



INTRODUCTION TO SENSORY PROCESSING TRANSCRIPT

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Thanks for joining me. This is an introduction to sensory processing a neurodiversity affirming approach.

So first off a little bit about my background. I studied Fine and Performing Arts in undergrad, and then I went on to earn a master's in Applied Drama from Goldsmiths, University of London, and I am a part time University Instructor.

I am also autistic. I wasn't diagnosed until about eight years ago, I grew up in a family with three neurodivergent kids, but we had no idea. Some parents and professionals are afraid of putting a label on a child. But growing up without a diagnosis, I can tell you that we know we're different, and we think it's our fault.

The neurodiversity movement is all about accepting and celebrating these differences rather than trying to hide or suppress them. Other autistic people you may know include Kathrine May author of *Wintering*, Greta Thunberg, climate activist, Morgan Harper Nichols, artist, poet and author, and Matt Haig, author of *Reasons to Stay Alive*, *Notes on a Nervous Planet*, and *The Midnight Library*.

So I added this slide: Life as an Autodidact. When I was diagnosed, my psychologist told me that I was autodidactic. And to be honest, that was the first time I had ever heard of that. But it basically means that if I want to learn something, I just go out and learn it. I teach myself. So this is here to represent that what I'm talking about today is not just from my own personal experience, but it's also based on a decade of self motivated study.

I've been researching autism and neurodivergence for over 10 years now. And during that time, I've read around 20 books, almost 200 pages of academic studies on autism and neurodivergence, over 100 hours of podcast and video content. And I've completed nine trainings including: Sensory Integration by Karen Purvis, Gestalt Language Processing by Alexandria Zachos, and Building Communication with Sensory Strategies by Jessie Ginsberg.

What I'm sharing today is a synthesis of my lived experience and the newest research. Neurodiversity: differences are not deficits. The neurodiversity movement embraces and celebrates differences and focuses on inclusion needed accommodations, and support over finding a cure, as well as the value that neurodivergent individuals bring to the world. And that is a quote from Andi Putt, speech language pathologist who wrote [The Autism Handbook](#), which is a resource that I would highly recommend.

We're going to start by talking about autism today, but there are so many overlaps with other neurotypes. Neurodivergence includes: autism, ADHD, dyslexia, dyscalculia, apraxia, sensory processing disorder, synesthesia, OCD, and more. The new studies in neuroscience actually suggest a blurring between the current diagnostic criteria and indicate that autism, ADHD and OCD look similar in the brain.

“The words that we call a diagnosis just mean there's a constellation of behaviors.” And that's a quote from Karen Purvis.

Basically, the current diagnostic criteria are all based on external factors, which can be one reason that it's difficult to get a diagnosis. Sometimes the people who need supports may not have a diagnosis, and everything we're talking about today is for anyone who would benefit regardless of their diagnostic status.

Now, just a really quick note on this. (I could do a whole talk on this.) But the trouble with diagnosis and why neurodivergence gets missed. One reason is pervasive stereotypes, perhaps you know one person with autism, and then you think there's no possibility that I could be autistic or that my child could be autistic because they don't look like that. Or the same thing with ADHD or sensory processing disorder. So that would be not even seeking a diagnosis because of the stereotypes and a lack of information. Also, sometimes professionals are the ones with the outdated information. It's been years ago, since doctors were learning about these things in school. And if they haven't kept up with the newest research, they may have an outdated idea of what neurodivergence or autism looks like. There's the fear of social stigma, which I talked a little bit about a few minutes ago.

And there's a diagnostic bias toward white males because particularly white male children are the ones that were studied. And so there is this really narrow idea of how autism is presented, when actually, there's a wide spectrum, which we'll get into here in a minute. And then there's also an accessibility. So the cost of the evaluation, the referrals, access to fully informed professionals, etc.

And I have a note here that all of the studies are cited on my sources slide. I am a University instructor. So I haven't put any information here that I haven't cited the sources for. So there's you can find those at the end.

What is autism? Autism presents differently with each person and it's not a word to be avoided, or anything to be ashamed or embarrassed by. It's simply a difference in the brain.

