OTHER THERAPIES FOR ASD

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WILL FOCUS ON THE TWO WE USE AT CDC-GERTRUDES.

• Sensory integration therapy

• Picture exchange communication therapy (PECS)
1. WHAT IS SENSORY INTEGRATION?

- Sensory processing or sensory integration is a neurological process that occurs in all of us.

- We constantly take in sensory information through our bodies from the world around us. As our brains organize or integrate this sensory information it becomes meaningful to us.

- Normal sensory integration allows us to respond to the specific sensory input we receive automatically, efficiently and comfortably.
OUR SENSES AND BRAIN PLASTICITY

- Sensations come into nerve endings in our body traveling to many areas of our brain.
- Our brain compares each incoming sensation with other incoming sensations and then decides how to respond.
- The more we challenge our brain by learning and doing, the more connections and pathways our nervous system makes.
- The more we repeat the new skill, the stronger the pathways in the brain become and the skill becomes automatic.
- Intervention for sensory struggles can make a huge difference at any age.
EXAMPLE OF BRAIN PLASTICITY

- Learning to play the guitar
  - When you first play a chord, a neural connection is made.
  - Each time you play the chord, the connection is facilitated.
  - Eventually, your fingers know how to play it without conscious thought.
  - You have, in effect, remodeled your brain.

(from Raising A Sensory Smart Child)
THE FAMILIAR SENSES

We have 5 familiar senses that respond to sensory input from outside of our body.

- **Auditory (sound)** - Information through the ears
- **Gustatory (taste)** - Information through the mouth
- **Olfactory (smell)** - Information through the nose
- **Visual-(seeing)** - Information through the eyes
- **Tactile (touch)** - Information through the hands & skin
THE HIDDEN SENSES

We have 2 hidden senses that respond to sensory input inside our body.

- **Vestibular** – Information about movement through the inner ear

- **Proprioceptive** - Information from muscles, ligaments, and joints
THE TWO HIDDEN SENSES: VESTIBULAR AND PROPRIOCEPTIVE

- We are not consciously aware of the hidden senses we cannot control them and we cannot see them.

- Along with the Tactile (touch) system, these 2 hidden senses are *fundamental* in laying the ground work for a child’s healthy development.

- When the hidden senses operate automatically and efficiently a child is able to focus his eyes, ears and attention (familiar senses) to the task at hand.
NORMAL DEVELOPMENT OF SENSORY INTEGRATION IN INFANTS AND CHILDREN

- The development of Sensory integration is similar to a child building with blocks

- Each block rests on the building blocks under it.
  - **Level 1**- Hidden senses
    - (Proprioceptive & Vestibular) + Tactile
  - **Level 2**- Perceptual Motor Foundations
  - **Level 3**- Perceptual Motor Skills
The Four Levels of Sensory Integration

LEVEL FOUR: ACADEMIC READINESS
By 6 years

LEVEL THREE: PERCEPTUAL MOTOR SKILLS
By 3 years

LEVEL TWO: PERCEPTUAL MOTOR FOUNDATION
By 1 year

LEVEL ONE: PRIMARY SENSORY SYSTEM
By 2 months

Tactile Sense (Touch)
Vestibular Sense (Balance and Movement)
Proprioceptive Sense (Body Position)
(Visual and Auditory Senses)

Motor Planning (Praxis)
Lateralization (Hand Preference)
Bilateral Coordination (Teamed Use of Both Sides of Body)
Body Percept (Body Awareness)

Purposeful Activity
Visual-Motor Integration
Eye-Hand Coordination (Pencil Skills)
Visual Perception
Auditory Perception

Self-Esteem and Self Control
Specialization of Body and Brain Visualization
Regulation of Attention Organized Behavior
Complex Motor Skills Academic Skills
WHAT IS SENSORY INTEGRATION DYSFUNCTION?

The inability to take in, organize and respond to sensory information in a meaningful & appropriate way.

Also called:

- Sensory Integration Disorder
- Sensory Processing Disorder
- SI Dysfunction
How Dysfunction May Occur in the Sensory Processing Machine

**STIMULUS**
- Sensory Intake

**CENTRAL PROCESSING**
- Dysfunction in:
  - Analysis
  - Organization
  - Synthesis (Integration)
  - Storage (Memory)

**RESPONSE**
- Motor, Language, or Emotional Output

*Inefficient feedback* causes difficulty in:
- Looking and listening
- Attending appropriately to people and objects
- Processing new information
- Remembering
- Interacting with others
- Learning
WHAT DOES IT LOOK LIKE?  
What can we do about it?

**AUDITORY:** Information through the ears (sound)  
- covers his/her ears during assemblies, gym and music classes, fire drills

**Strategies**
- Ear phones or ear plugs
- Prior notice of fire drills
- Sitting away from speakers

**GUSTATORY:** Information through the mouth (taste)  
- extremely picky eater
- puts everything into the mouth

**Strategies**
- Never force
- Teach safety and cleanliness; look first, ask second, and then insert
WHAT DOES IT LOOK LIKE? What can we do about it?

**OLFACTORY:** Information through the nose (smells)
- feels sick when strong smelling foods are served in the cafeteria
- smells/sniffs everything they come into contact with

**Strategies**
Expand repertoire of smells

**VISUAL:** Information through the eyes, including sight
- squints because light seems too bright
- trouble focusing on any one object or person/too many difficulties
- eye tracking activities

**Strategies**
Sun glasses or brimmed hats
Lighting changes

Seated in front of the classroom
Rooms near and organized
WHAT DOES IT LOOK LIKE?
What can we do about it?

