touch, and seeking intense sensory input such as spinning or deep pressure. Sensory overload may present as increased stimming, withdrawal, meltdowns, or shutdowns. Signs vary widely from person to person.

Can therapy help with autism and sensory issues?

Yes. Both occupational therapy and mental health therapy can play meaningful roles. Occupational therapy focuses on developing sensory regulation strategies and modifying environments. Mental health therapy, including neurodiversity-affirming approaches, supports emotional regulation, self-advocacy, anxiety related to sensory experiences, and the cumulative stress of navigating environments that were not designed with autistic people in mind.

Is sensory processing disorder the same as autism?

No, though they frequently overlap. Sensory processing disorder (SPD) refers specifically to difficulties processing sensory input and can occur in people who are not autistic. Autism is a broader neurodevelopmental condition, with sensory differences being one recognized component. Up to 90% of autistic individuals experience some

form of sensory processing difference. A formal evaluation can help clarify what is driving a person's specific sensory experiences.

Neurodiversity is a concept that recognizes and values the natural variations in human brain functioning. This includes autism, ADHD, dyslexia, OCD, and other differences in neurotypes.
A key aspect of neurodivergence is the unique sensory experiences that many neurodivergent individuals have.
Sensory profiles refer to the distinct ways in which individuals perceive, process, and respond to sensory information from their environment.
This article aims to explore these sensory profiles, emphasizing a neurodiversity-affirming approach that celebrates and supports these differences rather than pathologizing them.

The Spectrum of Sensory Profiles and Experiences

Sensory processing involves the way the nervous system receives messages from the senses and turns them into motor, emotional, and behavioral responses.
Neurodivergent individuals often experience sensory information in different ways than neurotypical individuals.
These experiences can range from hypersensitivity (overresponsiveness) to hyposensitivity (underresponsiveness) across senses, including sight, sound, touch, taste, and smell.

- **Hypersensitivity**: Individuals who are hypersensitive might find everyday sensory experiences overwhelming. Bright lights, loud noises, certain textures, or strong smells can cause discomfort or distress. For example, an autistic person might feel overwhelmed by the fluorescent lighting in a shopping mall or be highly sensitive to certain fabrics, which can lead to nervous system dysregulation.
- **Hyposensitivity:** On the other hand, some neurodivergent individuals may be **hyposensitive**, meaning they require more intense sensory input to register sensations. This can manifest as a high pain threshold, seeking out strong flavors, or an affinity for activities that provide deep pressure or intense movement.

Types of Sensory Processing Differences

Visual Processing

Visual processing is how the brain interprets and makes sense of the information received through the eyes. Differences in visual processing can significantly affect an individual’s daily life and comfort.

- **Visual Hypersensitivity:** Individuals with visual hypersensitivity might experience discomfort or even pain from bright lights, preferring dim lighting conditions. They might struggle with environments that have a lot of visual stimuli, such as busy streets or crowded classrooms. This hypersensitivity can also make it difficult to distinguish certain colors or cause a person to become

easily fatigued from visually intensive tasks. For instance, fluorescent lights often flicker at a frequency that is imperceptible to neurotypical individuals but can be distressing for a neurodivergent person who is visually hypersensitive.

- **Visual Hyposensitivity:** In contrast, those with visual hyposensitivity may need more intense visual stimuli to process their surroundings effectively. They might seek out bright lights or be particularly fascinated by moving objects or patterns. This can manifest as an attraction to screens or video games, where visual stimuli are vivid and constantly changing. Additionally, visual hyposensitivity can mean that individuals are not easily distracted by visual clutter, which might make them more focused on tasks in busy environments.

Auditory Processing

Auditory processing involves how the brain interprets and responds to sounds, which can be significantly different in neurodivergent individuals.

- **Auditory Hypersensitivity:** For those with auditory hypersensitivity, everyday sounds can be overwhelming or even painful. This might include loud noises, sudden sounds, or certain frequencies that others find tolerable. Background noises that neurotypical individuals might ignore, such as the hum of an air conditioner or the ticking of a clock, can be intrusive and distracting. This hypersensitivity can lead to a preference for quieter environments and the use of ear protection, such as noise-canceling headphones, to mitigate the impact of overwhelming auditory stimuli.

- **Auditory Hyposensitivity:** Individuals with auditory hyposensitivity might not respond to sounds that others can easily hear, often requiring louder or more pronounced auditory input to notice it. They might enjoy environments with a lot of sound, such as concerts or busy cafes, or engage in behaviors like playing loud music, making repetitive noises, or **vocal stimming**. This need for increased auditory input can help them stay engaged and focused, but it might also pose challenges in quieter settings where they may struggle to hear instructions or conversations.

Tactile Processing

Tactile processing refers to how the brain interprets touch sensations. Differences in this area can significantly affect how neurodivergent individuals interact with their physical environment.

- **Tactile Hypersensitivity:** People with **tactile hypersensitivity** may have strong aversions to certain textures, temperatures, or types of touch. They might find certain fabrics irritating or painful, leading them to prefer soft, seamless clothing. Light touches or unexpected physical contact can be particularly distressing, causing a strong reaction or avoidance behavior. These sensitivities can affect daily routines, such as grooming or wearing specific types of clothing, and may require accommodations, such as tagless garments or special bedding.

- **Tactile Hyposensitivity:** Conversely, those with tactile hyposensitivity might seek out strong tactile input, such as heavy blankets, tight hugs, or rough play. They may not notice minor injuries, like cuts or bruises, and might have a reduced awareness of temperature changes, potentially leading to safety risks. This need for intense tactile stimulation can lead to a preference for activities that provide deep pressure, such as weighted blankets or specific types of physical activity.

Gustatory and Olfactory Processing

Gustatory (taste) and olfactory (smell) processing involve the interpretation of taste and smell stimuli. Differences in these areas can significantly impact dietary preferences and daily experiences.

- **Gustatory Hypersensitivity:** Individuals with gustatory hypersensitivity might have very specific dietary preferences due to strong aversions to certain tastes or textures. They may find certain foods overwhelming, leading to a restricted diet and challenges in social situations involving food. This hypersensitivity can extend to issues with textures, making foods that are crunchy, slimy, or mixed-texture particularly difficult to handle.

- **Gustatory Hyposensitivity:** Those with gustatory hyposensitivity may seek out strong flavors, such as spicy or sour foods, to satisfy their sensory needs. They might be less sensitive to subtle flavors and require more intense taste experiences to find food enjoyable. This can lead to adventurous eating habits but might also involve challenges in recognizing spoiled or unsafe food due to a reduced sensitivity to off-tastes.

- **Olfactory Hypersensitivity:** People with olfactory hypersensitivity may have strong reactions to certain smells, which can cause discomfort or nausea. This sensitivity can affect their ability to tolerate certain environments, such as places with strong perfumes, cleaning products, or specific food odors. They might avoid areas with overpowering smells and prefer well-ventilated spaces with neutral scents.

- **Olfactory Hyposensitivity:** Conversely, individuals with olfactory hyposensitivity may not easily perceive smells and might seek out strong or pungent odors. This can manifest as an attraction to scented products or a need for more potent smells to enjoy or recognize them. While this can enhance their experience of certain environments, it might also pose safety risks, such as not detecting smoke or gas leaks.

Proprioceptive and Vestibular Processing

Proprioceptive processing relates to the body's awareness of its position and movement, while vestibular processing involves balance and spatial orientation. Differences in these areas can affect physical coordination and comfort.

- **Proprioceptive Hypersensitivity:** Individuals with heightened proprioceptive sensitivity may have a strong awareness of their body's position and movement, which can sometimes lead to discomfort or a need to control their environment closely. They might avoid activities that involve a lot of physical movement or feel uneasy with changes in their physical surroundings.

- **Proprioceptive Hyposensitivity:** Those with proprioceptive hyposensitivity often seek out activities that provide strong proprioceptive input. This can include heavy lifting, deep pressure activities, or engaging in physical activities that provide a sense of grounding. This need for proprioceptive input can help them feel more centered and focused.