These two brain scans, these are brain scans of two individuals language networks, one is autistic, and one is neurotypical. Which do you think is the autistic brain? The brain on the left is the autistic brain, and the brain on the right is neurotypical or non autistic. We'll talk more in depth about what's going on here later on. But you can see right away that the autistic brain has many times the number of connections.

While a lot of what we will be discussing here today is centered on supporting challenges. It is important to recognize and cultivate autistic strengths, creative thinking, pattern recognition, attention to detail, visual memory, spatial awareness, analytical problem solving, a strong sense of justice, and hyperlexia sometimes (early self taught reading.)

If you take away one thing from today, I'd like it to be that autistic behavior is human behavior. This is one of the first notes I wrote down for today's talk. So I was delighted to find the following clip by Dr. Barry Prizant.

"The book Uniquely Human came about because from very early in my career, I noticed that a lot of what I was seeing in children with autism and their families, it was very, very different from what the literature was saying at that time, words that we use very often were, the behavior of kids with autism, or people with autism was bizarre was deviant was psychotic, that their speech was meaningless parodying. And what I saw were a behaviors that certainly were different. But that could be seen as human behaviors, and uniquely human, I give many examples of how what we have tried to put in a box and say, Oh, that's an autistic behavior is a human behavior. So one example of that is jumping up and down and flapping. It's not uncommon, especially for a child with autism, when they're very, very excited to

jump up and down and flap their hands. But the rest of us, those of us who are neurotypical, and not on the autism spectrum, may jump up and down and flap when we're very excited as when a touchdown is scored by a favorite football team. Or, as Ross Blackburn says, watching somebody win a game show on TV or winning the lottery. There's a lot of autistic behavior going on there. That's very excited behavior. But we don't label that as autistic behavior, we label that excitement. So why can't we look at so many of the behaviors of people with autism, and in a sense, normalize them because we see them in all of us, rather than looking at autism as a disability, or as some people say, a disease which is actually inaccurate, that's inner child or in a person, that autism really is in everyday life, a shared human experience. When we're with a person with autism. It obligates us to act differently. And when we act differently, it supports them. I've known many parents who've said that by having a child with autism, they become a more open minded, more tolerant person, that they seek out ways to help other people because they've benefited so much from receiving help from others. So if we understand autism as a shared human experience, not just an issue in a person that needs to be fixed, that opens up all kinds of possibilities for us to be more compassionate society, for us to be more helpful towards each other. And for us to understand that continuum of humanity and all of us."

His book is fantastic. It is my number one recommended resource for understanding autism. This video and the first edition of his book were published in 2015 and there's now an expanded and revised version so be sure you look for that one. One of the changes in the new edition is that Dr. Prizant now uses identity first language "autistic person" versus "person with autism" because he continues to listen and learn from the Autistic community. We generally prefer to be called autistic instead of person with autism, similarly to how you would not describe a Deaf person as a person with deafness, Autistic people consider autism to be part of our identity, and we have our own Autistic culture.

When I start talking about autistic challenges, one of the most common responses is, "but don't we all do that," or, "but all kids struggle with that." And that is true because autistic behavior is human behavior. We're not aliens. What's different is the way our brains are processing input. It's actually a great thing to have empathy and connection to relate to the autistic experience. But it's important to understand why something may be that may be difficult for a neurotypical person, a person without autism will be extra challenging for an autistic because of neurological differences. And that's something that I hope to communicate today.

To get the most out of this training, I need you to do two things.

The first is to be open, we've laid a foundation that autistic behavior is human behavior. So really open yourself up to the nuance of what makes certain experiences and skills more difficult for autistic and neurodivergent people.

And number two, embrace possibility. If you continue to resonate with the sensory experiences that I will be focusing on today, there is a chance that you yourself are neurodivergent, I need you to be open to that possibility so that you're not dismissive of what I'm saying. The tricky thing about being autistic or neurodivergent, is that you imagine everyone else is struggling as much as you are, and are just better at handling it. It was actually seven years after my niece was diagnosed before I even realized that I was autistic too. If you do see yourself and what I'm saying feel free to reach out later and I can connect you with some additional resources.

