

Webinar 1 Sensory Processing: Understanding our Senses

Webinar by Children & young People's OT Services



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AIMS OF THE SESSION

By the end of the webinar:

- Identify the senses
- Identify behaviours linked to modulation differences
- Identify behaviours linked to praxis difficulties
- Know where to get further information and support

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Click on the link below and watch this mother talk about her experience of having a son with sensory processing differences.

Do you relate to anything she is saying?

Do you recognise some of these behaviours in your child/children you work with?

[A MOM SHARES HER STRUGGLES DEALING WITH HER SON'S SENSORY PROCESSING DISORDER - YOUTUBE](#)

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Here are some more behaviours which may indicate your child has differences with sensory processing.

Do you recognise any of these behaviours?

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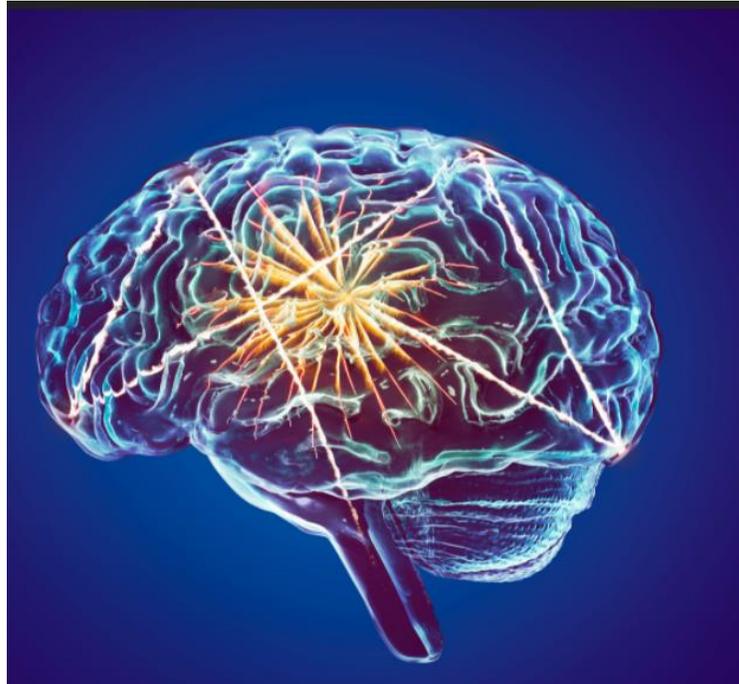
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Sensory Processing is how the brain takes in, filters and puts together all the sensory information from inside and outside the body to produce a behavioural or motor response.



Sensory processing is something we all do all of the time. We are all constantly processing, filtering and acting on the sensory information we receive from our bodies.

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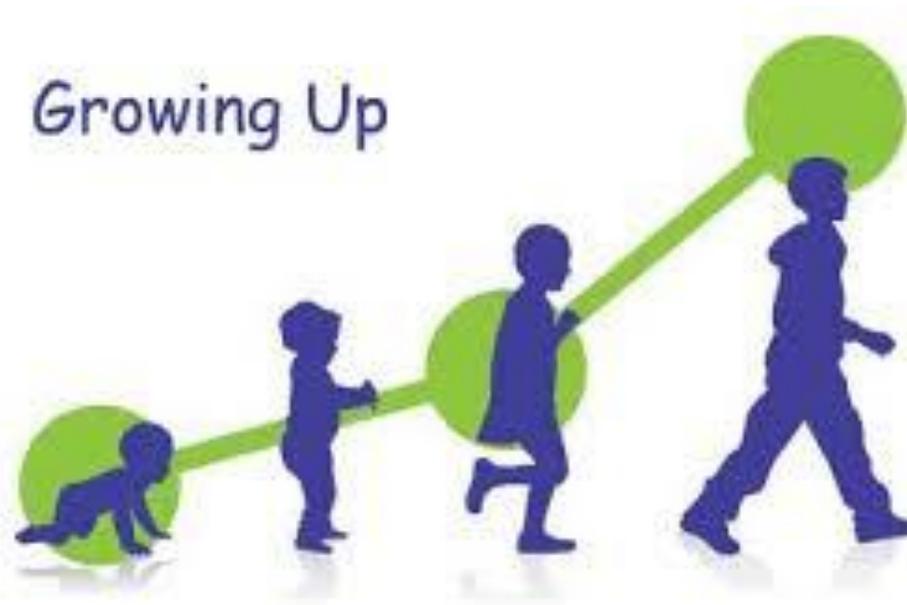
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SENSORY PROCESSING IS DEVELOPMENTAL AND REFINED AS WE GROW – JUST AS OUR FINE AND GROSS MOTOR SKILLS NEED PRACTICE AND TIME TO REFINE AND DEVELOP SO DO OUR SENSORY PROCESSING SKILLS.