- **Vestibular Hypersensitivity:** Individuals with vestibular hypersensitivity might experience discomfort with activities involving significant movement or changes in head position, such as riding in a car, swinging, or even certain types of exercise. They might prefer to stay still or avoid activities that challenge their balance and spatial orientation.

- **Vestibular Hyposensitivity:** Conversely, those with vestibular hyposensitivity might seek out intense movement activities, such as spinning, swinging, or bouncing. This can help them feel more engaged and regulated. They might be drawn to activities that involve a lot of motion and might have a higher tolerance for movement that others find disorienting.

Neurodiversity-Affirming Approaches

Adopting a neurodiversity-affirming perspective involves recognizing and valuing sensory differences rather than viewing them as deficits. A neurodiversity-affirming approach encourages creating environments and practices that respect and accommodate diverse sensory needs.**Creating Inclusive Environments:** Environments can be designed or modified to support sensory needs. For example, schools and workplaces can provide quiet areas, adjustable lighting, and sensory tools such as noise-canceling headphones or weighted blankets. Public spaces can offer sensory-friendly times or areas with reduced stimuli.**Individualized Sensory Supports:** Understanding an individual's unique sensory profile is crucial. Personalized strategies might include sensory diets (planned activities that provide the sensory input a person needs), sensory breaks during work or school, and tools like fidget devices or chewable jewelry. These supports can help individuals regulate their sensory input and reduce stress.**Educating and Raising Awareness:** Education about sensory processing differences should be part of broader neurodiversity training. This can help reduce stigma and increase understanding and acceptance. Schools, workplaces, and communities can benefit from training programs that teach about the sensory needs of neurodivergent individuals and how to support them.**Emphasizing Strengths and Preferences:** A neurodiversity-affirming approach emphasizes the strengths and preferences of neurodivergent individuals. For instance, a person with a strong visual

preference might excel in tasks involving visual detail, or someone with a heightened sense of smell might have a talent for culinary arts. Celebrating these strengths can lead to greater self-esteem and more inclusive opportunities.**Collaboration and Advocacy:** Supporting neurodivergent individuals in navigating their sensory experiences often requires collaboration among caregivers, educators, healthcare providers, and the individuals themselves. Advocacy for policies and practices that recognize and accommodate sensory differences is essential. This includes pushing for sensory-friendly public policies, inclusive education practices, and workplace accommodations.

Practical Steps for Supporting Neurodivergent Individuals

Implementing **neurodiversity-affirming practices** requires concrete steps and strategies that can be applied across various settings, including homes, schools, workplaces, and public spaces.**Homes:** Creating a sensory-friendly home environment involves understanding the sensory needs of each family member. This can include:**Lighting Adjustments:** Using dimmable lights or natural lighting to accommodate visual sensitivities.**Noise Management:** Incorporating soundproofing elements or providing noise-canceling headphones to manage auditory sensitivities.**Comfortable Textiles:** Choosing clothing and bedding materials that are comfortable and acceptable to individuals with tactile sensitivities.**Sensory Spaces:** Designating specific areas of the home for sensory activities, such as a quiet reading nook or a sensory playroom with tools like fidget toys, weighted blankets, and swings.

Schools

Educational environments can be made more inclusive through:**Sensory-Friendly Classrooms:** Creating quiet corners, providing flexible seating options, and minimizing clutter to reduce sensory overload.**Individualized Learning Plans**: Tailoring educational approaches to meet the sensory needs of students, such as allowing for movement breaks or using sensory-friendly teaching materials.**Teacher Training:** Educating staff about sensory processing differences and effective strategies for supporting neurodivergent students.**Inclusive Activities:** Designing classroom activities that consider sensory needs, such as using visual aids, hands-on learning, and multi-sensory approaches.

Workplaces

Employers can create supportive work environments by:**Flexible Workspaces:** Offering adjustable desks, quiet work areas, and sensory-friendly equipment like ergonomic chairs and fidget tools.**Accommodative Policies:** Allowing flexible work hours, remote work options, and sensory breaks to help employees manage their sensory needs.**Awareness Training:** Providing neurodiversity training for all staff to promote understanding and inclusivity.**Tailored Job Roles:** Matching job roles with the strengths and sensory preferences of neurodivergent employees, which can enhance productivity and job satisfaction.

Public Spaces

Public areas can become more inclusive by:**Sensory-Friendly Times:** Scheduling specific times with reduced sensory stimuli, such as lower lighting and volume levels in shopping malls, museums, and cinemas.**Design Considerations:** Implementing design features that accommodate sensory needs, like quiet zones, clear signage, and accessible layouts.**Community Education:** Raising awareness about sensory processing differences within the community to foster a more inclusive and understanding society.

Honoring Your Sensory Needs

Understanding and affirming the sensory profiles of neurodivergent individuals is crucial for fostering regulation and respect for AuDHD, ADHD, and autistic adults. By recognizing and accommodating sensory differences, we can create environments that support the well-being and potential of all individuals.
Embracing neurodiversity means celebrating the unique ways in which people experience and interact with the world, enriching our collective experience and fostering a more compassionate and understanding society. Through continued research, education, and practical support, we can build a world where neurodivergent individuals thrive and contribute their unique perspectives and talents.

NeuroSpark Health offers **assessment services**, **neurodivergent coaching**, **ND-affirming therapy**, and **ADA accommodations support** based on your individual sensory needs.
We see you.

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Sensory Sensitivity and Neurodivergence | Impact on Life and the Importance of Accommodations

Sensory sensitivity, characterised by an increased response to environmental stimuli, is a common trait among neurodivergent individuals. This heightened sensitivity can profoundly impact both personal and professional aspects of life, making it essential to understand and accommodate these needs. In this blog we explore the connection between neurodiversity and sensory sensitivity.
The Personal Impact of Sensory Sensitivity
In everyday life, individuals with sensory sensitivity may find themselves overwhelmed by common stimuli. Such as:

Loud Noises

Textures

Strong Smells

Bright Lights
These can all trigger discomfort or even pain, leading to avoidance behaviours.
For example, a person might avoid social gatherings due to the overwhelming noise, or they might struggle with clothing choices because of discomfort with certain fabrics.
Over time, these challenges can affect mental health, leading to increased anxiety, stress, and social isolation .
Professional Challenges and the Need for Accommodations
In the workplace, sensory sensitivities can present significant barriers. Environments with harsh lighting, constant background noise, or strong odours can be particularly challenging. Such conditions can lead to:

Decreased Productivity

Heightened Stress Levels

Physical Symptoms like Headaches or Fatigue
A study from Portland State University highlights that sensory sensitivity can interfere with job performance, leading to increased stress and even the need to take extended leave or seek alternative employment.
Similarly, a 2018 study emphasises the impact of sensory processing issues on work performance and overall well-being. The study found that individuals with heightened sensory sensitivities often experience challenges in traditional work environments, which are typically designed with neurotypical individuals in mind. This can lead to a mismatch between the individual's needs and the environmental demands, exacerbating stress and reducing job satisfaction .
Why Accommodations Matter
Accommodating sensory sensitivities is not just a matter of comfort; it's crucial for fostering an inclusive environment where neurodivergent individuals can thrive. Simple adjustments, such as:

- Providing noise-cancelling headphones
- Offering flexible lighting options
- Allowing breaks in quiet spaces

These can all make a significant difference. These accommodations not only enhance the well-being of neurodivergent employees but also improve their productivity and job satisfaction.
The 2018 study further underscores that recognising and accommodating sensory sensitivities is key to promoting neurodiversity in the workplace. By creating

environments that cater to the needs of all employees, organisations can harness the unique strengths and perspectives that neurodivergent individuals bring to the table, ultimately benefiting the entire workforce .