So let's talk about the autism spectrum. What most people imagine is a linear spectrum from less autistic to more autistic. The spectrum is more like a color wheel with colors representing sensory differences, social differences, enthusiasms executive functioning and more. This artwork is by an autistic artist who you can find on Instagram at @autim_sketches.

I would say that the autism spectrum looks like this. Because every person's experience is unique. And even those experiences vary from day to day and moment to moment based on internal and external factors. You can find the link to this artwork under my sources as well. I could watch it for ages. It's very mesmerizing.

So if you've met one autistic person, you've met one autistic person. This is true for all neurotypes. What we share is a difference in brain wiring. But how that shows up and is reflected in our actions and personalities is unique. So it's impossible to cover the vast spectrum of autistic differences today. So what I've chosen to focus on is sensory integration. These differences in the way our brains process sensory input may actually be the root cause of many other autistic differences.

Sensory Processing differences are a central feature of autism, synesthesia, apraxia and sensory processing disorder. This training will help you support anyone with sensory processing differences with or without a diagnosis.

Eight senses. So we have the basic five sight, sound, taste, touch and smell. But can you think of the other three, the trampoline the hula hoop and the human body.

The trampoline represents the vestibular sense, and that's connected to gravity receptors in the inner ear, calcium carbonate crystals and semicircular canals that give us information when we are running, jumping, swinging, spinning or moving our head, Dr. Ayers in *Sensory Integration and the Child* says that this input tells us exactly where we are in relation to gravity, whether we are moving or stay still and how fast we're going in what direction. She also says that it may be hard to realize that this information is actually being processed in your brain. Since the information is so basic that you cannot possibly imagine what it would be like not to process it. And that's particularly to neurotypicals. She says the sensations of gravity flowing through our nervous system helped to form a basic reference for all other sensory experiences. Basically, when the vestibular system is not in balance, all of the other senses will be inconsistent and inaccurate.

The hula hoop represents proprioception, the sense of body's position, or body map. So awareness of the position of your body and deep pressure in your muscles, and a mental body map of how joints and muscles connect with each other. So if you would close your eyes for a moment, and touch your finger to your nose, that's your mental body map at work. Let's try some more. Touch your elbow, touch your ear, touch your left canine tooth. Did you feel with your tongue if you did, that's because you don't have a body map for your teeth for your individual teeth in your mouth. The example that Dr. Ayers gives in the book is actually that we don't have a body map for our individual toes, but you kind of have to be barefoot and set up in a certain way to recognize that. So now imagine walking through a dark room that you don't know very well. You'd probably reach out to touch furniture or run your hand along the wall. This is why individuals without strong proprioception often touch items when moving through a space or tap a foot to concentrate it helps to ground them in space. Another input that we get from proprioception or the information that we receive from our joints and muscles when bending, straightening, pulling or compressing.

Interoception is the awareness of your body's internal signals, noticing what your body needs. So hunger, thirst, pain, bladder, bowels, temperature and pulse.

What is sensory integration? Sensory integration organizes information detected by one's senses. It gives meaning to what is experienced by sifting through all of the information and selecting what to focus on. It allows us to respond to a situation that we're experiencing, experiencing in a purposeful manner and forms the underlying foundations for academic learning and social behavior. It is an unconscious process like breathing.

How does the brain do that? Through modulation. Modulation is the brain's way of changing the volume of your senses. This is the process that brains use to adjust the intensity of sensory input and to keep our conscious sensations in harmony. When one or more of the senses is not modulated, it can make other input difficult or impossible to receive.

Basically, your brain decides what information is important. It filters out sensations that it considers unnecessary, like background noise, or the way your clothes feel on your skin, and it does all of this unconsciously. Neurodivergent brains are conscious of more sensory input. This can be a strength, but without supports, it can make everyday tasks difficult or even painful. Over and under responsive. For neurodivergent brains each sense can be over or under responsive. Sometimes this concept is over simplified and a child is described as sensory seeking or sensory avoidant, but it is much more nuanced.