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HOW MANY SENSES DO WE HAVE?

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Smell



Sight



Taste



Interoception

8 SENSES

THE SENSORY SYSTEM



Hearing



Vestibular



Proprioception



Touch

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TASTE AND SMELL



Taste and smell are our chemical senses. This means that in order for these senses to be processed a chemical reaction happens.

What we commonly call the “taste” of food or beverage is actually a multisensory phenomenon. While the sense of taste gives **basic** information about sweet, sour, bitter, and so on, most of the food experience {why a blueberry tastes different than a raspberry, for example) depends on the sense of smell.

When we chew food or sip wine, chemicals are vaporized into air passages that connect the mouth and the back of the nose, stimulating olfactory receptors and allowing us to realize the subtleties of flavour.

So if you have a picky eater – consider their sense of taste and smell together.

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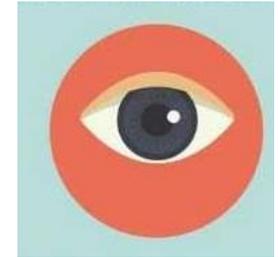
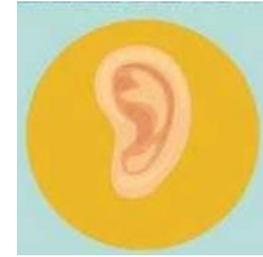
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TOUCH, VISION AND HEARING



- External senses
- Tell us about the world around us and alert us to potential danger before it reaches us
- People with **over reactivity** in the touch, vision and hearing senses will often appear in “**fight, flight or freeze**” or a danger response as their sense of danger is frequently on high alert as there external senses are informing them their environment is a dangerous place.

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TOUCH

We have 3 different touch systems. It is important to understand the differences as this will play an important part in treatment in later webinars.

Tight touch – when you tickle a child they laugh. Light touch is generally arousing.

Deep touch/pressure: deep touch, such as massage, is generally calming

Face and neck – it is important to realise that the face and neck is served by a different nerve than the rest of the body. Because of this people may have difficulties with touch on their face and neck but not the rest of their bodies (and vice versa)



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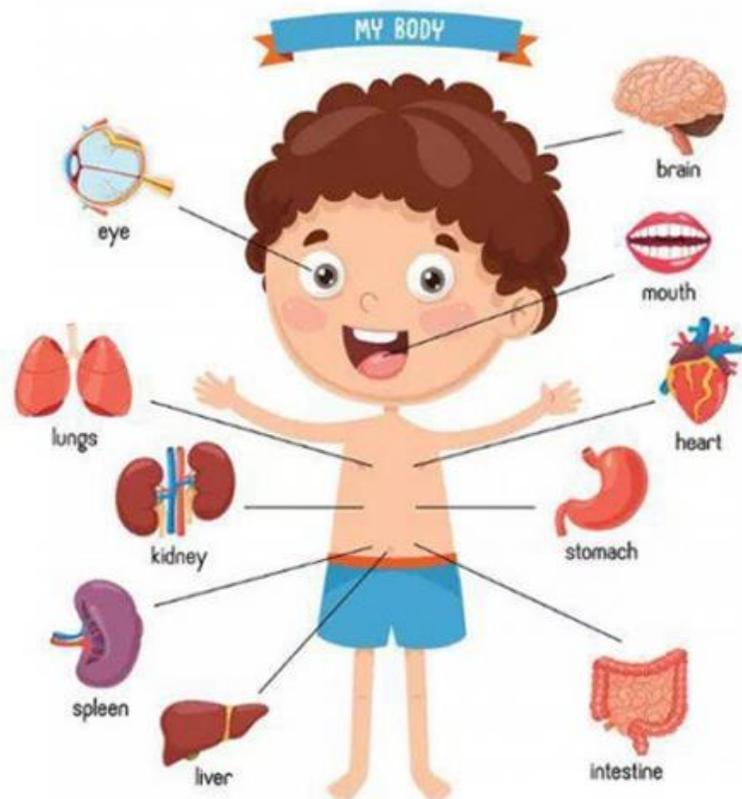
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INTEROCEPTION