Conclusion

Understanding and addressing sensory sensitivities is essential for promoting neurodiversity and ensuring that all individuals can participate fully and comfortably in both personal and professional settings. By making these environments more inclusive, we not only support the well-being of neurodivergent individuals but also unlock their full potential, enriching our communities and workplaces.

However, it’s important to remember that not all neurodivergent individuals experience sensory sensitivity. Neurodiversity encompasses a wide range of experiences, and each person is unique. There is no one-size-fits-all approach; accommodations should be tailored to meet the specific needs of each individual. By recognising and respecting these differences, we can create environments that truly support and celebrate the diversity of all minds.

Imagine this: You're at a bustling family gathering, laughter echoing off the walls, aromas of savory dishes wafting through the air, and a cacophony of voices intermingling in conversation. For most, it's a scene of joy and connection. But for someone with sensory sensitivities, it can quickly escalate into a whirlwind of overwhelming sensations.

In the hustle and bustle of everyday life, it's easy to overlook the intricate ways in which each person experiences the world around them. Yet, within the realm of neurodiversity, these differences take center stage, shaping the very fabric of how individuals perceive and interact with their surroundings.

Sensory processing differences are a hallmark feature of many neurodivergent conditions, including autism spectrum disorder (ASD), attention deficit hyperactivity disorder (ADHD), sensory processing disorder (SPD), and others. Sensory overload occurs when the brain becomes overwhelmed by sensory stimuli, leading to feelings of distress, anxiety, and even physical discomfort. Understanding the connection between sensory overload and neurodivergence is crucial for providing support and accommodation to those who navigate the world with sensory sensitivities.

For neurodivergent individuals, sensory overload can manifest in a multitude of ways. Everyday stimuli that may be perceived as benign by neurotypical individuals—such as bright lights, loud noises, strong smells, or tactile sensations—can trigger intense reactions in those with sensory sensitivities. These overwhelming experiences can lead to meltdowns, shutdowns, or avoidance behaviors as individuals attempt to cope with the sensory overload.

Sensory overload can significantly impact daily functioning and quality of life for neurodivergent individuals. It can interfere with their ability to engage in social activities, participate in academic or work settings, and navigate public spaces. As a result, it is essential to recognize the signs of sensory overload and provide appropriate accommodations and support to promote sensory regulation and well-being.

There are various strategies and accommodations that can help individuals manage sensory overload effectively. These may include:

- *Creating a sensory-friendly environment*: Minimizing sensory triggers by controlling lighting, noise levels, and environmental stimuli can help reduce the risk of sensory overload.
- *Providing sensory accommodations:* Offering tools such as noise-cancelling or reducing headphones, fidget tools, weighted blankets, or sensory-friendly seating can help individuals regulate their sensory experiences and cope with overwhelming stimuli.
- *Implementing sensory breaks*: Allowing time for sensory breaks throughout the day can give individuals the opportunity to recharge and reset their sensory systems in a calming environment.
- *Educating others:* Increasing awareness and understanding of sensory processing differences can help foster empathy and create a more inclusive environment for neurodivergent individuals.

At Walls Counseling, we understand the unique needs of individuals who navigate the world with sensory processing differences and neurodiversity. Our team of experienced therapists provides compassionate and evidence-based support for individuals, families, and caregivers. Contact us at (719) 362-0558 to learn more about our services and schedule a consultation.

I often hear my neurodivergent clients describe themselves as “too sensitive”, “too emotional”, “dramatic”, or “difficult” because of their sensory experiences in the world. Sometimes bright lights can feel painful, or certain sounds can be overwhelming. Sometimes clothing textures can make it difficult to feel comfortable in one's own body. These experiences are not deficits, flaws, or something to be “fixed”. They are your nervous system doing its best to navigate a world that wasn’t designed with neurodivergent people in mind.

Understanding Neurodivergence and Sensory Processing

The term “neurodivergence” refers to natural variations in how human brains develop and function. This includes conditions such as Autism, ADHD, Dyslexia, and many more. Neurodivergence is not inherently a bad thing; it is a natural part of human diversity!

Sensory seeking and sensitivities are common among neurodivergent individuals. Some people may need less sensory input due to experiencing things more intensely (hypersensitivity), while others may need more sensory input to feel regulated (hyposensitivity). Many people can experience both depending on the context and their own specific needs.

Additionally, sensory needs can be influenced by and change based on trauma history, hormonal changes, environmental demands, fatigue, illness, or stress. Sensory experiences can shift over time and are deeply connected to emotional regulation, safety, and well-being.

Why Sensory Needs Matter for Mental Health

When sensory needs go unmet, the nervous system can move into survival mode. What looks or feels like “anxiety,” “irritability,” “shutdown,” or “meltdowns” can often be your nervous system being overwhelmed by sensory input or deprived of needed input. Rather than asking, “What’s wrong with me?” a more compassionate question to ask is: “**What does my nervous system need right now?**”

Honoring sensory needs can:

- Reduce emotional overwhelm and burnout
- Improve focus and executive functioning
- Support emotional regulation
- Increase a sense of safety and self-trust
- Reduce shame and self-blame

This is not about “giving in” or avoiding growth. It’s about creating environments and supports that allow you to function, connect, and thrive.

Using a Sensory Checklist as a Tool for Self-Understanding

One practical, affirming tool I often recommend is a sensory checklist. A sensory checklist is not a diagnostic test; it’s a self-reflection tool that helps people notice patterns in how they experience sensory input.

A sensory checklist can help you:

- Identify which sensory inputs are soothing vs. overwhelming
- Notice early signs of sensory overload
- Advocate for accommodations at work, school, or home
- Reduce internalized stigma by identifying real needs

Sensory Areas to Explore in a Checklist

A checklist might include reflecting on experiences related to:

- **Sound** (ex: background noise, sudden sounds, music, silence)
- **Visual Input** (ex: light brightness, visual clutter)
- **Touch** (ex: clothing textures, tags, physical contact, temperature)
- **Smell & Taste** (ex: strong scents, food textures, flavors)
- **Proprioception/ Movement Sense** (ex: need for movement, pressure, stillness)
- **Interoception/ Internal Sense** (ex: noticing hunger, thirst, pain, or fatigue)

For each area, you might ask:

- What feels soothing or grounding?
- What feels overwhelming or draining?
- What helps me recover after sensory overload?

There are no “right” or “wrong” answers, only information to help you to better understand your needs.

From Awareness to Accommodation

Identifying sensory needs is not about changing yourself; it’s about changing conditions.

Accommodations can be small but impactful, such as:

- Use of noise-canceling headphones
- Softer lighting
- Taking breaks
- Adding movement into your day
- Use of different sensory tools
- Clear communication about needs and limits.

Accommodations are not special treatment; they are access.

A Final Word

Sensory sensitivities are not weaknesses; some nervous systems are wired to perceive the world in vivid, intense, and meaningful ways. When we stop framing sensory differences as problems and start treating them as information, we open the door to greater self-compassion, autonomy, and well-being.

You are not broken.

Your nervous system is communicating.

And your needs deserve to be honored.**Link to Emotion Recognition Worksheet**
Link to My Overstimulation Plan

Sensory sensitivities aren't flaws, they're information your nervous system is sharing.

Understanding Sensory Challenges

Characteristics of Sensory Issues

Folks on the autism spectrum often deal with sensory quirks—some are hypersensitive; some, not so much. The good ol' DSM-V says sensory stuff can be part of autism, but hey, not everyone's in the same sensory boat.

Take hyperreactivity: it's all about being extra-sensitive. Imagine a kiddo freaking out over a buzzing light or a loud noise—it's stressful! On the flip, hyporeactivity is about not feeling things enough. Some might need to move a lot or love bright lights just to feel balanced.

Now, sensory challenges are super common in autism. Over 96% of these kids report some funky sensory stuff happening. It's like the brain's got a different way of tuning into the world.