There will be a response tendency for each sense and even some variation within that. I'll use myself as an example. I have extreme sensory avoidance for water or liquid of any kind on my face. My tactile response to that sensory input is on bearable, but I love a hot bath or a heat really hot heating blanket. I didn't have a heater in my room growing up and mom was always afraid I was going to catch the bedroom on fire. My heating blanket was up so high. So I avoid this sensation of water on my face. But I love the sensation of water on being submerged in water that's not on my face. And I seek the sensation of heat in certain contexts.

Another important example is interoception or awareness of body signals. So sometimes interoception can be hypersensitive to every cut, scratch and bruise. But it can also be bleeding and having no awareness that you've cut yourself. This can also vary based on other sensory input that your brain is processing. If there's too much of one kind of sensory input, it may mean that you can't feel something else.

Let's talk about overstimulation. Overstimulation is invisible until it reaches intolerable levels, then it can be observed through actions, emotions, or a lack of responsiveness. Now this might look like an uncontrollable emotional outburst called a meltdown, or a shutdown, which might look like physically retreating or hiding with a limited access to spoken language. Either of these can be a response to overstimulation. Now, I wanted to share a metaphor for overstimulation and I couldn't find one that I liked. So I filmed this myself. The fishbowl represents a neurodivergent brain. It is spinning to represent a lack of vestibular input and not being grounded in space. And each color that I add will be a new sensory experience.

So yellow is proprioception. For example, you're concentrating on using a pencil without breaking the lead, just how much pressure to apply.

Next, we have taste. Someone cleaned the table earlier and you can taste the orange in the air.

Vision a friend makes eye contact and you're flooded with visual information. Also, there's a glare from sunlight through the window.

Interoception, the scrape on your knee hurts and you can't forget about it. A neurotypical would feel the scrape at first but we've become accustomed to it and be able to tune it out to focus on other activities later in the day.

Auditory, you hear every individual sound voices scuffs taps, even the hum of the light bulb. Again, a neurotypical could hear these things if they listened with perhaps the exception of light bulb. But if they were focused on work, most of that would melt away through brain modulation.

Smell someone walks past and the scent of their laundry detergent is overwhelming.

And lastly, we will have touch the texture of fabric and the tag on the back of your neck is more than you can bear. So you start tugging on your clothes. You can see this amount of sensory input has completely filled the bowl.

I'm now going to add some marbles that represent additional input. The first marble is someone calling your name. Can't see the marble. A tap on your shoulder. Can't see that marble. A voice giving you instructions. You can't see that marble. And trying to form your own thought. You can't see the marble.

Now this is a case of overstimulation. Neurodivergent individuals don't walk around constantly overstimulated. For example, if I was overstimulated right now I would not be able to be recording this training for you. But this is what happens when the sensory information becomes more than we can process and our brains just can't take anything, anything else on board. Meanwhile, a neurotypical brain without sensory processing challenges can see every marble in the bowl. Now the amount of color in your fishbowl is going to vary based on your environment and your supports.

The experience of overstimulation is completely internal and you don't see that overstimulation until it reaches critical levels. This is when a meltdown or

shutdown occurs. These happen when there's more input than you have the capacity to process and play this video. I did not add ink to this one for obvious cleanup reasons. But see when there's too many marbles, the bowl overflows. And what's important to remember is that whatever the last marble is, the one that causes the overflow is usually not the cause of the response. The marbles may have nothing to do with the response. The cause of a neurodivergent meltdown or shut down is usually a cumulative effect of many sensory inputs over time. This is why it's so important to support sensory needs before there's ever a problem.

Another quote from Dr. Ayers, "Most people only see the end product of poor sensory integration, that the child is hostile or that he is shy, that his activity is excessive or aimless, that he forgets things or bumps into them that he cannot read, write or add to numbers, they tend to think that he is goofing off or trying to make trouble or not using his head."

Sensory integration impacts every neural process including hyperactivity, concentration, behavior, speech and language, muscle tone, digestion, motor skills, social skills, academic learning, organization, executive functioning, emotional regulation, self care, independent toileting, confidence, and self worth.

I added a slide here about emotions which aren't technically one of our senses, but they are connected to overstimulation and the impact of emotional stimulation is often overlooked. So both positive and negative emotions have the potential to overwhelm the senses both while they are happening and through emotional memories. So big emotions like joy, anxiety, or fear, all benefit from sensory supports to avoid dysregulation. Due to social differences, it's often a mistaken idea that Autistics in particular have a lack of emotion, but we are often flooded with it, even if we may not communicate or emote that emotion in the same way as neurotypicals. Because of this, the impact of emotional stimulation can often be overlooked.

Recognizing sensory needs.

Tactile defensiveness is pain or sensitivity to clothing or shoes, water textures, like paint or sand, light touch, or people standing too close. And someone with tactile defensiveness will seek certain textures and avoid others. Also, it's a different experience when touch is self directed, then when it's something that's out of your control. Dr. Ayers says the input that feels good is organizing to the nervous system and helps to reduce the negative reaction.

Auditory processing challenges, this is different than trouble hearing. So auditory processing is a difficulty isolating specific sounds from the background noise. So basically, that modulation for your sense of hearing is not working to the level that you can pick out individual sounds. And this is related to the complexity of the sound more so than the volume of the speaker. certain pitches can cause pain, hypersensitive to sound, and those with auditory processing challenges can often hear things that others cannot.

Signs of auditory processing challenges are hands over the ears, responding and consistently when spoken to sometimes misunderstanding what is being said. Confusing similar sounding words, upset in noisy environments and difficulty modulating the volume of voice often speaks too loud or too softly.

Then we have dyspraxia which is related to the motor planning and body map. So this is a combination of sensory processing challenges that are vestibular and proprioceptive. So an individual with dyspraxia may get lost in space, they may bump into things often appear clumsy, awkward or accident prone. Struggled organized body movements did not have a good internal sense of where their body is and how much pressure they're using. So for example, someone with dyspraxia might break their crayons from pushing too much because they are not aware of how much pressure they're exerting with their hands.

Dr. Ayers says, "We can't see poor sensory integration, but we can see poor motor coordination." So that's kind of like a clue that something's going on with sensory processing. If we see these things often the best approach with children with dyspraxia is to let them develop at their own pace. It's not that these children will not develop certain skills, but they will do so in their own timeline, so it's important to follow the child.

I also added this slide about change, transitions and uncertainty can be more difficult for those with sensory processing differences. Additional sensory and emotional support may be needed during parties, events and holidays, trips, life transitions or changes in schedule staff or environment.

Supporting sensory needs.

The first step is validation. The most important thing you can do is to acknowledge that the problem is real and to respect the child's reactions in various situations. So for example, growing up I was often told particularly by adults outside of my family, that I was just being too sensitive. And that was as offered as a criticism

rather than considering that the way that was how I was experiencing the world and how could I be helped in those situations.

Number two, observe. Remember the fishbowl. Sensory overload is accumulative. So you want to look for triggers throughout the day. Even details that you perceive to be inconsequential may be relevant.

