

Visual Sense



Vision provides us with information about our environment (80%)

High discrimination needed

Closely linked to Auditory & Vestibular.

We constantly scan for visual patterns

Guides motor actions: especially fine motor

Requires very well coordinated eye muscles

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Visual Sensitivity: Dysfunction with Over-Responsivity & Under-Responsivity

Sensory Over-responsive:

Avoids being in room with bright lights/turns lights off/on

Wears hats, squints alot, dislikes crowded spaces, big box stores

Sensory Under-responsive:

Complains eyes are tired when looking at book, rubs eyes often, covers eyes up

Difficulty focusing on a still image

Sensory Craving:

Stands in front of mirror or reflective surfaces for long periods of time

Spins wheels, fans, or self and intently watches

Sensory Discrimination:

Confuses the letters "d" and "b" frequently

Difficulty finding a specified object in a busy/complex picture

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Visual Activities to Introduce into the Play Room/Recommend for Parents

Be aware of lighting; have options

Play flashlight tag or "I spy"

Sensory sensitive rooms: Toys are in bins, visually less chaotic

Decorations in spaces are limited or areas of high focus are needed

Do visual activities after other inputs

Use a timer -as a cue



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Auditory Sense

Hearing Highly protective

Linked to Visual & Vestibular

Auditory Discrimination

WHAT am I hearing?

Where is the sound (directionality of my world)?

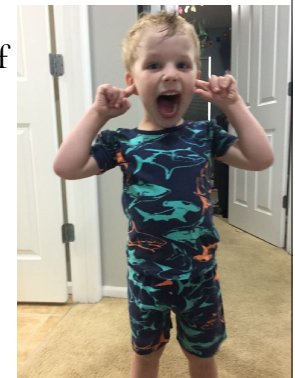
Never turns off

Relationship of sound to me (gives spatial awareness of my world, shape, distance, size, timing)

Extremely Precise:

Phonemes/letter sounds, sounds in words, words in phrases phrase in sequences and sentences

Speech challenges often a result



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Auditory Sensitivity: Dysfunction with Over-Responsivity & Under-Responsivity



Sensory Over-responsive:

Covers ears in noisy environment
Fears unexpected/excepted noises
eg. toilet

Sensory Under-responsive:

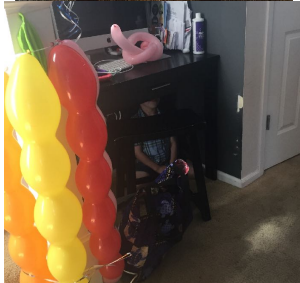
Does not respond to name being called; unaware of source of sound, makes sounds themselves

Sensory Craving:

Requests music that is fast or loud
Makes noises in quite environments

Sensory Discrimination:

Has a hard time differentiating words such as "think vs. thing"
Poor ability to adjust volume of voice



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Auditory Activities to Introduce into the Play Room/Recommend for Parents

Use of headphones

Sing songs while doing movement exercises: Simon Says

Have a white noise machine/or not

Talk slowly, clearly, while making eye contact

Use American Sign Language

Use other signals: touch, chime/bell, body movement



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Tactile Sense: Touch/Skin

Receptors are located within the skin

Particular areas that are extremely sensory rich: face, mouth, hands, & feet

Many types of information are processed:

pain, pressure, texture, temperature

High protective function: alerts us to
Danger

Immense discrimination and precision

GLOBAL: Whole body & Subcortical

Contributes to body awareness
(proprioception)

Praxis (motor planning)

Learning and social skill development



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Tactile Sensitivity: Dysfunction with Over-Responsivity & Under-Responsivity

Sensory Over-responsive:

Avoids touching textures, such as dirt, sand
Rigid with types of clothing worn (rough clothes, seams in socks)
Refuses or resists messy play
Resists cuddling and light touch
Resists baths/showers/going to beach

Sensory Under-responsive:

Does not notice when hands are messy
Does not notice cuts and bruises
Doesn't realize hands or face are dirty
May play rough with peers or not feel pain

Sensory Craving:

Seeking out experiences to touch things
Constantly fidgets with objects

Sensory Discrimination:

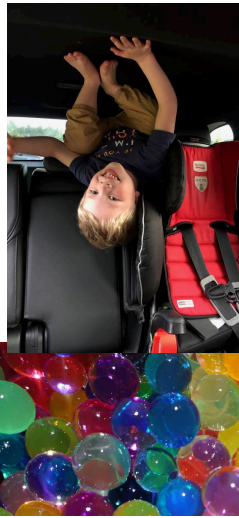
Constantly runs hands through certain texture
Puts non-food objects in mouth