How does this play out day-to-day, you ask? Well, it can mess with social interactions and keeping calm. Everyone with autism has their own sensory landscape. Getting to know these quirks is key to lending a hand. Picture this: by understanding what flips their sensory switch, you can help them keep focus and get through the day smoother.

It's worth it for parents, teachers, and therapists to tune into these sensory vibes. Help can come from things like Applied Behavior Analysis (ABA) and occupational therapy—a little personalized care goes a long way. Knowing and adapting to these sensory needs not only supports them but irons out daily life wrinkles, making their world a much comfier place.

Hyperreactivity vs Hyporeactivity

Sensory Sensitivity Spectrum
People with autism often display a range of sensory reactions, which generally fall into two categories: hyperreactivity and hyporeactivity. These terms describe how a person reacts to sensory input, and they can deeply affect day-to-day life.

Hyperreactivity means having a heightened sensitivity to sensory stimuli. Folks who are hyperreactive might get frazzled by loud noises, certain textures, or bright lights, which can make them anxious or uncomfortable. Picture this: a kid who covers their ears when the classroom gets too noisy or insists on wearing only the softest clothes. Here are some typical signs of hyperreactivity:

Hyporeactivity, in contrast, means being less sensitive to sensory stimuli. Those with hyporeactivity might seem tuned out to what's going on around them or need more intense stimuli to feel engaged. Imagine a child who doesn't flinch at sudden loud noises or seems unbothered by a pat on the back. Here's a glimpse of what hyporeactivity might look like:

Recognizing sensory challenges, whether it's due to hyperreactivity or hyporeactivity, is key. It impacts everyday living and requires thoughtful support. By understanding these variations, parents, teachers, and specialists can create better spaces for those dealing with sensory issues in autism. Need more details on autism? Check out our article on what is autism.

People on the autism spectrum experience a complicated mix of sensory responses, with reactions that can be all over the map. Spotting these patterns is essential for crafting the right interventions and accommodations.

Impact on Daily Life

Challenges in Different Environments
Individuals with autism navigate the world through a unique sensory lens, often facing obstacles due to sensory quirks. These quirks come in two flavors: too much (hyperreactivity) or not enough (hyporeactivity) response to things like sights, sounds, textures, tastes, and smells. It's a bit like having your senses on a set of tricky dimmer

switches that are constantly being fiddled with. These sensory puzzles can make life's simple tasks feel more like solving a Rubik's Cube blindfolded.

Common Environmental Challenges

Each person on the autism spectrum has their own sensory cocktail, shaken not stirred, which can stir up different reactions based on the setting. Picture a kiddo who finds the hubbub of a school a bit too rock-n-roll, but sinks into bliss inside a quiet library like it's a warm bath. It's all about tuning in to these unique notes.

By embracing the sensory ebb and flow, individuals with autism can better sail through their day-to-day adventures. Support and understanding, along with methods like Applied Behavior Analysis (ABA) and occupational therapy, can help sketch out a roadmap that tames sensory hurdles. These therapies are like trusty sidekicks in the quest for well-being and smoother social journeys.

Tweaking surroundings, employing sensory gizmos, and establishing zen routines can help parents and caregivers turn daily life into a smoother ride. Getting a handle on what makes an autistic person's senses tick encourages better chats and connections, like finding the right dance partner, boosting their day-to-day joy.

Interventions and Support

Tackling those pesky sensory issues in autism calls for some well-aimed interventions and support. Two big players in the game are Applied Behavior Analysis (ABA) and occupational therapy. These approaches come with a toolkit of strategies aimed at giving folks with autism a better handle on their sensory world.

Applied Behavior Analysis (ABA)

ABA is like a household name when it comes to dealing with behavior matters related to sensory stuff. The magic happens with a Board Certified Behavior Analyst who tailors the programming right to the individual's needs. It's all about helping kids with autism find their way through their sensory encounters without too much fuss.

Studies out there tell us that ABA procedures do wonders for how kids handle sensory stimuli, leading to an all-around better quality of life. Key ABA moves often include:

- **Backing the Good Stuff**: Using positive reinforcement to nudge along desired behavior.
- **Building Skills**: Training to confidently tackle sensory hurdles.

Here's the lowdown on ABA's game plan:

Role of Occupational Therapy

Occupational therapy (OT) is another resource in the toolbelt for dealing with sensory bumps. OT therapists step in to size up sensory needs and roll out plans that make everyday settings more manageable, be it home or school.

With OT, those on the autism spectrum can learn ways to manage all that sensory bombardment, which could mean:

- **Changing Up the Scene**: Crafting environments that are less likely to overwhelm.
- **Getting the Right Mix**: Engaging in activities that help with sensory inputs.

OT doesn't fly solo either. Sometimes you've got dietitians and speech therapists jumping in to help with tastes, textures, and whatnot that can really mess with eating.

Here's a snapshot of OT's focus zones:

All in all, Applied Behavior Analysis and OT bring much-needed support for children managing autism and the sensory challenges that tag along. Relatives and teachers can get a lot out of understanding these intervention techniques, making life more chill for those on the autism spectrum.

Addressing Diverse Needs

Personalized Strategies and Help
Tackling sensory issues in autism needs a handy approach focused on what each person's sensitive to and what they like. Personalized strategies can make life way better and improve learning for folks dealing with sensory challenges.

Grasping Individual Sensitivities
Everyone with autism experiences sensory stuff differently, so it's important to figure out what bothers them and what doesn't. Parents, teachers, and professionals ought to do some digging to understand someone's sensory likes and dislikes.

Getting to know and adjusting to sensory issues can make things more comfy and open up chances for learning, talking, and hanging out in the community.

Crafting Safe Environments
Making spaces that care for sensory needs is crucial. Classrooms, homes, and public places can feature sensory-friendly tweaks like:

- **Quiet Corners**: Have spots where folks can go to relax when overwhelmed.
- **Sensory Gadgets**: Offer fidget toys, weighted blankets, and calming stuff.

- **Fun Seating**: Offer choices like bean bags or cushions so people can sit comfy.

Boosting Self-Advocacy
Teaching self-advocacy helps people with autism speak up about what they need, sensory-wise. This includes:

- **Talk Skills**: Encourage using words and signals to show discomfort or the need for a pause.
- **Tailored Plans**: Create personal sensory plans that list ways to deal with sensory overload in different places.

Being able to voice needs and having the right adjustments in different settings help folks handle sensory demands better.

Working Together
Teamwork among families, therapists, and teachers is key in finding and using good strategies and supports. Checking and changing accommodation plans regularly keeps them in tune with what a person needs as they grow.

By building an understanding community and tackling sensory issues head-on, people with autism can feel less uneasy and more connected to the things around them. Adjusting sensory experiences can affect social skills and adaptive functioning, showing how crucial tailored strategies are.

Research Findings and Implications

Understanding the impact of sensory issues in autism is key to making life better for those affected. Studies show strong links between how people with autism handle senses and their social skills and ability to adapt.

Link with Social Skills
Research shows that folks with Autism Spectrum Disorders (ASD) and sensory processing issues often struggle with social skills and understanding social cues. For instance, preschoolers with autism who have strong sensory issues often find social interactions tougher and have a harder time picking up on social signals.

Kids with higher sensory challenges tend to lose social motivation and miss out on the subtleties of social exchanges. These sensory processing quirks matter a lot for boosting social skills in autism.

Impact on Everyday Functioning
Sensory issues don't just mess with social skills, they also hit adaptive functioning hard. Kids with hefty sensory problems often struggle with everyday tasks, like taking care of

themselves and solving basic problems. These sensory hiccups can make it tough for a child to do well in places like school and social circles, slowing down their growth.

Kids at risk for ASD may show more sensory-seeking behavior early on, which could hint at future social struggles. This all points to how deeply sensory issues impact a child's ability to fit into their environment.

In short, sensory issues in autism deeply affect both social skills and how kids adapt to daily life. Grasping these links is vital for parents, teachers, and professionals helping those with autism. For more insights on autism, check out our articles on the signs of autism in kids.