Allows you to understand what is going on **inside** of your body by:

- Registering a sensation
- Putting meaning to a sensation

- When to go to the toilet
- If you are hungry or thirsty
- Heart rate
- Breathing rate
- Sweaty

Children with interoceptive difficulties may miss the early signs of dysregulation or anxiety resulting in extreme behaviours.

VESTIBULAR: MOVEMENT

Important for movement:

- Lets us know where we are in relation to gravity – are we upside down or the right way up
- Speed and direction of movement
- Helps us keep an upright posture
- Important for balance
- Controls the small muscles in your eyes needed for moving them side to side for reading.

Important for attention and learning:

- Link to attention and concentration – it is neurologically impossible to “sit still and listen”.



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WHY HAS THERE BEEN A RISE IN SENSORY AND MOTOR ISSUES IN THE PAST 30 YEARS? – THE VESTIBULAR SYSTEM



Click on the link below and listen to this Occupational Therapist talk about the importance of children having good, developed vestibular systems.

[The REAL reason children fidget — and what we can do about it | Angela Hanscom | TEDxPortsmouth - Bing video](#)

Only 1 in 12 children now can meet the strength and balance averages of children in the 1980's

Children are walking around with under developed vestibular systems and this is having a negative impact on their ability to learn.

Invitation to those working in the early years or supporting “readiness for school” to look at vestibular activities rather than practicing “traditional” school skills (such as pencil and scissors)

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PROPRIOCEPTION: BODY AWARENESS

Tells you where the different parts of your body are by picking up movement in your muscles and joints.

Knowing where your body parts are at all times without the use of vision.

Regulation of force – knowing how hard or how soft to push/press something.

Essential role in regulation and calming: It has the ability to calm and regulate all the other senses.

If you feel a child is dysregulated and you are unsure why – provide proprioception.