**TACTILE:** Information through the layers of skin (touch)
- doesn’t like glue, marker, or paint on their fingers or hands
- does not like to be touched
- child doesn’t notice food on their face
- Take long to feel pain.

**Strategies**
Shaving cream, finger paints, play-doh, sand play, water play, hammer and nails, sandpaper, rolling out pizza, bread or cookie dough
Brush with towel
Scrubby
Wash, brush, comb hair
Big bear hugs often
WHAT DOES IT LOOK LIKE? What can we do about it?

**PROPRIOCEPTIVE**: Information through the muscles and joints
- looks clumsy
- trouble learning new body movements

**Strategies for PROPRIOCEPTIVE/resistive activities:**
- Crawling games
- Brain Gym program

What interests them?
- Break down into smaller steps
WHAT DOES IT LOOK LIKE?
What can we do about it?

**VESTIBULAR**: Information from movement
- difficulty with motion, spinning, or swinging
- craves motion, spinning, and swinging

**Strategies:**
- Introduce activities slowly
- Never force a child
- Repeat an activity that they like
- Use balance board
What happens when a child is distressed?

- Brain powers down
- Child can’t process: listen or think
- May act out aggressively
Sensory Processing Gone Astray

Struggles to stay alert or awake

Overly alert, unable to attend

- Difficulty attending from the back of the room
- Explosive emotions or lack of emotions or incongruent emotional responses
Sensory Processing Gone Astray

- Unable to sit with anyone behind them in class
- Aggression to self or others
- Compulsive Behaviors
- Difficulty with clothing, change of clothing
Sensory Processing Gone Astray

Fixation on sensory stimuli

Clumsy, awkward, difficulty in sports

Over or Under-reaction to pain

Unsure of group situations, or a loner
DEVELOPING A HOME SENSORY schedule

- Work with an Occupational Therapist if possible.

- Begin with observations, what behaviors are you seeing?

- Look for patterns or differences in behavior in various environments & with different stimuli.

- Begin to give the child the sensations they are needing in a safer, healthier way.

- Long term goal is for child to self-regulate.
REFERENCES.

- Dr. Ross Greene, *Lost At School, Why Our Kids With Behavioral Challenges Are Falling Through the Cracks, and How We Can Help Them*
2. PICTURE EXCHANGE COMMUNICATION SYSTEMS. What is (PECS)?

- A visual communication system
- It is a form of Augmentative & Alternative Communication (AAC)
- Uses object cards to express/communicate desires
- A picture of the desired object is given to a communication partner in exchange for that item
**EXAMPLE OF IMAGES.**
What does PECS aim to achieve

- It enables non-verbal children with autism and other communication deficits to initiate communication with others.

- PECS focuses on the initiation of communication and aims to develop the basic skills for communication, including language, social skills as well as reciprocal communication.

- Enables non-verbal children to request/choose.

- High rate of success in teaching spoken communication.
Who should PECS be used with?

- The approach was specifically devised to meet the needs of young children with ASD

- However, the system has been successful with adolescents and adults who have a wide array of communication & cognitive
How to get started

- Motivation – it is essential to start with what engages the student
- Establish a motivation hierarchy, most preferred to neutral to non-preferred items.
- Update as preferences change

- Preferably 2 people:
  - Child aims to communicate with adult 1.
  - Adult sits behind/beside child to assist.
PHASES USED IN (PECS)

- **Phase One - The Physical Exchange**
  - **Objective:**
    - Upon seeing a "highly preferred" item, the student will pick up a picture of the item, reach toward the trainer, and release the picture into the trainer's hand.
  - 1. Fully Assisted Exchange
  - 2. Fade Physical Assistance

- **Phase Two - Expanding Spontaneity**
  - **Objective:**
    - The student goes to his/her communication board, pulls the picture off, goes to the adult, and releases the picture into the adult's hand.
  - 1. Remove Picture From Communication Board
  - 2. Increase Distance Between Trainer and Student
Phase Three - Picture Discrimination

**Objective:**

- The student will request desired items by going to a communication board, selecting the appropriate picture from an array, going to a communication partner and giving the picture.

Phase Four - Sentence Structure

**Objective**

Going to the book, picking up a picture of "I want," putting it on a sentence strip, removing the strip from the communication board, approaching the communicative partner, and giving the sentence strip to him/her.
Phase Five Responding to "What do you want?"

**Objective:**
- The student can spontaneously request a variety of items and can answer the question, "What do you want?"

Phase Six - Responsive and Spontaneous Commenting

**Objective:**
- The student appropriately answers "What do you want?" "What do you see?" "What do you have?" and similar questions.
- 1. What do you see?
- 2. What do you see? vs. What do you want?
- Additional questions
THINGS TO REMEMBER.

- It is important that the child exchanges the picture.
- Give small quantities of the motivator if it is food/drink.
- Let the student have the toy/activity only for a short amount of time.
- Alternate the communication partner/adult 1 so the child is able to communicate with a range of people.
- Ensure the picture has the written word at bottom.
- Make sure the picture all the same size.
- Keep the communication book/board in the same place and where the student can access it.
References: