Notes to accompany the PowerPoint Slides for the E-learning module for parent-carers: Sensory Processing and Autism

 Before you start:

- Please note that the PowerPoint which accompanies these notes has been divided into Part 1 and Part 2.
- Remember once a particular part of the Sensory Processing and Autism PPT is open, to then open it up it in **Slide Show View**.
- You will need to have a copy of these notes open (preferably a hard copy version), in order to navigate your way through the slides.
- You may also want to consider doing parts of this training with your partner and/or a friend.
- You are welcome to pop an e-mail to sarahs_karma@yahoo.co.uk at any stage should you need clarity on anything or have a specific question you would like to ask.

PART 1

Slide 1: Sensory Overload, watercolour and ink on paper

'This is a pretty accurate artistic representation of how I feel regularly. Normal life is so overstimulating for me. Everything is turned up to eleven and it feels like my senses can't just focus on one thing. My sensory perception is a jumbled, unintelligible, intolerable mess, just like this picture.'

The artist's written interpretation of the piece of art displayed on this slide.

 **Reflection**:

- What is the first word/phrase that comes to mind on looking at this piece of art?
- What is your experience of sensory overload?

Slide 2: Module outline

This is an outline of the content that will be covered over the course of this module:

- Our Sensory systems
- Sensory processing
- Is it sensory or behaviour?
- Sensory processing difficulties
- Synaesthesia: Mixed signals
- Sensory processing and Autism
- Sensory Overload
- Sensory Meltdown
- Responding to sensory processing difficulties

Slide 3: Imagine one day. . .

This slide uses an insightful analogy to help us understand what people experience when they cannot effectively process, or interpret, sensory input. This analogy was written by **Stanley Greenspan,** the author of **'The Challenging Child'**.

It's no wonder that many Autistic adults with sensory processing difficulties feel out of control, exhibit a whole host of behaviours that are often misconstrued and interpreted as the result of something completely different as opposed to sensory overload.

Reflection:

- What is your gut reaction to reading this analogy?
- What would your response be, if you were to experience this every time you got in behind the wheel of a car to drive somewhere?

Slide 4: Sensory Overload

The poem on this slide was written by **Matty Angel**, an Autistic Poet, Writer and Artist who lives alone in Christchurch, New Zealand. Matty has given many talks on Autism and about being unique in a world that she feels is often not very accepting. Matty wrote this poem in an effort to explain her feelings.

Click on the link provided on the slide to read other poems and pieces of writing by Matty Angel.

Also consider reading the article, **'21 People Describe What Sensory Overload Feels Like**' written by Melissa McGlensey.

Sensory overload happens when too much sensory stimulus is occurring at once; it can be triggered by a crowded room, a TV turned up too loud, strong aromas, fluorescent lighting or a hundred other things. It's often associated with certain diagnoses like Autism, sensory processing disorder (this is currently not recognized as an official diagnosis in the DSM 5), chronic fatigue syndrome, fibromyalgia, post-traumatic stress disorder and more, although anyone can experience it.

Sensory overload can be overwhelming, scary and exhausting, and may require a person to separate him/herself from a situation, perform a calming ritual or in some cases, results in meltdown. It is a hard experience to understand unless you have experienced it firsthand. So, individuals who have experienced sensory overload have shared with **Melissa McGlensey** in this article, what it is like for each of them.

The article can be accessed by clicking on the link provided below:
https://themighty.com/2016/02/people-explain-what-sensory-overload-feels-like/

Reflection:

- What struck you as interesting about these descriptions of sensory overload?
- How does your Autistic adult child describe his/her experience of sensory overload?

Slide 5: Our Senses

Carol Stock Kranowitz in her book, **The Out-of-Sync Child: Recognizing and Coping with Sensory Processing Disorder** aptly describes how 'Our senses give us the information we need to function in the world. Their first job is to help us survive. Their second job, after they assure us that we are safe, is to help us learn how to be active, social creatures. The senses receive information from stimuli both outside and inside our bodies. Every move we make, every bite we eat, every object we touch produces sensations. When we engage in any activity, we use several senses at the same time.

The convergence of sensations—especially touch, body position, movement, sight, sound, and smell—is called intersensory integration. This process is key and tells us on the spot what is going on, where, why, and when it matters, and how we must use or respond to it. The more important the activity, the more senses we use. That is why we use all our senses simultaneously for two very important human activities: eating and procreating. Sometimes our senses inform us that something in our environment doesn't feel right; we sense that we are in danger and so we respond defensively.

For instance, should we feel a tarantula creeping down our neck, we would protect ourselves with a fight-or-flight response. **Withdrawing from too much stimulation or from stimulation of the wrong kind is natural.** Sometimes our senses inform us that all is well; we feel safe and satisfied and seek more of the same stimuli. For example, we are so pleased with the taste of one chocolate-covered raisin that we eat a handful. Sometimes, when we get bored, we go looking for more stimulation. For example, when we have mastered a skill, like ice skating in a straight line, we attempt a more complicated move, like a figure eight.

To do their job well, so that we respond appropriately, the senses must work together. A well-balanced brain that is nourished with many sensations, operates well, and when our brain operates smoothly, so do we. We have more senses than many people realize. Some sensations occur outside our bodies, and some inside.'

Slide 6: Our Eight Senses

Most of us are aware of at least 5 of our senses:

- Visual
- Gustatory (taste)
- Tactile (touch)
- Auditory
- Olfactory (smell)

There are however 3 additional **internal** (hidden) senses:

- Proprioception (body awareness)
- Vestibular (balance/motion)
- Interoception (internal awareness)

Slides 7 - 11: Sensory input: Visual, Gustatory, Tactile, Olfactory and Auditory

The information on each of the above slides come from a blog post by **The Therapist Parent**, a psychologist, '**Understanding Sensory Processing as a key to Behaviour**'.

'I have learnt the importance of having at least a basic knowledge of sensory processing and that we need to consider this if we are going to help with behavioural changes. Understanding arousal levels and sensory processing is a relatively new concept so it is understandable that it is not something that most parents understand. However when we do see that our children's behaviour may be related to their ability to process sensory information, it is like we have been given a key to help them through what they find difficult.'

Krysten Taprell; **The Therapist Parent**

 Click on the link provided on **slide 11** to read more about how each of the 5 sensory systems mentioned in slides 7 - 11 process information.

Slide 12: The hidden senses of the sensory system

 The link provided on this slide provides information on how each of the 3 hidden senses of the sensory system process information.

Slide 13: The Vestibular Sense

The vestibular processing system plays an essential role in the relationship between our body, gravity and the physical world. It provides us with information about where our body is in space. It is responsible for informing us whether our body is stationary or moving, how fast it is moving, and in what direction.