Donald was “perfectly petrified of the vacuum cleaner.” So was Elaine, who would not venture near the closet where her family’s vacuum was stored. Richard, Barbara, and Virginia, on the other hand, ignored sound to the point that others wondered if they could hear at all.1

They were among autism’s first children,2 described in the landmark 1943 article by Leo Kanner that gave a name and description to a condition that today affects 1 in 36 children in the United States. Kanner, an American psychiatrist, advocated for a new diagnosis for these children, some of whom had been assumed to have intellectual disability.

Among other things, most of the children he saw shared an unusual relationship to sound – either ignoring or fearing it. Seventy years later, in 2013, American psychiatrists officially recognized under- or over-reacting to one’s senses as one of several signs of autism.

The senses include sight, touch, taste, smell, and movement. But for many people, the most recognizable sensory sign of autism involves hearing. Children on the autism spectrum are often shown covering their ears to block out noise. In fact, that’s what Elaine did when she heard the rumble of the vacuum cleaner. She was hyper(over)-responsive to noise. Richard, Barbara, and Virginia were hypo(under)-responsive; they barely acknowledged many sounds.

Researchers still have many questions about how children and adults on the autism spectrum process information from their senses, and how it affects development.

Noise sensitivity is common in autism, although it also occurs in people who don’t have autism. At one point in their lives, 50 to 70 percent of autistic people were hypersensitive to everyday sounds, according to a 2021 scientific review.3 This may cause distress and interfere with routine activities, such as sitting in a noisy classroom or traveling to work amid rumbling trucks and blaring horns.

Some participants in SPARK, the largest study of autism, have described different perceptions of, and responses to, sound. Some report being very sensitive to sounds of certain intensity, pitch, and tone, or feeling bombarded by noises that other people tune out. Others are not bothered by loud sounds and have even played in a band. No one single type of sensory symptom is “consistently associated” with autism.4

How is Sensory Information Typically Processed?

Think of your brain and nervous system as a controller, taking in information from your senses, deciding what’s important, and choosing how to react. If you don’t have autism,

it may work like this: Your boss comes to your desk to talk. A fluorescent light flickers overhead, a co-worker laughs in the next cubicle, and a microwave whirrs in the break room. Your brain filters out those sights and sounds so you can focus on what your boss is saying. You also tune out the sound of a siren outside, but when you smell smoke, you respond to that sensory input and leave the building.

If you have autism, you may process sensory information differently. You may be unable to filter out irrelevant sights or sounds, such as, in the previous example, the flickering light or the microwave. Or you may find certain sounds, lights, smells, or textures to be severely distracting or uncomfortable.

Some suspect that sensory sensitivities may trigger some common behaviors in autistic children, such as very picky eating or running away.

Studying How Autistic People Perceive Sound

To measure sensory symptoms, researchers have used surveys, skin conductance tests, hearing exams, electroencephalograms (EEGs), and brain scans.

A group of British researchers found that autistic teens as a group had the same ability to discriminate sounds overall as their typically developing peers. But there were differences among autistic teens. About 20 percent had exceptional pitch, the ability to distinguish one musical tone from another. Another group of autistic teens, however, had trouble determining the loudness of a tone; those teens were also more likely to be sensitive to noise.5

Other researchers wanted to see how children's autonomic nervous systems, which control involuntary processes such as heart rate, reacted to noise. For this study, they measured skin conductance ─ the response of sweat glands on the hand ─ in children with and without autism.

Children with autism had stronger autonomic reactions than typically developing children when they heard noises, but also when they didn't.6 Their stronger bodily responses may trigger greater behavioral responses to sound, the researchers concluded.

Seeing How the Brain Responds to Sound and Touch

Can you *see* how the brains of autistic people respond to sound? One research team took scans of children's brains while exposing them to traffic sounds and scratchy fabric. The youth with autism showed greater activity in certain brain regions than typically developing children on a functional Magnetic Resonance Imaging scan.7 Those regions included the amygdala, which is involved in social and emotional behavior, and the cortices that process sensory information.

In another study, researchers collected information from EEGs, in which electrodes are placed on someone's head to measure electrical activity in the brain. They measured children's brain waves when they heard beeps and saw the same picture over and over. Typically developing children got used to the beeps and pictures over time, meaning their brains showed a weaker response to them. But the autistic children were less likely to get used to the sounds and pictures.8

These studies suggest that the nervous system of children with autism may respond differently to sound.

Why Might Some Autistic Children Underreact to Sound?

Does autism affect hearing in some children? One research group conducted tests to find out. They detected no difference in the hearing of children with and without autism – at least in tests that did not require a behavioral response from the children.
However, things got trickier when they administered a test that required the children to indicate by their *behavior* that they heard a particular sound. In those tests, 41 percent of the children with autism acted as though they did not hear as expected at least one time.9 Researchers repeated the tests and got different results with some of the same children. Their failure to respond consistently and typically to sound may have been caused by a problem with attention, rather than with hearing or sensory processing, they and other researchers theorized.9-10
Those researchers cautioned that children with autism may appear to have hearing problems on tests that require a behavioral response, even though their hearing is fine. They also said that their findings may undercut some of the assumptions behind auditory integration training (AIT), a treatment that exposes autistic children to filtered music or sounds. Children with autism may perform unreliably on behavioral hearing tests that might be given before and after AIT.9
The National Autism Center and the American Speech-Language-Hearing Association concluded that AIT did not have sufficient scientific evidence as an autism treatment. Similarly, a 2017 review by researchers at Vanderbilt University found that interventions based on auditory integration did not improve language in autistic children.11
Other therapies have been used for noise sensitivities in the general population. They include cognitive behavioral therapy to manage fear of noise, and strategies to desensitize people to noise. But there is little research on using those methods with autistic people.12
So where may people turn for help?

Navigating a Noisy World

Occupational therapists who are trained in sensory processing may help. They can recommend ways to manage noise sensitivity, such as noise-cancelling headphones and strategies to stay calm in loud places.
U.S. special education law and the Americans with Disabilities Act provide other options, called accommodations. Parents can ask schools to allow their children to be seated away from loudspeakers and chatty classmates, take tests in a quiet room, and be warned about a scheduled fire drill, for example.
Autistic employees can ask for quieter work areas and other “reasonable accommodations” based on their individual needs. Visit the U.S. Department of Labor’s Job Accommodations page to learn more.

Hyposensitivity and hypersensitivity often get mixed up. Both are types of sensory processing disorders, but many people use them interchangeably and think they mean the same thing. In reality, they don’t. It’s easy to confuse them, as they sound so similar. However, while hypersensitivity results in a person experiencing overstimulation, hyposensitivity results when a person experiences little to no response from a stimulus. In other words, a person with hyposensitivity will experience low levels or an absence of sensory feedback. For example, someone with hyposensitivity may not experience feelings of being hot, cold, or in pain the same way other people would. On the other

hand, those with hypersensitivity may experience extreme feelings of being hot, cold, or pain.

Hyposensitivity and Autism

People with autism spectrum disorder (ASD) often have sensitivities to things like visuals, smells, sounds, touch, tastes, balance, awareness of both body positions and movements, and internal body cues and sensations. Most individuals with ASD have a mixture of both over- and under-responsiveness. These two conditions are known as hypersensitivity and hyposensitivity sensory processing disorder, respectively. Hyposensitivity in people with ASD differs from hypersensitivity. Instead of being overwhelmed by stimulus, people with hyposensitivity experience underwhelming feelings, resulting in them needing to constantly explore textures with their hands and seeking out more sensory information from the world around them. People with hyposensitivity may also have difficulty distinguishing sensations, including feelings of hunger and illness.

Hyposensitivity and Other Concerns

Sensory processing disorders (SPDs), such as hyposensitivity, have been linked to ASD, and many people with ASD experience SPD. However, it's important to note that not everyone with SPD has ASD. This means that people with SPD may have SPD independently from other disorders, such as ASD, though it's unknown what other causes or links exist.

The exact cause of SPD is unknown, but some believe that genetics play a role in who will experience SPD. Furthermore, some doctors consider ASD a parent disorder to SPD and believe that ASD adults will pass SPD on to their children.

Because the exact cause of SPD is unknown, there are no ways to prevent SPD from occurring.

Hyposensitivity Symptoms

Symptoms of hyposensitivity can be categorized as auditory, olfactory, visual, and vestibular.

Auditory hyposensitivity refers to a lack of stimulation from sounds. As a result, one may be able to withstand loud sounds and experience the following:

- No response to name being called
- Enjoys sound-making activities
- Requires frequently repeated verbal directions
- Confusion with localizing sounds
- Turning up the sound settings of devices to maximum volume

Olfactory means our sense of smell. So, olfactory hyposensitivity reveals itself as a high tolerance and an under-responsiveness for smells:

- Craving foods that have strong smells

- High threshold for unpleasant smells
- Sniff people and objects to interact with them
- Trouble telling the difference between various smells

Visual hyposensitivity is related to what we see and process visually. One is likely to be under-responsive to visual situations and inputs and may experience:

- Trouble with puzzles, pictures, objects, and words
- Difficulty locating specific items amid other items
- Issues with tracking items visually, such as a ball being thrown
- Difficulty with depth perception and items that have little to no contrast

Finally, the vestibular system is responsible for the input we receive from our ear and how we register it in contrast to equilibrium, sense of movement, gravitational changes, and more. If one has vestibular hyposensitivity, they may experience:

- Being able to spin for long periods of time without getting dizzy
- Being able to find enjoyment when swinging for a longer duration
- Intense enjoyment for rollercoasters and other adrenaline-inducing activities
- Enjoying rocking in place when sitting stationary
- Enjoying being tossed in the air or having your feet suspended
- Enjoying rocking and nodding your head back and forth
- **FEATURED**
  5 Pervasive Developmental Disorder Types
-

Other general symptoms of hyposensitivity include:

- Being clumsy
- Fidgeting
- Trouble with personal boundaries
- Issues with realizing your own strength
- Indifference to pain and temperature
- A constant need to touch others, even when it’s inappropriate
- Failure to understand personal space
- Inability to sit still for long periods of time
- Enjoying activities that consist of jumping, bumping, and crashing
- Enjoying deep pressure, including tight-holding bear hugs
- Loving intense movements

Hyposensitivity Treatment

It’s important to treat and make accommodations for people with ASD and who are experiencing hyposensitivity. Some accommodations that can be made for then include:

- Offering visual supports
- Providing access to sensory tools such as fidget toys
- Arranging furniture to give individuals a safer environment
- Allowing for frequent movement breaks
- Providing foods with strong flavors, different textures, and strong smells
- Offering weighted blankets, deep-pressured clothes, and lap pads

There are also certain therapies that may help with hyposensitivity. Sensory integration therapy is provided to those with sensory processing disorders. It helps children adjust to sensory regulation through movement and physical contact.
Sensory integration therapy often occurs in a sensory gym, a space set up with sensory-specific equipment to provide a safe place for individuals with ASD to receive help. Many sensory gyms include weighted vests, supersized pillows, trampolines, ball pits, and more.
If you or someone you know has sensory processing disorders, including hyposensitivity, it’s recommended that you work with an occupational therapist. This is especially important for children who may have difficulty understanding and managing their sensory issues.

Living with Hyposensitivity

Many teenagers and adults will continue to use tools and techniques taught to them in occupational therapy to manage and live with their hyposensitivity. Behavioral therapy has also been known to help those with sensory disorders.
Some sensory disorders improve over time, as children age into adulthood. However, it doesn’t hurt to have some coping skills and ask for accommodations when possible. Also, avoiding stress is recommended, as stress can play a significant role in sensory processing difficulties, especially for adults.

What Is Stimming?

Stimming is short for self-stimulating behaviors. The term “stim” is used to describe one of these behaviors, which can include doing an action over and over or repeating the same sound several times. You may use stimming to help cope with emotions.

While many people may engage in stimming, the behavior has become associated with autism.

Stimming refers to repetitive behaviors or movements that you may use to help cope with emotions. One example of a stim is twirling your hair when you feel bored. (Photo credit: Tetra Images/Getty Images)

Stimming Behaviors

There are many different types of stimming, including:

- **Auditory stimming.** These involve your hearing and sounds, such as snapping your fingers, repeatedly touching your ears, or listening to the same sound over and over.
- **Vocal stimming.** This type includes sounds you make with your voice or throat, such as coughing or clearing your throat several times, repeating the same word, or humming.
- **Tactile stimming.** These include actions that involve touching or feeling, such as when you rub or scratch your skin, open and close your fists, tap your fingers on an object or surface, or flap your hands or arms.
- **Visual stimming.** These behaviors involve sight, such as looking at lights for a long time or frequently blinking or rolling your eyes.
- **Vestibular stimming.** This type involves movement or balance, such as pacing back and forth or twirling around.
- **Olfactory stimming.** These stims involve tasting or smelling, such as smelling or sniffing things or people, or chewing on or licking objects.
- **Full body stimming.** This type of behavior includes movement that involves your entire body, such as rocking your body back and forth or spinning around.

Stimming Examples

Stimming refers to repetitive behaviors or motions that you may use to help cope with emotions. Some examples of stimming include:

- Biting your nails when you feel anxious
- Twirling your hair when you feel bored
- Flapping your hands when something excites you
- Jiggling your foot when you are concentrating
- Banging your head
- Turning a light off and on
- Scratching your skin repeatedly

Stims may help to distract you, relieve stress, or calm you down. While the repetitive behaviorserves a purpose, it can also cause harm if the stim involves hurting yourself.

Stimming in adults

Adults may rely on stims to help deal with overwhelming situations, too many things going on at once that affect one or more of their senses, or uncontrolled emotions and thoughts. Examples of adult stims include:

- Fiddling with your necklace or bracelet
- Pulling your hair
- Flexing your feet

- Muttering
- Whistling
-

Understanding Sensory Processing and Autism

Autistic people commonly process the sensory experiences of their bodies and their environments differently.
Certain sensory experiences can significantly affect a person's ability to engage in desired activities or environments, thereby influencing their mental health, physical health, and overall quality of life.

Sensory Modulation and Autism

Research has shown that a significant majority of autistic individuals experience sensory stimuli in unique ways. They may be hypersensitive to certain sounds, lights, or textures, finding these inputs overwhelming and distressing. Conversely, some may be hyposensitive, seeking additional sensory input to feel balanced. These sensory differences can involve any of the senses—sight, sound, smell, taste, touch, balance, and body awareness—and an individual can experience both hypersensitivity and hyposensitivity across different senses or a response may fluctuate depending on a number of factors (time of day, levels of sleep, feeling unwell levels of anxiety, support available in the environment).
Modulation differences can manifest in various ways. A person who is hypersensitive to touch might find the texture of certain fabrics intolerable, leading to discomfort or even pain. On the other hand, someone who is hyposensitive to touch might seek out deep pressure, like tight hugs, to feel grounded. Similarly, visual hypersensitivity could cause someone to be overwhelmed by bright lights, while hyposensitivity might lead to a preference for bright, bold colors or spinning objects.

Modulation and Overwhelming Environments

These unique sensory experiences can affect various aspects of an autistic individual’s life. In environments that are typically overwhelming—such as busy offices, crowded public spaces, or loud social gatherings—autistic individuals might experience heightened stress and anxiety. Conversely, quieter, more controlled settings can help them feel more comfortable and engaged. Understanding these sensory needs is crucial for creating supportive environments that enhance well-being.
The Sensory Street research project looked at how public places can be challenging sensory environments for autistic people and what can be changed to make them more accessible and inclusive. Their website provides lots of evidence-based advice on making public spaces more sensory-friendly for autistic individuals.