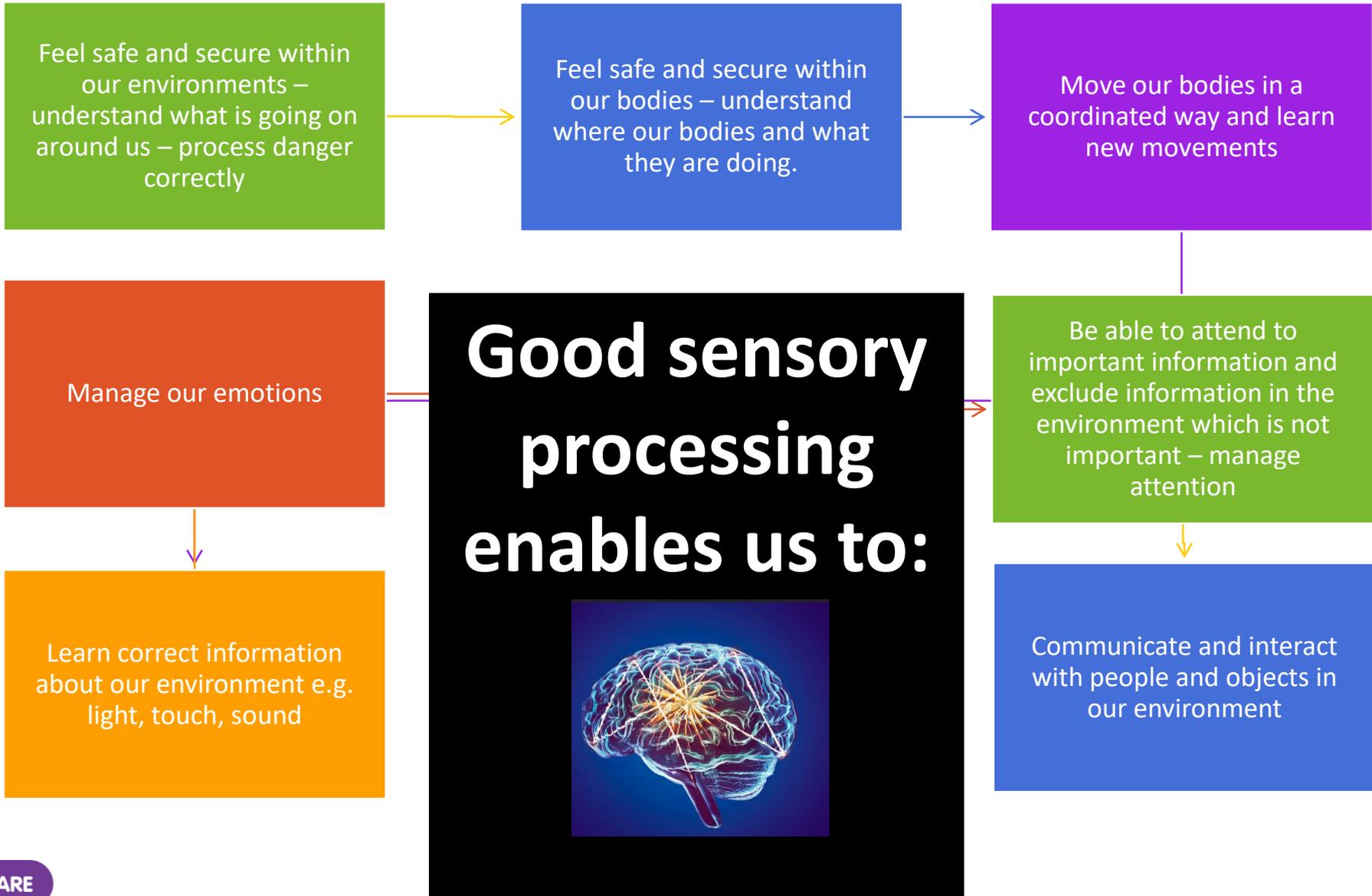
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WHAT CAN GO WRONG?

Sensory processing difficulties are estimated to impact on 5 to 16 percent of school aged children.

This rises to an estimated 90% of Autistic people having sensory processing difficulties.

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Difficulty Registering the Sensory information

Child does not register the amount of sensory input correctly. They register the input as too much or too little.

Difficulty Discriminating the sensory information

Child registers the amount of sensory input correctly but they are unable to tell the different properties of the information for example they can tell they are holding something in their hand but they can not tell if it is bumpy, soft, smooth or rough.

Difficulty integrating and planning the sensory information

Child can register and can discriminate the sensory information received but they are able to use it to form ideas, make motor plans or form successful motor movements.

Difficulties with Modulation

Difficulties with quality and planning of motor skills.

Poor postural control

Difficulties with planning motor skills and tasks (praxis)

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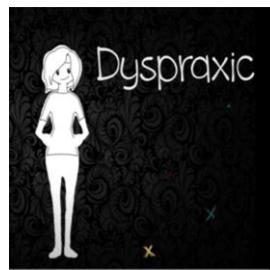
DIFFICULTIES WITH POSTURE AND PRAXIS

- Children will have difficulties with planning and organising their school work and their occupations.
- They will not have adequate posture with remaining sitting upright in a chair in class or sitting upright on the carpet. We will see behaviours such as the child not wanting to remain seating (walking around the room or standing).
- They will struggle in social situations involving motor skills – such as playing with toys or playing games in the playground.
- They will withdraw from motor tasks such as playing with their friends.
- Limited repetition or interests – these will be limited to games involving simple motor tasks.
- High levels of anxiety and emotion as aware they find things difficult.

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<https://www.bing.com/videos/search?q=you+tube+dyspraxia&cv id=5c85e4620be3487786a20638c138df33&aqs=edge..69i57j0l5j69i60l3.7223j0j4&PC=U531&ru=%2fsearch%3fq%3dyou%2btube%2bdyspraxia%26cvid%3d5c85e4620be3487786a20638c138df33%26aqs%3dedge..69i57j0l5j69i60l3.7223j0j4%26FORM%3dANA B01%26PC%3dU531&view=detail&mmscn=vwrc&mid=E11CC40113B184F52024E11CC40113B184F52024&FORM=WRVORC>



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What can go wrong: Sensory Modulation Difficulties

Sensory modulation is the ability to regulate our responses to sensory input in a graded and appropriate way.

Over responsive

Under responsive

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OVER RESPONSIVITY

The body registers there is too much sensory input

The brain mistakes these sensations as negative or threatening.

It therefore causes a fight/flight response or exaggerated emotional response.



<https://www.youtube.com/watch?v=aPknwW8mPAM>

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UNDER RESPONSIVITY

The body does not register enough sensory information, therefore the brain requires more sensory input.

The child with then either:

The child will not respond to their environment (passive)

OR

The child will seek to obtain sensory information to increase their levels of arousal, attention, posture, focus and pleasure (sensory seeking)

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Sensory checklist for school and classroom.

Name:	DOB:
Date completed:	Class:
School:	Completed by:

What is Sensory Processing?

Sensory processing is what makes it possible for a CYP to use the sensory input he/she is receiving from their body and environment in a functional, adaptive manner. Effective sensory processing is necessary for almost every activity a CYP performs. We must be able to integrate the information we receive from all our senses to understand our surroundings successfully.

A CYP with sensory processing concerns has difficulty using sensory input from his/her eyes (vision), ears (sound), skin (touch), nose (smell), mouth (taste), muscles and body joints (body awareness), and inner ear (balance & position of body in space).

To find out more about the senses please attend understanding sensory processing and supporting sensory processing school/nursery prior to using this resource.
<https://www.buckshealthcare.nhs.uk/cyp/>



Touch
 What your skin feels (texture, tightness, pressure, temperature, etc.) from either something touching you or you touching an object.



Sound
 The sound waves that your ears register, including different pitches and frequencies.



Taste
 The signals that your taste buds receive in your mouth (sweet, salty, sour, bitter, umami).



Vestibular
 What constitutes your sense of balance and spatial orientation or coordination of your head and body.



Vision
 The colors and depth perception signals that your eyes receive from your surroundings.



Proprioception
 The system that focuses on the body's muscle and joint movements.



Smell
 The scents and aromas that your nose picks up from the objects around you.



Interoception
 What gives you signals of your internal organs, such as hunger, pain, urination, etc.

Sensory processing organises the sensations from one's own body and the world around us. For some children, their sensory integration does not develop as it should and may affect their sight, hearing, smell, touch, taste or spatial awareness. Children can experience hypersensitivity (excessive and undesirable reactions) or hyposensitivity (under-responsive and difficulty in processing responses) to stimuli. This checklist aims to identify sensory processing issues. It is not a diagnostic tool and professional advice should be sought. Also bear in mind the child's age, developmental stage and ability. **Highlight all that apply**

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WHEN SHOULD YOU BE WORRIED?

We are concerned about sensory processing differences when:

- Impact on the ability to perform activities they want or need to do.
- Causing harm to self or other people

Seek out an Occupational Therapist, Speech and Language Therapist or Physiotherapist with post graduate training in sensory integration.

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HOMEWORK



Be a sensory detective!

Before coming to your next sensory webinar or workshop I want you to watch your child's behaviours.

Which do you think may be a result of difficulties with :

- Under responsiveness
- Under responsiveness
- Praxis and planning difficulties

Use the behaviour checklists in this presentation to identify sensory processing behaviours.