It is one of the first systems to develop in utero. Think of it as a foundation – all other senses are processed in relation to the vestibular system. When the fetus is only 5 months old its vestibular system is amazingly well developed. The vestibular system provides the growing foetal brain with a whole host of sensory information as the foetus is rocked back and forth by its mother's movements.

After birth, our vestibular system is often likened to the 'brain's traffic controller' for all the sensory information it receives. It sorts and relays incoming sensory information from other sensory organs and passes it onto to the various sensory regions of our brain. The vestibular system provides a foundation for the development of all other sensory systems such as touch, vision, sound and proprioception.

It is an important element of the central nervous system, and crucial for the development of balance, coordination, motor control of the eye, bilateral coordination (the ability to fully use both sides of the body) and developing confidence and trust of movement. It is the system which allows us to develop a tolerance to motion. Fundamental functions such as our posture and spatial orientation are affected by the vestibular

processing system. For instance, our posture may change if we are on a swing, to allow us to remain upright and understand where we are in space. It provides information for our body's protective reflexes, and prepares us to go into fight or flight mode in emergency situations.

 **Activity**:

Consider the following physical activities to help you get a sense of the vestibular sense and how your particular vestibular system responds to changes in position and movement. Please be mindful that if you do decide to have a go at these activities that you consider doing it **with a partner** and that should you experience feelings of dizziness and/or nausea **take a break** until these sensations subside.

- **Head exercise**: In a sitting position, bend your head down to look at the floor then up to look at the ceiling
  - Lead your head with your eyes focusing on the floor and the ceiling
  - Repeat 10 times
- **Sitting on a chair facing a wall**: Bend forward and touch the ground then sit up
  - Keep your eyes focused on the wall
  - Repeat 20 times
- **Standing**: Change from sitting to standing and back again
  - 20 times with eyes open
  - Repeat with eyes closed
- **Stand on one foot**
  - Perform first with eyes open for 30 seconds
  - Repeat with eyes closed (attempt only with assistance)
- **Walking**: Walking in a straight line in a hallway or next to a wall
  - P{ractice walking in a straight line for 1 minute with one foot in front of the other or "heel to toe" (with the heel of one foot touching the toe of the other foot)
  - If this is too hard at first, practice walking "almost heel to toe" and gradually work to heel to toe touching
- **Eye exercise: Smooth pursuit** - Holding a pencil in front of your face about a ruler's length (30 cm from your nose), keep eyes fixed on the pencil
  - Slowly move the pencil from side to side for 30 seconds while your head stays perfectly still
  - Perform this in a sitting position
  - Then try this exercise while in a standing position

 **Reflection**:

What, if any sensations did you experience while performing the above exercises?

Slide 14: The importance of the vestibular sense

The vestibular system involves vestibular organs and receptors, located in the non-auditory region of the inner ear. It includes two components: the semicircular canal, which detects rotational movements, and the otolith organs (utricle and saccule), which detects linear changes. These organs detect fluid movement and provide information of where our head is in space. This information then updates us of our bodies' orientation and balance within the surrounding environment, allowing us to experience gravitational security.

Gravitational security is the confidence we have that we can maintain our position and interact with the environment without falling. Therefore, when our vestibular system is healthy, we are able to feel confident during activities which require movement, whether our feet are on, or off the ground. We also have control in starting and stopping activities such as swinging, jumping, climbing and somersaulting because our bodies are able to adapt and maintain balance, protecting our bodies and reducing injury. A healthy vestibular system also allows us to be able attend to other sensory inputs that we encounter throughout the day so that we can focus on activities such as reading, eating and simply sitting!

Slides 15: A well-developed vestibular sense

The vestibular system is neurologically interconnected with many other systems in the brain. An example is the limbic system, which is crucial for the development of further physical, emotional and psychosocial regulation and wellbeing. The vestibular processing system is also interconnected to the cerebellum, combining visual information to enable reflexive eye movements. This is needed for tracking moving objects, scanning, discriminating objects and visual gaze stabilization. This can impact activities such as reading, playing sports, adjusting visual attention whilst moving, and maintaining attention when alternating both looking at a note pad and then at the keyboard.

When the vestibular system doesn't work properly, the way we interpret other sensations may not be accurate. It is very sensitive, so even small changes in position can have a big impact. However when the vestibular system is well developed, we can coordinate movement efficiently. It helps us maintain an upright posture and helps keep your head and neck muscles steady so your eyes can track an object or information in front of you. The vestibular system helps generate muscle tone. Overall, the vestibular system helps us feel safe and secure in our bodies. An individual with a well-developed vestibular system will have no difficulty jumping, climbing, spinning or engaging in activities that require his/her feet to leave the ground.

Click on the link provided on this slide to read in more detail how the vestibular sense contributes to our capacity to successfully engage in the world.

This blog also provides information on alerting as well as calming activities that can be considered depending on whether you may need to increase your level of alertness or calm down.

Slide 16: Vestibular Sense & Self-regulation

Problems associated with vestibular processing can make many aspects of everyday life very challenging. Individuals with difficulty processing vestibular information may be hypo (under) or hyper (overly) responsive to movement, and can appear to display behaviours of both at any time.

Your Autistic adult child may appear fearful of movement because he/she feels insecure and unbalanced. This often leads to a preference for sedentary activities, avoidance of swings or climbing, or other activities where his/her feet leave the ground. He/she may experience sensitivity to changes in walking surfaces and may have difficulty remaining concentrated and upright while having to work. He/she may also have difficulty moving through the environment at home or at work, often moving cautiously or slowly. As a very young child, he/she may have really disliked being moved onto his/her stomach or back, or having his/her head tilted back.

In contrast, an individual may appear to be in constant motion, unable to sit still. This can impact activities such as reading and writing at work, and sustaining concentration without moving. These individuals may appear uncoordinated and clumsy, often tripping over things. They move through the environment, seemingly unaware of danger, impulsively jumping or running. They can also appear to be lost in familiar environments, unable to locate objects. Vestibular processing difficulty not only affects us physically, but also psychologically. It can be responsible for high emotional reactions from stressful experiences and can develop into anxiety or insecurity in an environment.

Our reaction to vestibular input can cause nausea, a headache, or flushing of the skin. Some of us don't always know when we have had enough; if this is the case for our Autistic family member monitor them closely and support them to recognise when they have had enough.

Some practical examples could be:

- Motion sickness (those who get motion sick vs. those who don't)
- Spinning (the slightest motion of spinning could cause one individual to feel sick or throw up, while another could spin for hours and not seem to care)
- Claustrophobia (someone may feel like the room is caving in on them, with a lot of people around, they feel anxious and unsafe in small or large rooms filled with people. While others may not be affected by this in the least and enjoy being in rooms with a lot of people.)