So I made this handout to help document sensory challenging differences, sensory processing challenges, and particularly to do the detective work if you're trying to figure out where a meltdown or a change in behavior is coming from. So I'm going to talk you through the handout now. The first square we have up here is auditory. So close your eyes and notice any sounds that you hear, even if they're very faint. If you're wearing headphones, you might just pop them off for a few seconds. What did you hear? Sounds are often 10 times as loud to a student with auditory processing challenges. Now we have visual. So notice the visual environment lighting, reflections, visible movement, etc. Tactile observe the reaction to textures, clothing, wetness, proximity to touch and being nearby people. And then we have smell and taste. Always respect food restrictions that are due to taste, smell or texture. And notice other smells in the environment. Vestibular or the sense of gravity, students seeking or avoiding input by jumping, spinning or climbing. Okay, I said students because I originally made this for school, but this also applies to your own children or to yourself. So it's a sign that the individual is not having enough vestibular input. If they are jumping, spinning or climbing proprioceptive or a body map. The individuals might seek input by tiptoes flapping, tapping or chewing or they may seem kind of lost in space. Interoception awareness of the physical needs. So notice signs of physical needs such as hunger, sickness, hot, cold, tired, etc. And then I did add a section here for change in environment, staff or routine. And down at the bottom, there's somewhere to document communication attempts. So actions, emotion vocalization, the use of AAC, etc. AAC, it's advanced augmentative communication. So this might be if you have a child who doesn't speak and they use a iPad, like you can tap words that the iPad will speak for you. Or it could be something low tech, like words on velcro like laminated words in a binder. Those are just two different forms of AAC. So any form of communication including like someone holding your hand and taking you to another part of the room, or offering an object any write down anything that happens so you can get all of the data to kind of try to figure out what's going on.

Number three, ask why. So behavior is communication, and we want to look for clues and patterns. So what do you observe? Does this repeat Are there any patterns in time, place activity or people when it happens, what senses might be

overstimulated or under stimulated, what function might that be high behavior be serving, self regulation, communication, etc. And could the dysregulation be due to a misunderstanding, when attempts at communication are ineffective, this in itself can lead to dysregulation so again, I have this originally written for a school but you want to have an open dialogue with all of the people involved. So parents, therapist teachers, to collaborate and exchange information. And keep in mind that the trigger could be an emotional memory that you're not aware of from another environment.

Number four offer supports. Supports are highly individual to the child and these are just some examples. So sensory motor supports for vestibular and proprioceptive input include heavy work, push, pull, lift and carry heavy items. This contracts muscles and compresses joints for proprioceptive input. Spinning and bouncing can reduce the sense help regulate the sense of gravity. rocking chairs and swings can reduce anxiety and emotional upset. Therapy chewing supports and fidgets can promote focus. Chewy snacks can reduce mouthing items, weighted blankets, vests or shoulder wraps can be calming and grounding. And gross motor play promotes sensory integration, especially when it is self propelled action. I want to talk about fidgets as focus tools. So fidgets like fidget spinners, or those little sensory poppers are really popular, just trendy right now. But for someone who's neurodivergent, that can be a really powerful tool to help with sensory regulation, sensory modulation, and it can help promote focus.

So if we don't have access to those kinds of tools, then our brains will look for other ways to get the stimulation that we need. And that may actually lead to masking the self seeking behavior and that can cause self harm. So for example, I was a little kid who was always called a wiggle worm, and I was always kind of just wiggling around. And eventually, at a certain age, I did have enough self control to suppress that behavior. But my brain was still seeking a sensory input. And so I would pick up my scalp until it bled. Now, without a diagnosis, I had no reason why this was happening or what function this behavior was serving. But this is an example of what's called a body focused repetitive behavior. And it can It's basically your brain's way of creating a fidget when there is no fidget around. So it could also be something like chewing your tongue grinding teeth. It could be other forms of self harm, or eat or even eating disorders, which are particularly common among autistic girls. So basically, the brain will find a way to get the stimulation it needs to cope. And it's our job to help individuals find a way to regulate themselves without causing harm.

So you want to weigh what might be perceived as like a slight disturbance of the sound and sight of a fidget with the fact that if the student particularly in a classroom setting didn't have access to that fidget, they may be turning towards self harm in ways that you may not even be able to see. Here are a few examples of sensory motor support. So we have a sit and spin a therapy ball. And then over here is a really fun just open play object called a Billibo that you can use to spin or you can put it upside down like a helmet. It can be used for different sorts of imaginative play.