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Tactile Sense: Activities to Introduce into the Play Room/Recommend for Parents

- Sensory bins filled with rice, lentils, beans
- Sensory dough such as play dough, kinetic sand, etc.
- Practice squeezing objects (progressive muscle relaxation exercises)
- Weighted materials, stuffed animals, lap pads, vests or blankets
- Bobo doll to punch or roll on, drag or push
- Bean Bags- reading or learning in
- Large Pillows- soft

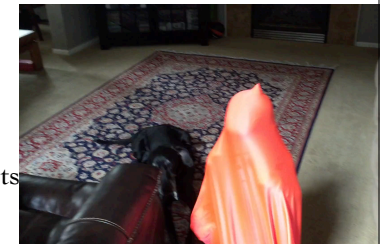


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Proprioceptive Sense: Muscle & Joint Input

Used to promote calm... down regulates
 Used to alert...up regulate
 Firm input may be not perceived as dangerous or alerting the way light touch might be
 Function is modulation and discrimination
 Adjust all actions: strength, precision, coordination (gross and fine motor)
 Often involved in mediating physical pain or discomfort
 Functional Receptors are in the muscles, tendons, joints, and sheaths sound bones
 Information from own body including:
 awareness location and state of body parts
 Position of body and limbs
 Force and pressure



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Proprioceptive Sensitivity: Dysfunction with Over-Responsivity & Under-Responsivity

Sensory Over-responsive:

Unable to sit for long periods of time due to discomfort
 Avoids jumping or bouncing activities

Sensory Under-responsive:

Slouches when sitting in a chair or on the floor
 Sits in one position for long periods of time

Sensory Craving:

Seems to always be jumping or bouncing
 Crashes into couch cushions or bed mattress at home

Sensory Discrimination:

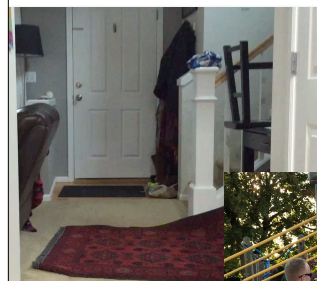
Falls or bumps into objects
 Does not use the right amount of force to push/pull/grasp



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Proprioception Activities to Introduce into the Play Room/Recommend for Parents



He lives in the upside down



Sensory Socks, Bear hugs(parents)

Lifting boxes/toys

Weighted lap pads/blankets/throw heavy bean bag game

Play with vibrating toys

Trampoline or Bobo doll (awareness of self in relation to others), ROWDY

Wall push-ups, animal walks

Yoga stretches (safe input)

Play dough kneading, tug of war with therapy band

Use minimal words

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Vestibular Sensory Input: The Great Integrator

The body knows if it is moving or not, head up or down?, are we balanced or not?

Are we moving “safely” in the world?

Arousal, Vision, Posture, Balance, Coordination

Timing, Sequencing

If body is not safe in space,
my emotions are not safe.

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Vestibular Sensitivity: Dysfunction with Over-Responsivity & Under-Responsivity

Sensory Over-responsive:

Does not get dizzy when spinning
“Wakes up” with intense movement

Sensory Under-responsive:

Refuses the swing, slide, and spinning : prefers sedentary activities
Anxious when climbing or when feet leave the ground

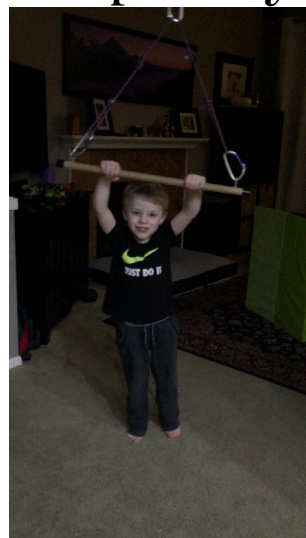
Sensory Craving:

Enjoys climbing or jumping from tall heights
Constantly spinning, climbing, rolling, running, etc.