Reflection:

- Looking at the examples given above, which if any, apply to your Autistic adult child?
- How would you describe his/her vestibular threshold (hyper or hyposensitive) for this particular experience and/or type of movement?
- How does he/she typically respond in this/these situation/s?
- What helps to increase his/her sense of safety and lower his her levels of arousal in this/these particular situation/s?

Click on the YouTube link provided on this slide to watch the video, '**Brain Highways: The vestibuar system**'. This is an introductory video which helps us to appreciate the effects of a poorly intergrated vestibular system.

Reflection:

- What did you hear in this video, if anything, that you were previously not aware of?
- What if anything, do you recognise as something in the vestibular system that has impacted your Autistic adult child during his/her early development?

Slide 17: The Proprioceptive Sense

Proprioception is often called our hidden sixth sense. The cells of our body that sense proprioception are called proprioceptors. These are located in our muscles and joints and they process sensory information when our body moves. The stretch on our muscles and the position changes of our joints that occur when we move is called proprioceptive feedback. This lets our brain know where our arms, legs, and body are at any given moment, which is important for our coordination.

Our proprioceptive system helps us to:

- **Know where our limbs** (arms and legs) **are**. For example, when we take a sip of our drink, we don't have to look at the cup as it goes to our mouth. We can move it there with our eyes closed if need be. Our proprioceptors send the information about where our hand, and therefore the cup is, through to the brain for us.
- **Grade our force and speed of movement**. If we think back to the cup, we typically don't crash the cup into our mouth. Our proprioceptive sense makes sure our hand moves smoothly and slowly enough to reach our mouth, without hitting ourselves in the face or spilling water.
- **Maintain our muscle tone**. Muscle tone is the resting tension in our muscles. Our proprioceptive system helps our vestibular sense to support this tension. Some individuals with difficulty processing this type of sensorty input might have lower than average muscle tone and this can affect their postural control and stability.
- **Maintain our balance**. This is super important. If you stand on one foot and close your eyes, you should feel some movement at the ankle. These are your proprioceptors telling your brain what's happening with your leg.

  They're also helpful to your vestibular sense to make sure you don't fall over. For example, if you step on an unstable surface, you receive vestibular information from your inner ear about the change in head position and you receive proprioceptive information about the position that your ankle, knee and hip are in. The combination of this information helps your body keep upright and not fall over.

Click on the link provided on the slide to watch the Youtube video, '**What is proprioception, our hidden 6th sense?**'

Slide 18: Proprioceptive Dysfunction

Activity:

Consider your Autistic adult child; tick off which of the proprioceptive processing difficulties you think he/she has:

If he/she is under responsive to proprioceptive input (i.e. sensory seeking) he/she will...

- ☐ walk too heavily, push too hard, bang too hard, press too hard when writing, handle objects too roughly
- ☐ be the loud one, rough one, crasher, mover, shaker, runner, jumper, and bouncer i.e. an insatiable bundle of energy
- ☐ shake his/her legs or constantly bang the back of his/her foot on the floor/chair while sitting
- ☐ engage too roughly in activities (often hurting him/herself or others), enjoy bumping/crashing into things
- ☐ crack his/her knuckles, chew on his/her fingers, bite his/her nails until they bleed, chew on pens, gum, pencils, clothing e.g. collars, sleeves, or strings, or inedible objects e.g. paper clips
- ☐ enjoy tight clothes i.e. turtlenecks, tight belts, hoods, hats, jackets zipped all the way up, tight pajamas

If he/she has poor motor planning, body awareness, or motor control, he/she will...

Motor planning is the ability to conceptualize and figure out what each part of his/her body needs to do in order to move a certain way or complete a task.
Body awareness is the internal understanding of where the body is in space.

Motor control means that the brain may know what to do, but the individual can't figure out how to make their body carry out the planned movement.

- ☐ have difficulty climbing, running, riding a bike, doing jumping jacks, hitting a ball, roller skating
- ☐ have difficulty tying shoes or knowing how to move his/her body when engaged in daily activities
- ☐ frequently bump into objects and people, accidentally trip and fall often
- ☐ have difficulty going up and down stairs, and may become anxious by them (escalators too)

Signs of postural instability will include...

Postural instability is the ability to hold and maintain one's postural muscles and responses, giving you a sense of security and safety during movement.

- ☐ slumping at desk and/or dinner table
- ☐ appearing to be "limp" and lethargic a lot of the time
- ☐ needing to rest his/her head on his/her hands or lay his/her head down on his/her arm on the desk/table while working
- ☐ having poor posture during motor tasks
- ☐ an inability to stand on one foot and having difficulty with any balancing tasks

Click on the link provided on the slide to watch the Youtube video, '**Brain Highways: The Proprioceptive System**', which looks at what happens when the proprioceptive sense does not receive or interprete input from the muscles and joints correctly.

Slide 19: Losing one's touch: Living without Proprioception

Click on the YouTube link provided on this slide to watch the video, **'Losing one's touch: Living without Proprioception**'

Reflection:

Having watched the above video, what specifically struck you as particularly interesting about our

6th hidden sense called proprioception?

Slide 20: Proprioception & Alertness

Throughout the day, our levels of alertness naturally alter. In the morning we should be gradually increasing our level of alertness in order to wake up. At night we should be lowering our state of alertness, so that we can fall and stay asleep.

To function optimally, we would need to be 'calmly alert' (neither over excited nor drowsy). In this calm, alert state we can focus on what we are doing long enough so that we can truly engage and understand.

Activities which activate the proprioceptive sense help those of us who are anxious and/or have sensory needs to feel more grounded and less anxious. This could include deep massage and the use of a weighted blanket.

Click on the link providedon this slide to access **page 19** of this **NHS information booklet** which provides information on calming strategies for individuals who are over sensitive to proprioceptive input as well as alerting strategies for those that are under sensitive to such input.

Slide 21: Interoception: Seeing my world from the inside out

Activity:

Sit back and close your eyes. What do you feel inside your body?

- Is your heart beating fast or slow?
- Are you breathing deeply or shallowly?
- Do you have to go to the bathroom?
- Are your muscles tense or lose?
- How does your stomach feel?

Most of us are able to feel all of these sensations with the help of our little-known, but very important, eighth sensory system, Interoception.

How interoception works: There are little receptors located throughout the inside or our body, in our organs, muscles, skin, bones and so forth. These receptors gather information from the inside of our body and send it to brain. The brain helps to make sense of these messages and enables us to feel things such as hunger, fullness, itch, pain, body temperature, nausea, need for the bathroom, tickle, physical exertion and sexual arousal. Additionally, **interoception allows us to feel our emotions**.

Typically, each emotion feels differently in the body. For example, before speaking in public, your body may *feel* a certain way: the heart may race, the muscles may feel tense and shaky, the breathing may become shallow, and the stomach may feel fluttery. These sensations let us know that we are feeling a bit nervous. Without clearly feeling these sensations, it is difficult to identify emotions with a high degree of clarity.

When the interoceptive system is working properly, the sensations alert us that our internal balance is off and motivates us to take action, to do something that will restore the balance and help us feel more comfortable. For example, if we feel thirsty – we get a drink; if we feel full – we stop eating; if we feel cold – we get a sweater; if we feel the need to urinate – we go to the bathroom; if we feel anxious – we seek comfort; if we feel frustrated—we seek help**.** Interoception underlies our urge for action. If we *feel* that our internal balance is off, we are motivated to act, to seek immediate relief from the discomfort caused by the imbalance.

Reflection:

Based on what you now understand about interoception, in what ways, if any, does your Autistic adult child's interoceptive system not process information correctly?

Click on the link provided to watch the YouTube video, '**Interoception: The New Topic in Autism'** by Kelly Mahler, an Occupational Therapist.

Slide 22: Interoception and Autism

As with other sensory systems, the interoceptive system can be impacted in Autistic individuals. To date, very little research has examined the interoceptive experience of individuals with autism. However the research

conducted has found that the Autistic participants have significantly lower awareness of their interoceptive signals in comparison to the neurotypical participants. Although a great deal more research is needed in order to have a full understanding, the existing research confirms the numerous personal experiences reported by individuals with autism as quoted by **Cloe Rothschild**, a young Autistic adult, on this slide.

Slide 23: Research states that interoception can be improved

The YouTube link provided on this slide provides access to a number of video resources on interoception created by Kelly Mahler. The video of particular interest, is the one entitled, '**Interoception Questions with Kelly-Episode 3: Interoception Tips for** Caregivers'.

Slide 24: What is sensory processing

Sensory processing is a neurological process. It organizes all the information we take in from our senses for use in our daily living. It occurs in our nervous system. The nervous system is essentially 100 billion neurons, the spinal cord and the brain. Over 80% of the nervous system is involved in processing/ organising sensory input; thus the brain is primarily a sensory processing machine.

A well balanced brain, efficiently processes sensory sensations. This then enables us to respond automatically with adaptive responses and it is these responses that help us master our environments

Slide 25: Components of sensory processing

Reflection:

Consider the scenario below to understand how we process sensory information.

Sensory input: Walking to work, you hum along to a song playing through your earphones. At the pedestrian crossing, you look both ways, decide it is safe to cross, and step off the pavement.

Then you hear the blaring sound of a motorcar's hooter. Your auditory sense receives the stimulus of this sudden sound, and the message is sent to your brain.

Neurological Organisation: Suddenly you stop hearing the music. Your brain has a more urgent task; to filter out all the irrelevant sounds, analyse the new message, interpret the sound as a danger signal and organise the information for you to use.

Motor output: your brain tells you to react with an appropriate motor response. You do what you need to do and jump backwards, out of harm's way back onto the pavement**.**

Think about a similar situation you may have had and see if you are able to separate each of the three components of how you processed the sensory information that you were exposed to at that time.

Slide 26: An insider's view

The link on this slide will give you access to the YouTube video, **'Autism and Sensory Processing'** by Purple Ella. Purple Ella, also known as **Ella Tabb,** is an autistic speaker and vlogger. She also works alongside the charity, Autism.org as one of the content creators.

In this video she talks about and how sensory processing can impact Autistic individuals and makes some suggestions as to how parent-carers can provide support with these difficulties.

PART 2

Slide 2: Is it Sensory or Behaviour?

Many Autistic people have difficulty processing everyday sensory information. Any of the senses may be over- or under-sensitive, or both, at different times. These sensory differences can and often do impact behaviour, and can have a profound effect on a person's life.

Diana Henry, an Occupational Therapist often gets asked if whether what an individual presents is sensory or behaviour. Her response: 'I get this question all the time. Everything we do is behaviour. The question is whether there is a sensory component driving the behaviour' observed.

Click on the click provided on this slide to read more about **'Sensory Differences'** on the **National**

Autistic Society webpage.

Slide 3: Behaviour is Communication

This slide is an important reminder that some of the behaviour we observe and react to; cannot easily make sense of, is being driven by our Autistic adult child's unique sensory processing which can cause sensory overload and a subsequent fight, flight, freeze or fawn response.

Slide 4: Sensory Processing: A key to understanding behaviour

If sensory information is not processed smoothly, an individual might pay too much attention to the unnecessary sensory information or not enough attention to the necessary sensory information, to perform an activity, feel calm or pay attention. This can cause them problems. They may not be fully aware of what is happening, be distracted, uncomfortable, confused or perhaps easily upset because the information they are receiving is not clear enough for them to understand what is really happening. They also may enjoy certain experiences and a little planning to include these might just help them calm down e.g. when they relax in a bath they can then go on to have a relaxing evening.

In light of the above, becoming a detective to identify if there is a pattern showing how sensory information is reacted to, may help you plan and be proactive in your response to your Autistic family member's difficulty processing specific sensory information. This will provide strategies which can help him/her regulate the amount of sensory information they need, in order to respond as appropriately as they can.

Activity:

Use this **Sensory or Behaviour Checklist** below for a situation where you are struggling to determine whether what you observe could be a sensory processing issue driving the behaviour in your Autistic adult child and that you have subsequently inappropriately reacted to.

Name:		Date:	
Time of Observation:		Location of Observation:	
Observer/Title:			

Describe the overall behavioural outcome, episode or concern:			
Describe what was occurring immediately before the undesired outcome:			
Describe your Autistic family member's reaction/s during the undesired outcome:			
Describe any adult or peer reactions:			
List the sensory characteristics of the activity or skill		List the sensory characteristics of the environment	
□ tactile	□ smell	□ loud	□
□ proprioceptive	□ taste	□ distracting	□
□ vestibular	□	□ small space	□
□ visual	□	□ large space	□
□ auditory	□	□ quiet	□
List any successful strategies that helped your Autistic family member previously: □ □			

Overall assessment:
ACTION PLAN: 1. 2. 3.

 Click on the link provided on this slide to read about **Sensory Differences** as explained by the **National Autistic Society**.

Slide 5: Sensory Processing Difficulties

 Click on the link provided on the slide to read the article, '**The daily pain of having extreme perception'**. This article will give you insight into when a gentle glow can feel like for some, a piercing spotlight and everyday sounds hurt others' ears. For these individuals life can get extremely anxiety provoking and physically painful, but there may also be an upside to being a highly sensitive person.