Sight Sound and Touch supports to avoid overstimulation. Now, these are going to be based on the individual's need and what their stimulation levels are. None of these are suggested to be used all day all the time, but as and when needed, if it's possibly either preventing the individual from participating or if it is contributing to be becoming overstimulated. So ear defenders are noise cancelling headphones for individuals who are sensitive to sound or endeavor. Individuals who are sensitive to sound sunglasses or hats for individuals who are sensitive to sunlight. Gloves for individuals who are hypersensitive to touch. For example, when I garden I have to wear gardening gloves if I'm not going to become overstimulated afterwards. Textured items can help individuals with tactile defensiveness. Now this is going to be specific to each person. But it could be like a piece of sandpaper, it could be a square velvet cloth, it could be anything rough, soft, squishy, etc. Again, the stimulation that feels good can help regulate the stimulation that feels bad or over stimulating personal space. So this is particular to students in school, but a student who's sensitive to touch may benefit from being at the front or the back of the line, so they're less likely to be brushed up against by other children. And as adults, we can just make sure we have enough personal space around us. When possible, and soft, comfortable clothing is a sense is essential for most touch sensitive individuals.

Number four, prepare the environment. So to prepare the environment to support sensory integration, movement work needs to be available throughout the day, not includes the things we talked about earlier, with possibilities for jumping, running, spinning, all those kinds of things. Time outside for gross motor play is great, a quiet area to provide opportunity for self regulation. comfort items can help reset or transition and additional support for each individual's specific needs, and keep the supports clearly visible and accessible to all who need them. This is particularly for educators to try it to have these things available when possible to all who need them. Obviously, there's some exceptions. If someone has an AAC Digital Talking device that is that child's voice if someone needs like a chewing support, we don't

share chewing supports, but things like fidgets it's nice to have extras that are available for the class, or ear defenders and things like that.

Number five meltdowns and shutdowns approach for supporting meltdowns and shutdowns. As much as we try to meet the needs and prevent these sometimes they still happen. Every situation is unique. But here's a basic template for dealing with meltdowns and shutdowns feel like I've said that 500 times just now. So when a child is melting down, we may want to help them change their behaviors. But neurodivergent students often need support before that's possible. So number one, this helps the student feels seen and understood, we want to validate the feelings and if they're having trouble accessing language, or if they're a young child, if possible, give language to the emotion that the student seems to be experiencing.

And number two, attempt communication. So if the individual is not able to respond, offer communication supports if you have something like an AAC or a talker, but it could also be writing, it could be texting, alternate ways to communicate that's not based on spoken language. Or particularly for a child, you can hold up to hands with options that they could point to, for example, would it help to go somewhere quiet or put on your ear defenders, and that ties in with number three, which is to minimize sensory input. If any of the senses seem overwhelmed, offer supports ear defenders, etc. And change the environment if needed. So you can create personal space, remove items, step outside, move to another room, etc. And number four support regulation. Depending on the student, this may be that they need quiet and space music, weighted blanket swinging rocking fidget toys etc.

It's important to accept that they can't just stop what they're doing. They need a way to move through it. This is when the brain is telling us that it can't cope anymore. So as much as it may be tempting to just say, "Stop doing this" redirection is much more effective. Now as a parent, I'm an autistic person with an autistic child. And I know that sometimes what we really want is for them to just stop. Because sometimes particularly a meltdown can be overstimulating for us but it just doesn't work that way. It's not something that you can just turn off and even if it appears that it's just turning off, it's changed somehow like it's trying to think of a way to say this It's going to come out one way or another. And we want to help to try to focus it in a more positive way. So particularly if the meltdown is harming themselves or someone else, you want to help redirect into some of these other sensory inputs. And it's going to take some trial and error to figure out what works for you.

And it's important to accept that we sometimes misinterpret the situation, always ask for someone's perspective after they're regulated. So we may not be able to say what's wrong while we're having a meltdown or shutdown. But it's important to not disregard the neurodivergent person's experience. And that once that person is regulated, to try to talk to them about what happened and how they were feeling, and how sensory integration might have been a part of what happened. So again, just to remember, what we want to do is help the individual move through to like when these actions are happening there for a reason. So if say, the individual is banging their head, they're seeking a sensory input, so offer a different sensory input. Or if they're covering their ears and screaming, it might be to block out a different sound. So taking that person outside to a quieter space, where they could swing or sit on a rocking chair could be really helpful. And that's also where this handout comes into play.

The more detail that we have, the better we can be a detective to figure out what contributed to the reaction. Okay, I don't know how this is going to work for audio. But I did want to say that sometimes. One of the popular calming techniques is a deep breath. And that may work for some people. For myself, for whatever reason, when I'm told to take a deep breath, it causes me great anxiety, and it's not very helpful. But what does work for me is a horse breath, or horse noise. Now, you might want to bear in mind, we're living in COVID times, and particularly young children might spray a bit of spittle when they do this, but this talent that I mean is [blows air through relaxed lips.]

And I can take a much deeper, longer exhale. When I do this, I actually did it through my whole labor. When I was giving birth, that was the only breathing technique that worked for me. And so that's just kind of a fun little thing that might be helpful. If you're having particularly a young child you're trying to teach to take a deep breath and it's not working, they could either pretend to blow out birthday candles or introduce that. Or if they like music, you can add a little bit of vocalization to it and it becomes a lip trill like this. [Blows air through lips with vocalization.]

And it's also kind of silly, it can help lighten the mood. So doing that outside can be great.

So to review, sensory integration is an unconscious process of the brain. It organizes information detected by one's senses, it gives meaning to what is experienced by sifting through all of the information and selecting what to focus on. It allows us to act or respond to the situation we are experiencing in a

purposeful manner. And it forms the underlying foundation for academic learning and social behavior.

But you don't have to take my word for it.

Here I have linked all of the books, trainings and academic articles that I have referenced in putting together this talk. As well as the media sources with different artworks and images. And this is what I really recommend for further reading. So *Uniquely Human* by Dr. Barry Prizant. Be aware that the original edition is outdated, so be sure to look for the expanded and revised edition. This is the number one source particularly for autism that I would recommend.

Second, [The Autism Handbook](#) is great. If you are a parent and you want to print out handouts to start this conversation with your child's school. That's what I did. That's why I started with, that's a great source. She also has a fantastic Instagram account [@mrsspeechiep](#). I think... I haven't done it yet. But I'm gonna put together some different Instagram accounts that you can follow as well because there's some great information out there from professionals.

Sensory Integration and the Child, I drew on very heavily for this presentation. It's a great book. It's a textbook, so it's on the expensive side. I think I paid \$70 For that textbook. But it's a great read. So if you want to go deeper on this, I would recommend it. I would caution. So this is the 25th anniversary edition. And a lot of this sensory stuff is great, but I would caution against the chapter on autism. So she wrote the original version in the 1970s and she since passed away... our understanding of autism has changed so much by then. And what's represented in that chapter is one very stereotypical aggressive approach to autism. I don't think it's worth throwing out the whole book, the book is fantastic. But that one chapter is rooted in a different time. And it is not applicable to our understanding of autism today.

I would also recommend the PDF or the articles Behavior is Not the Issue by Dr. Barry Prizant and Amy Laurent. It's a very practical guide for emotional regulation in school or home settings. And I have that link to there.

And if you want monthly updates for me, neurodivergentspacetime.com is where you can sign up for that. Basically, I started by putting this presentation together for my son's school. And I've been asked by other parents and therapists and educators for access to this talk. And when I learned so much more than I could fit into this one presentation. So I'm really inspired to continue making educational resources. So I'm not quite sure what shape that's going to take for the for the

moment, I'm working on monthly newsletter updates. And maybe I'm also writing a book we'll see.

So that's me at neurodivergentspacetime.com. You can also reach out if you subscribe to my substack there's a free tier where you can access the monthly emails. And if you subscribe to the paid tier, you'll get some bonus content. You'll also have access to posting in the comments and additional questions and answers for me. So thanks for listening. I hope you learned a lot. If you'd like to leave a testimonial, I would love to add that to my website. So you can send that to me through email thenerdyneurodivergent@gmail.com or on social media. And you can follow me at [@neurodivergentspacetime](https://www.instagram.com/neurodivergentspacetime) on Instagram. So maybe I'll see you there