Sensory Discrimination and Autism

Sensory discrimination refers to the process whereby specific qualities of sensory stimuli are perceived and meaning attributed to them. For example, touching something

and realising that it is hard or soft. This variability can manifest in various ways, such as difficulty differentiating between similar sounds, difficulty with determining how much force they're exerting on objects, and finding it tricky distinguishing between items with subtle differences, such as coins. These sensory processing differences can impact daily activities, social interactions, and learning experiences.

Praxis and Autism

Praxis is the important ability to conceptualise, plan and execute unfamiliar motor tasks. Sensory systems, including the proprioceptive system, play a crucial role in effective movement planning and execution. This process relies on the integration of multiple sources of sensory information for the individual to effectively plan and sequence their movements to perform the new task. Differences in the way some individuals process this sensory information will impact their praxis abilities.
Although motor skills are not part of the diagnostic criteria for autism, they are now widely recognised as a characteristic of the condition. For example, analysis of a large sample of autistic children found over 80 per cent of the children had a risk for motor impairment or Developmental Coordination Disorder (DCD) present and that this persisted into adolescence.

Stimming and Sensory Self-Regulation

- Stimming, or self-stimulatory behaviour, is a vital self-regulation tool for many autistic people. Sensory stimulation plays a crucial role in the development, information processing, and behaviour of individuals, making it essential to understand its impact. Actions such as rocking, hand-flapping, or fidgeting can help them manage overwhelming sensory input and reduce anxiety. These behaviours often provide comfort and aid in maintaining focus and emotional balance. Recognising the importance of stimming and allowing space for it can significantly improve an autistic individual's ability to cope with their environment.
- Additionally, intense interests, often seen in autistic individuals, can have positive aspects. These deep engagements can lead to the development of expertise in specific areas, boosting self-esteem and providing a sense of achievement. These interests can also offer a regulating effect, serving as a sanctuary from the sensory overload of daily life. Encouraging and nurturing these passions can help autistic individuals leverage their strengths and contribute meaningfully to their personal and professional lives.
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Autism is commonly associated with differences in communication and social interaction. However, a growing body of research highlights that sensory processing differences are also a central aspect of the autistic experience. Many autistic individuals perceive and respond to sensory information in ways that differ from neurotypical individuals. These differences can influence daily functioning, learning, and participation in social environments.

Beyond sensory sensitivity or hyposensitivity, autistic individuals may also experience sensory discrimination difficulties and motor coordination challenges, which are closely linked to how the nervous system processes and integrates sensory input.

Sensory Processing Differences in Autism

Sensory processing refers to the way the nervous system receives, organises and interprets sensory information from the environment and the body. According to Sensory Integration Theory, first developed by occupational therapist A. Jean Ayres in the 1970s, effective sensory processing is essential for producing appropriate behavioural and motor responses.

Research suggests that atypical sensory processing is highly prevalent in autism. Studies indicate that over 90% of autistic individuals report sensory processing differences, including heightened or reduced sensitivity to sensory stimuli.

Sensory input can be categorized into several systems:

- **Visual** (sight)
- **Auditory** (sound)
- **Tactile** (touch)
- **Olfactory** (smell)
- **Gustatory** (taste)
- **Vestibular** (balance and movement)
- **Proprioceptive** (body position and force)

Differences in these systems can influence how autistic individuals experience everyday environments.

Sensory Modulation: Hyper- and Hyposensitivity

One of the most commonly discussed aspects of sensory processing in autism is sensory modulation, which refers to the nervous system's ability to regulate responses to sensory input.

Autistic individuals may demonstrate:

Hypersensitivity (Over-responsiveness)

Hypersensitivity occurs when sensory stimuli are perceived as excessively intense or overwhelming.

Examples include:

- Sensitivity to loud or unpredictable sounds

- Discomfort with bright lighting or visual clutter
- Aversion to certain clothing textures or physical contact
- Distress in crowded or highly stimulating environments

These experiences can lead individuals to avoid certain environments or situations to manage sensory discomfort.

Hyposensitivity (Under-responsiveness)

Hyposensitivity involves reduced sensitivity to sensory input, often leading individuals to seek additional stimulation.

Examples include:

- Seeking deep pressure or tight hugs
- Engaging in repetitive movement such as rocking or spinning
- Touching objects frequently to gain sensory feedback
- Preference for strong tastes or smells

These behaviours can support self-regulation by increasing sensory input to the nervous system.

Sensory Discrimination Difficulties

In addition to sensory modulation differences, autistic individuals may experience challenges with sensory discrimination. Sensory discrimination refers to the brain's ability to interpret and differentiate between sensory stimuli.

Whereas modulation concerns how strongly a stimulus is perceived, discrimination concerns how accurately it is interpreted.

Difficulties with sensory discrimination may include:

- Difficulty locating the source of a sound
- Trouble distinguishing between similar textures by touch
- Challenges identifying body position without visual cues
- Difficulty judging the amount of force required to manipulate objects

For example, a child may hold a pencil too tightly or too loosely because the proprioceptive system is not providing clear information about grip force. Similarly,

challenges with tactile discrimination can make activities such as dressing, handwriting, or using utensils more difficult.
Research suggests that sensory discrimination differences may affect learning, particularly in tasks that require fine motor precision or body awareness.

Motor Coordination Differences
Motor coordination differences are also frequently observed in autism. These challenges may affect fine motor skills (small, precise movements) as well as gross motor skills (larger body movements involving balance and coordination).
Motor coordination difficulties can include:

- Clumsiness or frequent bumping into objects
- Difficulty maintaining balance
- Delayed development of motor skills such as crawling or walking
- Challenges with handwriting or tool use
- Difficulty with sports or coordinated movement tasks

Motor challenges are closely linked to sensory processing, particularly the vestibular and proprioceptive systems. These systems help the brain understand body position, movement, and spatial orientation. When sensory signals from these systems are less precise, coordinating movement becomes more difficult.

Sensory Overload
When the nervous system receives more sensory input than it can effectively process, an individual may experience **sensory overload**. This occurs when sensory stimuli accumulate faster than the brain can organise and interpret them.
Sensory overload can result in:

- Anxiety or distress
- Withdrawal or shutdown
- Increased self-regulatory behaviors
- Difficulty communicating or concentrating

Sometimes, sensory overload may lead to very intense responses to overwhelming sensory or emotional experiences. (These intense experiences have historically been referred to as meltdowns).

Self-Regulation and Stimming
Repetitive behaviours, often referred to as stimming, play an important role in sensory regulation for many autistic individuals.
Examples include:

- Hand flapping
- Rocking
- Repeating sounds or words
- Tapping or manipulating objects

Research suggests that stimming behaviors may serve several functions, including regulating sensory input, managing emotional states, and maintaining attention. Increasingly, clinicians and researchers emphasize understanding these behaviours as adaptive self-regulation strategies rather than behaviours that should be eliminated.

Implications for Support and Intervention
Understanding sensory processing, sensory discrimination and motor coordination differences is essential for supporting autistic individuals in educational, clinical and community settings.
Evidence-based strategies may include:

- Creating predictable and low-stimulation environments
- Providing sensory supports
- Allowing opportunities for movement breaks
- Using therapy interventions based on sensory integration principles
- Supporting development of motor planning and coordination skills

When environments are designed with sensory needs in mind, autistic individuals are often better able to engage in learning, communication, and social participation.

Conclusion
Sensory processing differences are a core component of the autistic experience. These differences extend beyond sensory sensitivity to include challenges with sensory discrimination and motor coordination, which influence how individuals interact with their environment.

By understanding the neurological foundations of these differences, educators, clinicians, and communities can move toward more supportive and inclusive environments that accommodate diverse sensory experiences.