 **Reflection**:

- What sensory input are you aware of that your Autistic adult child experiences as disturbing and/or physically painful?
- What about his/her behaviour helps to make you cognizant that he/she is becoming overwhelmed by this specific sensory input?

Slide 6: Synaesthesia

Research suggests synaesthesia is nearly three times more common in Autistic adults than in the general population.

The two conditions may share common features such as unusual wiring of the brain, say UK scientists.

Synaesthesia is a condition where one sense automatically triggers another. Some people experience tastes when they read or hear words, some perceive numbers as shapes and others see colours when they hear music.

People with synaesthesia might say: "The letter q is dark brown," or: "The word 'hello' tastes like coffee," for example.

 Click on the link provided on the slide to read the article, '**Synaesthesia in Autism'**. In this article **Olga Bogdashina**, shares her experience and insight into synaesthesia in Autism.

Slide 7: Tasting words or sensing letters as colours

What's it like to "taste" words or "see" music? If you know, then you might just have the sensory condition known as synesthesia. There are many different forms of synesthesia; over 80 combinations of ways in which an individual's senses may be linked. For instance, some perceive words as a taste, while others may associate different personality traits with each of the 26 letters of the alphabet.

Furthermore, while synaesthesia is most commonly seen as a link between two senses, there are forms of synaesthesia in which three or more of the senses are involved. There has also been at least one case in which an individual displayed a connection among all five senses.

This slide provides an opportunity to explore two particular types of synaesthesia: Lexical-gustatory synaesthesia and Grapheme-color synaesthesia.

Should you wish to read a little more on the various other types of synaesthesia you can do so by clicking on the link below:
https://www.betterhelp.com/advice/synesthesia/the-many-types-of-synesthesia-explained/

Click on the link provided in the bottom left hand side of this slide to watch the video of **James Wannerton**, President of UK Synaesthesia Association, describe his daily experience of synesthesia; how each name he hears has a particular taste.

Activity:

Click on the link in the bottom right hand corner of this slide, in order to open the **synesthia.me, Type Your Name – What color is your name?** web page. Type your name in the space provided.

The first line that then appears is **your name** in the light blue text, and the second line is **your name** shown as synaesthesia coloured blocks for each letter. Try it out and then if you wish download and save your image.

Slide 8: A Neurological Traffic Jam

Taste, touch, smell, sound. These are all pretty run of the mill, everyday things we take for granted. When an individual has senses that don't work normally, it may be hard to comprehend.

Sensory Processing Difficulties, exists when sensory signals are either not detected or don't get organized into appropriate responses. Pioneering occupational therapist, educational psychologist, and neuroscientist **A. Jean Ayres, PhD**, likened SPD to **a neurological "traffic jam"** that prevents certain parts of the brain from receiving the information needed to interpret sensory information correctly. A person with SPD finds it difficult to process and act upon information received through the senses, which creates challenges in performing countless everyday tasks.

For some individuals with sensory processing difficulties, information reaching their senses often feels like an assault of competing stimuli. To get the idea, imagine this scenario: Three colleagues are telling you conflicting stories about how the office safe got left unlocked overnight, the phone is ringing, and you suddenly smell the toast burning in the kitchen next door — and did I mention the itchy rash on your legs?

For others, outside stimuli are dulled, as if a shade has been pulled over the environment, muting sights, sounds, and touch. These individuals crave extra stimulation to arouse themselves — similar to needing the jolt of a wake-up shower after a sleepless night. These are the people who may love to spin and swing on their office stools. Most individuals with Sensory Processing Difficulties display elements of both extremes, suffering from sensory overload at some times, seeking stimulation at others.

An individual sitting in an office in which the internal heating is set too high and has arrived at working wearing a turtle neck sweater can ignore the sweat trickling down her face and neck because she loves that there is a slight breeze coming in from the open window nearest her desk.

However a highly sensitive individual nearby with Sensory Processing Difficulties cannot ignore anything; the sweat is distracting and irritating, and the wind makes her feel worse, not better. Lacking an inner ability to cope with these irritations, she jumps up in frustration and lashes out, saying, 'Who the hell can work in this place when it is so warm with a hurricane blowing across your desk!' and closes the window forcibly, ruining your pleasant experience of the breeze for the rest of the afternoon. The bad feelings stay with her long after the physical triggers are gone.

Individuals with Sensory Processing Difficulties can be frustrating to parent-carers, colleagues and their friends, but most of all their behaviour is very frustrating for the individuals themselves.

Signs that someone may have difficulties processing sensory input could include:

- Over sensitivity to particular things in their environment
- Experience common, everyday sounds as painful and overwhelming
- Light touch is physically uncomfortable and/or painful
- Uncoordinated

- Clumsy; regularly bumping into things
- Display an extremely high pain threshold
- Constantly touching and needing to feel things
- Fearful of crowds or being in close proximity to others
- Fidgety and struggle to sit still

This may vary from person to person. Sensory issues usually fall into two categories: hypo-sensitivity (under-responsiveness) and hyper-sensitivity (over-responsiveness). Oftentimes, sensory processing difficulties are associated with Autism Spectrum Disorder. However it is important to note that some individuals who experience difficulties processing sensory information are not Autistic.

Slide 9: What is your Sensory Profile?

A Sensory Profile is a measure of an individual's responses to sensory events in daily life. It provides an overall picture of an individual's sensory processing patterns. Results of the Sensory Profile are used to consider how these patterns might be contributing to or creating barriers to an individual's performance in daily life.

This slide outlines **Winnie Dunn**, an Occupational Therapist's **Four Quadrant Model of Sensory Processing**. This is a theoretical framework that is used to understand how people process sensory information. In this theory, Dunn proposes there are four patterns of sensory processing, which are categorized based on neurological threshold and behavioural response. Individuals with low sensory thresholds may be quicker to respond to sensory stimuli. Individuals with high sensory neurological thresholds may require more sensory input to respond.

People may respond to a stimulus either actively or passively. A passive self-regulation approach means the individual allows things to happen around them and then they respond. An active approach involves controlling the amount of sensory input they are receiving in the environment.

The four quadrants of this theory place individuals in the following categories:

- **Top left hand quadrant**: *sensation seeking* (high neurological threshold & active response)
- **Bottom left hand quadrant**: *low registration* (high neurological threshold & passive response)
- **Top right hand quadrant**: *sensation avoiding* (low neurological threshold & active response)
- **Bottom right hand quadrant**: *sensory sensitivity* (low neurological threshold & passive response)

Reflection:

Which of the four quadrants would best describe how you process information received by each of your 8 sensory systems?

Activity:

Click on the link provided on this slide in order to access the checklist of **Behaviours that might be observed in children or adults with SPD.** Use this checklist to get a better sense (this is not a diagnostic tool) of yours and/or your Autistic adult child's sensory processing patterns.

Slide 10: The Sensory Spectrum

Everyone processes sensory input differently. **The Sensory Spectrum** is used to describe the way in which our bodies uniquely receive and process sensory input.

The term the sensory spectrum describes the array of sensory differences that exist from person to person. How we experience and interpret various stimuli is an individualized experience.

Additionally, we all have sensory preferences. These are things we enjoy and avoid. **This is called a sensory bias**. It's the reason why we like different foods, music, activities, etc. A sensory bias is only a problem when it severely restricts or limits productivity or when it chronically interferes with enjoyment in life.

Most people would place themselves somewhere within the normal range on the sensory spectrum. But no one is the same, even people who are neurotypical can be more or less sensitive to sensory input than others.

Reflection:

Where would you place yourself on the sensory processing spectrum shown on this slide?

Click on the link provided on this slide to watch the video, '**Sensory needs in children with Autism'.** This video is presented by a speech therapist, Fay McGill, who talks about the potential sensory needs in Autistic children and how one may respond to these.

Reflection:

- What are your particular and that of your Autistic adult child's sensory preferences?
- Which of these sensory preferences severely interfere with your and/or Autistic adult child's daily life?
- In what ways to these sensory preferences interfere with your lives?

Slide 11: The Autistic Nervous System

The nervous system for many Autistic children and adults is very fragile and vulnerable to the continuous buildup of stress chemicals. Their systems are often anxious and on 'high alert.' Just regulating normal daily demands (sensory, social, cognitive, etc.) can cause extensive accumulation of stress chemicals in the nervous system. Just like all of us, as the stress chemicals accumulate our coping skills begin to break down.

The challenge for many of us and Autistic individuals particularly, is underdeveloped internal body awareness and therefore difficulty sensing the buildup of stress. There is no sense of feeling stressed until boiling point is reached. Then, unfortunately, panic sets in and what little coping skills are still available are generally insufficient and the individual falls apart. This lack of 'feeling the buildup' explains why from the outside observer's perspective that things have appeared to go from 0-100 without warning. Once at boiling point, the least little snag can set off a meltdown.

The diagram shared on this slide illustrates the effects of the gradual buildup of stress chemicals. Remember, Autism is a bio-neurological condition that leaves the nervous system fragile and vulnerable. Much of what our nervous systems process smoothly and effortlessly (sensory, social, cognitive demands of the day), is very insulting and taxing for Autistic children and adults. Their nervous systems are running naturally on high idle, which creates a constant sense of anxiety and feelings of insecurity.

Autistic individuals are often easily overwhelmed. Feelings of overwhelm quickly sets off the brain's 'panic' button; the flight, fight, freeze or fawn survival response. If the stress comes on slow enough the nervous system will try instead to shutdown, minimizing the stimulation and attempt to avoid further overload. If this is ineffective, or stimulation comes on too fast and strong, it is likely that meltdown will occur.

The link provided on the slide will give you access to **Bill Nason's** Facebook page**, Autism Discussion Page** and his post which looks specifically at the vulnerability and fragility of the Autistic nervous system.

Reflection:

- What about anything you have read hear, rings true for your family and the ways in which your Autistic adult child engages with you, other family members and the world in general?
- Look carefully at the diagram on this slide; what is your understanding of the phrase 'Critical Point' and what could this mean for you specifically in your role as parent-carer?
- What do you consider would need to be your priority response once a situation has reached a 'point of no return'?

Slide 12: Sensory Processing & Autism

Activity:

Difficulties with sensory processing can affect every part of a child's or adult's life. This is because our bodies are constantly receiving sensory messages.

Close your eyes for a minute and just think about all of the sensory input you are currently experiencing.

- Do you hear any sounds or smell and scents?
- Can you feel what you are sitting on?
- Does your body know whether you are sitting up or lying down?

What about micro sensations?

- How do your clothes feel against your skin?
- What about your watch or jewellery?
- Can you sense the seams of your socks or tights?
- How is the faint tick of a clock sound, or the flicker of a light affecting you?

Some of you may have never noticed these micro sensations before. This is because your brain filters them out. For Autistic individuals though, these micro sensations may be felt with greater intensity. This can often lead to distraction or avoidance. Over time, if these sensations become too much, this can lead to sensory overload.

Click on the link provided on the slide to read an article, '**What if people with Autism are hyperfunctional?**' In 2007, neuroscientists and researchers Kamila Markram, Henry Markram, and Tania Rinaldi developed an alternative theory for what Autism is, called the "**Intense World Syndrome**." They believe that Autism is not some form of mental deficit, but that the brain is actually supercharged and hyperfunctional. This makes stimuli overwhelming to Autistic people, causing them to socially and emotionally withdraw as a mode of self-protection.

Slide 13: Autism Spectrum Condition and Sensory Processing Difficulties

Despite there being a lot of attention on sensory sensitivity in Autism, the research reports a mix of sensory patterns. Results show that there is no clear pattern of responses in Autism to sensory information. Different studies have given different results, but most find that there is a mixed sensory profile in Autism.

It is therefore important to remember the words of Stephen Shore; 'If you've met one individual with Autism, you've met one individual with Autism**.'** Every Autistic child and adult will have their own unique sensory profile and need their own individualized supports.

Click on the link provided on the slide to watch the Youtube video, which I hope will give a feeling for the sheer amount of sensory input in our every day environment and how an Autistic individual with sensory processing difficulties might experience the world. This particular video is of **Carly Fleischmann's** visit to a coffee shop with her father and her sister.

Slides 14 and 15: Autism Spectrum Condition and the impact of Sensory Processing Difficulties on daily living

On any typical day there are many different sensory inputs that our brains need to process. The brain needs to decide whether to respond or to ignore. The world is full of noises. If you're sensitive to noise sirens, clocks ticking, loud vehicles, dogs barking, music class, playground noises, vacuum cleaners and hand dryers might be an issue. The world is also full of things to look at and smell. This can prove very distracting if you are more sensitive to visual inputs or smells.

Our touch sense is constantly working. Difficulties might occur with clothing fabrics, shoes, socks, haircuts, hair brushing or washing, teeth brushing, messy play and food textures for those who are sensitive to touch. If processing is slower it will take longer to respond to messages from the touch system.

Those who are slower to process proprioceptive sensory input have poor awareness of where their body is and poor coordination. Sometimes they find slow movements more difficult. This could mean seeking out more movement by constantly being on the go and fidgeting. There could also be sensitivity to movement, or vestibular sensory input, which often results in avoidance of moving surfaces, swings and other equipment.