Sensory Discrimination:

Does not adjusting posture when on a swing to prevent falling off
Trips when walking up the stairs or falls when climbing

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Vestibular Activities to Introduce into the Play Room/Recommend for Parents

Swinging

Jumping/moving during play session

Spinning

Hanging upside down

Games that facilitate movement

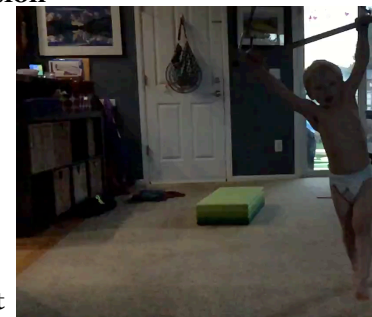
Crossing the midline

Swimming lessons

Sit on flexible objects, wiggly seat

Sit and bounce on an object, therapy ball, Rowdy

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Interoception Sense: Internal states of Being

Sensors are in the internal organs, and nerves throughout the body.

Sense of physiological & Physical body safety

Purpose is to maintain physiological balance

Linked to emotion regulation and awareness of self



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Interoception Activities to Introduce into the Play Room/Recommend for Parents

Warm bathes, warm tea,

Ice cold drinks

Language use of differences

Hot/cold, tight/loose, soft/hard touch

Engage multiple sense at once



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Sensory Craving (Chaotic Registration)

Behaviors will not remediate, they are unconscious, they can become aggressive and often belligerent to meet their needs.

They are often deemed out of control.

They tend to be thrill seekers- they need constant supervision.

Lots of expulsions from primary school and day care



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Sensory Craving (Chaotic Registration)

Obsessively Active Or Fidgety, loves hanging from bars, climbing and stretching

Can't sit still, Runs not walks, uses a loud voice

Cracks knuckles, neck, joints

Appears impulsive, unruly, nothing is enough

Grinds Teeth, picks skin, bites/mouthes everything

Jump, Swing. Spin- Excessively

Bumps into people or things- Often the same place on the body, falls on the floor and rolls around

Difficulty figuring out how to do new tasks



Their small body is on overload

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Glazed over, Shut down, Non responsive
When integrating is too much, it stops.



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SENSORY INTEGRATION...

works to change the neurological system in the brain so that the child processes sensory input more effectively.

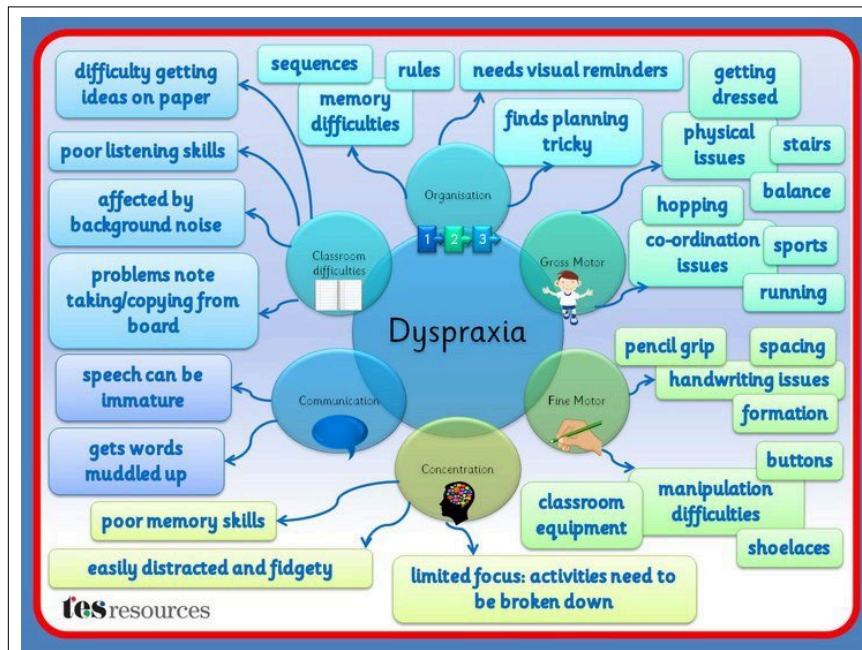
Over time, the more sensory input the brain receives in a therapeutic way, the better equipped the brain becomes to integrate all the sensory input from a variety of environments.

While **sensory integration** helps to find a balance in the brain, the child will **continue to need** a variety of sensory outlets to help stay regulated —just like any well-organized adult.

For example, the child might need to continue participating in swimming throughout the year, just as an adult may need to continue participating in yoga on a weekly basis.

Because children have brains that are more plastic than adults, they are still developing and the connections can be changed, the sooner SPD is recognized and services are pursued, the better the outcomes.

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