Sensory issues look different in autism vs ADHD. Here's the complete guide to types, signs, and what support actually looks like for each.
Last updated: June 2026
Sensory issues in autism involve differences in how the brain processes input from the senses — sound, touch, temperature, movement, taste, and smell. Autistic individuals may be hypersensitive (overwhelmed by input), hyposensitive (seeking more input), or both at different times. These sensory differences are a core diagnostic feature of autism spectrum disorder under DSM-5.
If you've found this page because your child melts down over clothing tags, can't tolerate certain foods, covers their ears in crowded spaces, or does things that look odd but seem to calm them down — you're in the right place.
This is the hub for everything Blossom ABA Therapy has written about sensory processing in autism. It explains the big picture first, then links to dedicated articles on each specific sensory pattern.

What Sensory Processing Differences Actually Are

The sensory system does two jobs: it detects input from the environment and the body, and it regulates how much of that input reaches conscious awareness. In most people, the brain filters sensory information automatically — tuning out the hum of a refrigerator, the feel of a shirt collar, the background noise of a restaurant.
In autism, that filtering process works differently. The brain may let through too much (hypersensitivity), not enough (hyposensitivity), or process input inconsistently — which is why the same child who can't tolerate the sound of a vacuum cleaner might seek out deep pressure or loud music in other contexts.
This isn't a behavioural choice. It's a neurological difference, and it's been part of the official diagnostic criteria for autism since DSM-5 in 2013.

Sensory Issues in Autism vs ADHD — The Key Difference

Both autism and ADHD involve sensory processing differences, which is why families often find this confusing. Here's how they typically diverge:
In autism, sensory differences tend to be consistent and specific. The same texture, sound, or temperature will reliably cause distress or seeking behaviour. The pattern is predictable once you know what to look for, and it connects to the broader picture of how an autistic person experiences and regulates their environment.
In ADHD, sensory difficulties are more often linked to attention and arousal regulation. A child with ADHD might be overwhelmed by sensory input when their attention system is underaroused, and seek stimulation to regulate — but the same input in a different context may not bother them at all.

The practical implication: sensory issues that are consistent, specific, and tied to particular inputs point more toward autism. Sensory issues that fluctuate with attention and context point more toward ADHD. When both are present — which happens in a significant proportion of cases — the picture is more complex and evaluation by a specialist matters.

The Eight Sensory Systems (Not Just Five)

Most people know five senses. Sensory processing in autism involves eight:

The five external senses — sight, hearing, touch, taste, smell — plus three internal ones that are particularly significant in autism:

Proprioception — the sense of body position in space, provided by muscles and joints. When this system is underresponsive, a person seeks heavy input: pushing, crashing, pressing their body against surfaces, holding their arms in unusual positions. T-Rex arms and jaw clenching are both proprioceptive behaviours.

Vestibular — the sense of balance and movement, located in the inner ear. Differences here affect how a person tolerates spinning, swinging, rocking, or rapid changes in direction.

Interoception — the sense of internal body states: hunger, thirst, pain, temperature, heartbeat. When interoception is impaired, a person may not accurately register heat, cold, or physical discomfort — which is part of why heat sensitivity looks the way it does in autism.

What Each Sensory Pattern Looks Like

Each of the following articles goes deep on one specific sensory pattern. They're worth reading individually if you're seeing that specific behaviour in your child.

Heat Sensitivity in Autistic Individuals

Why autistic people often struggle with temperature regulation — including both overheating and unusual cold tolerance. Covers the interoceptive and autonomic nervous system factors involved and what it looks like on a hot day, during illness, or in school environments.

Tactile Sensitivity in Children and Adults

The most common sensory complaint in autism — and the one that causes the most daily friction around clothing, food textures, grooming, physical affection, and medical procedures. Covers both hypersensitivity (avoidance) and hyposensitivity (seeking) in the tactile system, with practical strategies for each.

Autism Jaw Clenching

Jaw clenching and teeth grinding (bruxism) in autism are proprioceptive stimming behaviours — the jaw and facial muscles provide strong sensory input that many autistic people find regulating. Covers why it happens, when to involve a dentist or oral health professional, and what ABA support looks like for this specific behaviour.

The Autistic Stare

The fixed gaze or unfocused stare that many autistic people exhibit is often misread as inattention, rudeness, or disengagement. It's actually a visual processing pattern — sometimes sensory-seeking, sometimes a response to overload, sometimes simply a

different way of processing visual information. This article separates the different functions the autistic stare can serve.

Autistic T-Rex Arms

Holding the arms close to the body with elbows bent is a proprioceptive stimming behaviour that provides physical compression and sensory grounding. It's one of the most commonly Googled autism body postures and one of the most misunderstood — this article explains the function, why it happens, and why it generally shouldn't be suppressed without offering an alternative.

How Sensory Issues Are Assessed

A sensory profile is typically part of a comprehensive autism evaluation. The assessment looks at all eight sensory systems, identifies whether each one is hypersensitive, hyposensitive, or both, and maps those patterns onto the child's specific daily challenges.

Occupational therapists (OTs) specialising in sensory processing work alongside ABA teams in many cases — particularly where sensory issues are significantly affecting daily activities like dressing, eating, hygiene, and school participation.

ABA therapy contributes by identifying the function of sensory-related behaviours, building structured sensory diets (proactive schedules of sensory input that reduce overload and seeking throughout the day), and supporting generalisation of coping strategies across environments.

What Actually Helps: A Summary

These are the approaches with the strongest evidence and clinical support across sensory profiles in autism:

Sensory diet. A personalised schedule of sensory activities, developed with an OT, that provides the nervous system with predictable input throughout the day — reducing meltdowns driven by accumulated overload or unmet sensory need.

Environmental modification. Reducing unnecessary sensory triggers where possible: softer lighting, noise-cancelling headphones, seamless clothing, food introduction at a pace the child can tolerate. This reduces the sensory load without requiring the child to suppress their natural responses.

Graduated exposure (where appropriate). For sensory avoidance that is significantly limiting daily functioning, structured and gradual introduction to the avoided input can expand tolerance over time. This is different from forcing exposure — it follows the child's pace and uses reinforcement.

Proprioceptive and vestibular input. Heavy work activities, deep pressure, weighted blankets, trampolining, and movement breaks address the sensory systems most commonly underresponsive in autism. These are often the highest-value, lowest-risk interventions available.

Function-first approach to stimming. Before addressing any sensory behaviour, understanding what function it serves determines whether and how to respond. Suppressing a regulatory behaviour without addressing the underlying need typically produces more challenging behaviour, not less.

Support from Blossom ABA

If your child's sensory differences are affecting their daily life — getting dressed, eating meals, tolerating school environments, managing transitions — that's exactly the kind of challenge ABA therapy is designed to address systematically and individually.
We serve families in Georgia, Tennessee, Virginia, North Carolina, and Maryland through home-based, center-based, and school-based ABA therapy. Contact us to talk with our team about your child.

Frequently Asked Questions

Are sensory issues always a sign of autism?

No. Sensory processing differences occur in autism, ADHD, sensory processing disorder, anxiety, and in some neurotypical people. What makes sensory issues particularly associated with autism is their consistency, specificity, and connection to the broader pattern of sensory and repetitive behaviour that is part of the diagnostic criteria. A child with consistent, specific sensory sensitivities across multiple domains warrants evaluation — but the sensory issues alone don't confirm a diagnosis.

Can sensory issues get better with age?

For many autistic people, sensory sensitivity changes over time — sometimes reducing, sometimes shifting from one system to another. What tends to improve most reliably is the person's ability to anticipate and manage their own sensory needs. With the right support, many autistic children develop strategies that significantly reduce the daily impact of their sensory differences, even when the underlying neurological differences remain.

What's the difference between sensory hypersensitivity and a sensory meltdown?

Hypersensitivity is the underlying neurological pattern — the brain is receiving too much sensory input. A meltdown is the behavioural result when sensory input exceeds what the nervous system can regulate. Meltdowns are not tantrums and are not within the person's voluntary control. Understanding the sensory triggers that precede a meltdown — through observation and a sensory profile — is the first step toward preventing them.