Sensory inputs will change depending on the environment. Often the environment at home is more predictable and can be easier to manage than at a supermarket for example. There are less people, or

sometimes no other people, at home. The Autistic adult at home has their own space they can retreat to if required. They have more choice over the activities they participate in.

The larger and more unpredictable the space is, the more sensory input there is for the Autistic adult to process. At a large supermarket there is a lot to look at, the lights are typically brighter. There are more people, there is more movement and much more noise. For those without sensory sensitivities, the brain ignores and filters out the information it doesn't need. This makes it much easier to be in such a space. When the brain isn't filtering out this information as well, such as in Autism, the brain pays attention to everything. This is why sensory overload can occur. There is just too much information for the brain to process. This can sometimes result in meltdown or shutdown.

Responses to sensory inputs can fluctuate and change. Adults with sensory issues can find these harder to manage towards the end of the day. Or towards the end of the week. Tiredness or ill-health can exacerbate sensory issues. The ability to manage sensory sensitivities differs significantly for an Autistic adult when they are physically well compared to if they are unwell. They often then will have even less reserve when they are unwell. This can lead to quicker sensory overload.

Another thing that will impact on sensory processing is stress. There is some research in this area. It indicates that anxiety can increase sensory sensitivity. However, it also shows that sensory sensitivity can increase anxiety.

Slide 15 helps us to appreciate the sensory component that may underlie some of the behaviours we observe and possibly even respond to inappropriately, in our Autistic adult children.

Slides 16 and 17: Sensory Overload

Sensory overload occurs when too much sensory stimulus is occurring all at once; it can be triggered by a crowded room, a TV turned up too loud, strong aromas, fluorescent lighting or a hundred other things. It's often associated with certain diagnoses like Autism Spectrum Condition, ADHD, chronic fatigue syndrome, fibromyalgia and post-traumatic stress disorder, although anyone can experience it.

Sensory overload can be overwhelming, scary and exhausting, and may require a person to separate him/herself from a situation, perform a calming ritual or in some cases, meltdown. It's a hard experience to understand unless you've felt it yourself.

Jenalyn Cloward Barton's experience of sensory overload is quoted on this site, a quote that is taken from a blog post entitled, '**21 People Explain What Sensory Overload Feels Like**'. Melissa McGlensey asks individuals who have experienced sensory overload to describe their experience to help readers better appreciate what it feels like. You can access the article by clicking on the link provided on the slide.

Slide 17 provides a YouTube link to the video, '**Sensory Overload.**' This video shows how some Autistic people have difficulty processing intense, multiple sensory experiences at once.

This animation gives the viewer a glimpse into sensory overload, and how often our sensory experiences intertwine in everyday life.

Reflection:

- Having just watched this YouTube video, what is your immediate reaction to how it made you feel?
- How, if anything, has it changed in terms of the way you think about people who struggle with processing sensory information?

Slide 18: Sensory Meltdown

Click on the link provided on the slide to read how **Kaleb Johnson** bravely discloses in his post, '**What Meltdowns Feel Like as an Adult on the Autism Spectrum',** how the majority of the time his sensory meltdowns lead to panic attacks.

He describes further how during a sensory meltdown, he is unable to block out sounds. Every single noise comes at him. He can hear his breathing speeding up; his heart beating. Every sound feels like a gunshot going off beside his head. It physically hurts him.

He'll put his hands over his ears, clutching his head; eyes scrunched closed; trying to block the battle going on in his brain. It feels like the world is spinning, and his legs are weak. He collapses on the floor; tears filling his eyes.

He starts rocking back and forth. His heart races and breathing quickens. Then the panic starts; his anxiety spikes. He starts to lose control. Often he has blanks in his memory during these times.

Slide 19: An insider view

The words of **Joe James** on this slide describes his experience of Meltdown. Here he talks about the impact of photography on his wellbeing. 'I love photography, it's my art, my expression, it gives me another type of voice, to show visually how I feel,' he explains. 'Through my pictures I can show people how I feel because a lot of the time I can't really express myself. Especially over social media. This is how I interpret what I see. This is where I find beauty.'

He describes the experience of shooting and editing his photos as 'like putting on noise cancelling headphones, all the people around me just don't exist anymore' and has a process he follows for each shot. He uses the screen to adjust his light and viewfinder to discover the moment. In editing, he will not add or remove anything to the image, simply making little adjustments that resonate with his senses until it becomes the memory he remembers. 'I was going to beautiful places with my family and taking pictures because those moments were the only moments when I felt happy. I'm bottling memories because I get to go home and open it up and experience it again.'

The link on the slide will give you access to Joe James' Facebook page, '**Joe James Autistic Awareness & Photography**'.

Slide 20: Responding to Sensory Meltdowns

Below are various websites you can access to look at thinking further about how you can consider responding at times when you may sense your Autistic adult is becoming overwhelmed and/or is experiencing sensory meltdown.

To **identify and keep a log** of your Autistic adult child's **sensory triggers** as a parent-carer consider:

1. Observe and take note of your Autistic adult child's sensory threshold. A meltdown typically occurs when a situation puts someone past their regulatory sensory threshold.
2. Be mindful of how your Autistic adult child's behaviour changes as he/she reaches the edge of his/her sensory threshold. It is important to remember that all behaviour is some form of communication.
3. Know what behaviour to expect when your Autistic adult child's sensory threshold has been crossed. What does a sensory meltdown look like or is the response more typically a shutdown?
4. Identify what works best for your Autistic adult child in terms of the most appropriate way for you to respond to his/her distress. It can be helpful to note what has worked in the past, but also if you are able to, to talk with your son/daughter, in reflection when things are calm, what he/she feels would be the most helpful way for you to respond at such times in the future.

Learn how to make your own **weighted blanket**: A sewing tutorial
https://www.mamasmiles.com/sewing-tutorial-how-to-make-a-weighted-sensory-blanket

This is an insightful and very helpful blog post on thinking about how to improve sleep hygiene. Sleep hygiene' refers to the practice of establishing habits that help ensure a good night's sleep. This blog, '**Neurodiversty and Sleep: 16 ways to calm your nervous system and mind to sleep**

better' is written by Jenna Grace.
https://blogs.psychcentral.com/neurodivergent/author/jenna/

Grounding is a practice that can help you pull away from flashbacks, unwanted memories, and negative or challenging emotions. These techniques may help distract you from what you're experiencing and refocus on what's happening in the present moment. You can use **grounding techniques** to help create space from distressing feelings in nearly any situation, but they're especially helpful if you're **dealing with anxiety and distress** and are needing to calm down. Click on the link below to access '**30 Grounding techniques to quiet distressing thoughts'**.
https://www.healthline.com/health/grounding-techniques

Slides 21 and 22: Autism and Eating Disorders

Eating difficulties are not exclusive to the Autistic population, but studies have shown that Autistic individuals often have issues with eating.

Click on the link on **slide 21** to access an article that explores the importance of addressing the sensory aspects of an individual's eating difficulties which leads one to consider the possible **intersection between Avoidant and Restrictive Food Intake Disorder, Autism, Sensory Processing difficulties and the PDA profile of Autism,** where intolerance of uncertainty, anxiety and avoidance all feature highly.

Click on the link below **Sophie McInnes'** picture on **slide 22** to read her story of how she had developed **anorexia**. She explains that her anorexia had developed not from issues surrounding body image or weight, but because she had developed a set of rules for herself about how many calories she could eat.

Slide 23: Autism and Sleeping Difficulties

The quote on this slide are the words of an Autistic adult describing the impact sleeping difficulties have on his/her daily life.

The optimal length of sleep and its quality serve as protective factors for mental health and daily functioning. Sleep problems may lead to a number of adverse effects on health, mood, memory, academic performance and daytime functioning.

Sleep problems are the most common co-occurring conditions experienced by Autistic individuals (Baker & Richdale, 2015). Sleep difficulties very often reduce an Autistic person's opportunities for learning and community participation.

Click on the link provided on the slide to read about the research on '**Autistic adults and sleep problems**' conducted by Georgia Pavlopoulou and Dagmara Dimitriou.

Slide 24: Delayed Sleep Phase Disorder

Delayed Sleep Phase is not caused by insomnia; lack of self-discipline; poor sleep hygiene; anxiety; or other psychological issues.

There is a definite, scientifically proven links between circadian rhythm sleep disorders and more clearly neurologically rooted conditions such as ADHD and Autism. Dr Alexander Nesbitt writes, 'Patients with ASD have a high incidence of sleep disorders, including circadian rhythm sleep wake disorders of which Delayed Sleep Phase Disorder is the most common phenotype.'

Click on the link provided on this slide to read a blog post by Sally Cat on '**Delayed Sleep Syndrome and PDA'**

Slide 25: Responding to Sensory Meltdowns . . . continued

A picture is worth a thousand words. Many Autistic individuals have difficulty processing verbal information and like all of us, particularly when distressed. Given that many Autistic individuals are visual learners, the **Incredible 5-Point Scale** is a potential **visual support** a parent-carer could

consider using to support their Autistic family member communicate the degree of distress they may be experiencing due to sensory overload. The **5-Point Scale** simplifies communication by assigning a number and /or colour to the degree of distress. A Distress/Anxiety scale can be created together with the Autistic family member, specifically tailored to meet his/her particular needs. Click on this link in order to access and download the scale that you feel will work best for your family context: https://www.5pointscale.com/scales.html

The link below will give you information on the 5-Point Scale and pointers on how it could be used. https://www.supportincornwall.org.uk/kb5/cornwall/directory/advice.page?id=tSXIhdoOOMc

It is important that we model to our children how to build a solid foundation to be able to maintain their **emotional health and wellbeing**. Not one of us come into the world knowing how to do this. It is up to our parents to teach us. However as parents, to be able to do this successfully we need to be mindful of our own mental health and wellbeing; create some time each day to take care of ourselves. It is not possible to pour from an empty cup.

Part of this teaching is **modelling the use of appropriate feeling vocabulary** to clearly say how we are feeling and being sufficiently attunded to our children to be able to tentatively reflect back what we think they may be feeling. Often visual supports are helpful in this regard. The next e-Learning module will share how to use **The Zones of Regulation**, a visual means of **developing emotional literacy** for the whole family.

In preparation for the next module, Autism and Emotional Self-Regulation, you can read this article, '**A framework designed to foster self-regulation and emotional control**' on The Zones of Regulation website: https://www.zonesofregulation.com/learn-more-about-the-zones.html

A sensory diet is the provision of the sensations an individual's needs throughout the day so that their sensory system is regulated to enable optimal functioning. Individuals who have sensory issues, differences, or needs are often focused on getting more of or avoiding particular types of sensations/ sensory input. When their brain is in that seeking or avoiding mode, it is not able to focus on anything else.

As parent-caeres is important for us to learn what our Autistic family member's specific sensory needs are. We can then decide, or get the necessary guidance from a registered Occupational Therapist, on how these needs can be met.

You can visit **Alisha Grogan's** website, https://yourkidstable.com/sensory-diet-template/ to get access to a free Sensory Diet Template as well as information on how to go about completing it, if you feel this is a strategy you would like to consider.

Have you ever been in the midst of experiencing stress and had someone says, "Just take a deep breath". Maybe you've even said it to your own family members, but why does everyone say that? Let me explain why **deep breathing** is so important.

When you are calm, your body is in what is known as 'rest and digest' mode. Your breathing is normal, your muscles are relaxed and your heart rate is normal.

When you experience a stressful event your body automatically goes into what is known as 'flight, fight or freeze' mode. Your heart rate increases, your stomach stops digestion and your breathing becomes more shallow.

The goal of **calming exercises** is to get yourself from 'flight, fight or freeze' mode back to 'rest and digest' mode. **Deep breathing** helps get more oxygen into your bloodstream, opening up your capillaries. It has a physical effect on your body to help you calm down and lower stress.

There are lots of different ways to teach someone how to take deep breaths. One way is using shapes. It's a visual way to help keep track of your breathing and slow it down. Accessing the website below will help you do this.
https://copingskillsforkids.com/blog/using-shapes-to-teach-deep-breathing

Social Stories were created by Carol Gray in 1991. They are short descriptions of a particular situation, event or activity, which include specific information about what to expect in that situation and why.

Comic strip conversations, also created by Carol Gray, are simple visual representations of conversation.

They can show:

- the things that are actually said in a conversation
- how people might be feeling
- what people's intentions might be

Comic strip conversations use stick figures and symbols to represent social interactions and abstract aspects of conversation, and colour to represent the emotional content of a statement or message.

This link https://www.autism.org.uk/about/strategies/social-stories-comic-strips.aspx will explain how to use and write both Social Stories and Comic Conversations.

Provide a **visual schedule:** a daily visual schedule as part of the daily routine can help prepare for **transitions** before they occur. Visual schedules provide a plan for the day.

Consistency and Predictability: as far as possible follow the same routine, patterns and driving routes for example. This can help to lessen the stress during the transitions.

Slow Down: **give transition warnings** using verbal and/or visual supports and then sufficient time to process and to transition when ready.

Use redirection away from the anxiety and stress of the transition and focus instead on something of high interest.

Visual timer: It may be helpful to be able to 'see' how much time remains in an activity before the expectation to transition to a new location or event needs to be met.