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NEXT STEPS

- Webinar 2: Using our Senses to Support Regulation
- Webinar 3: Sensory Supportive Environments
- Advice Line Support

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FURTHER INFORMATION



[Educating Different Kinds of Minds | Temple Grandin | TEDxCSU - YouTube](#)

[Temple Grandin: "The Autistic Brain" – YouTube](#)

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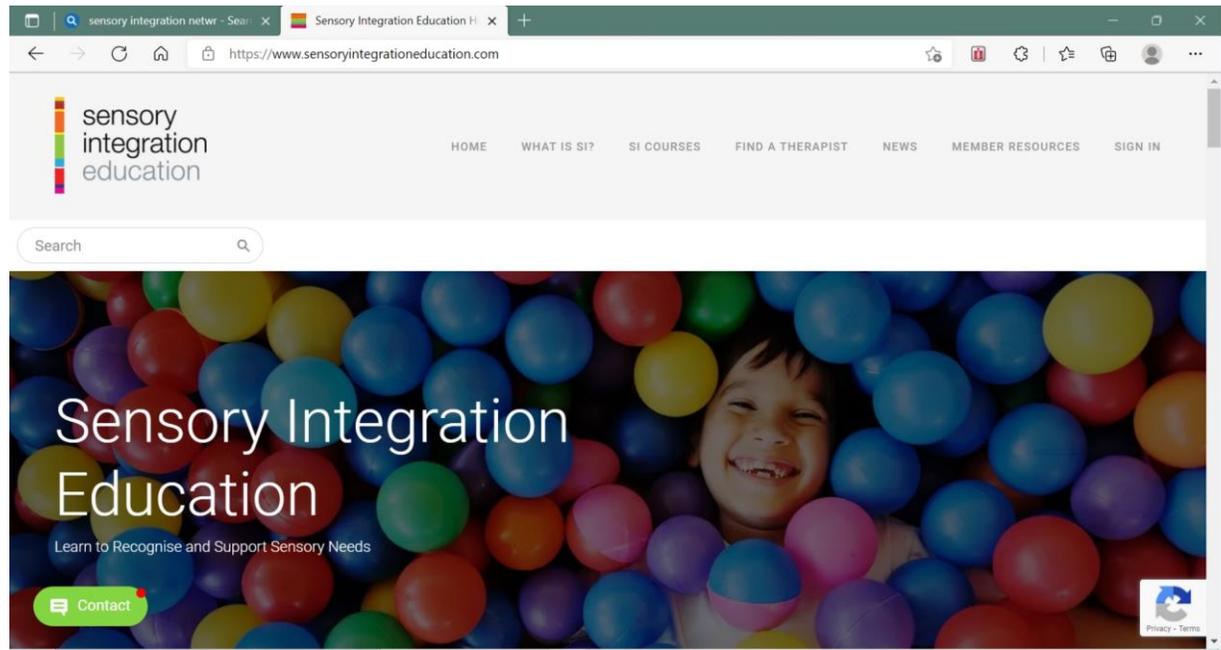
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and HSE, For Schools

Introduction to Sensory Integration Difficulties (for Schools)

★★★★★ (11)

31 Units | £10.00

All Courses, For Parents and Carers, For Schools, Teenagers/Young Adults

Understanding Sensory Processing and Integration in Teenagers and Young Adults (for parents and carers)

★★★★★ (7)

5 Units | £5.00

All Courses, For Parents and Carers, For Schools

Understanding Sensory Processing and Integration in Children (for Parents and Carers)

★★★★★ (38)

5 Units | Free

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Occupational Therapy support you can access without a referral

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Occupational
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Occupational
Therapy virtual
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Contact our Occupational Therapy team

01296 838000

Buc-tr.cyptherapies@nhs.net

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We really need your feedback!!!!

<https://bht.onlinesurveys.ac.uk/lo-occupational-therapy-webinar-feedback-v2>



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www.buckshleathcare.nhs.uk/cyp/therapy/occupational-therapy

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