

Sensory Integration

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ABC
Pediatric Therapy
Network

Creating
the
best
life
for
all
children

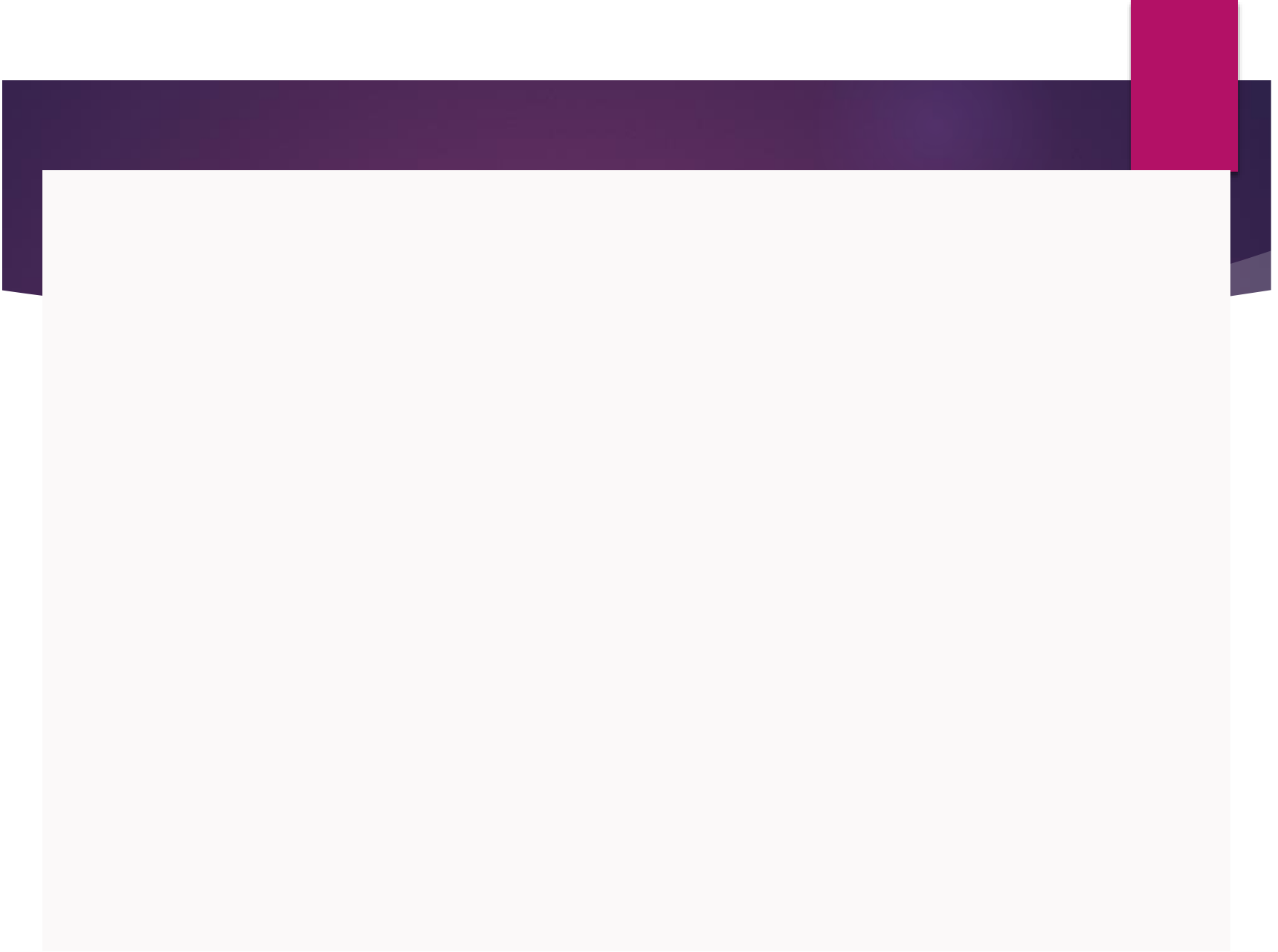


What Is Sensory Integration?

- ▶ Takes place automatically within our nervous system
- ▶ Ability to:
 - ▶ Take in
 - ▶ Sort out
 - ▶ Connect information from our senses
 - ▶ Generate a response within our environment

What is SI Dysfunction?

- ▶ Child cannot analyze, organize, or respond to sensory messages accurately
- ▶ Unable to interact comfortably with the world around us
- ▶ Can affect development of gross motor, fine motor, speech and feeding ability, behavior, and the ability to process information.

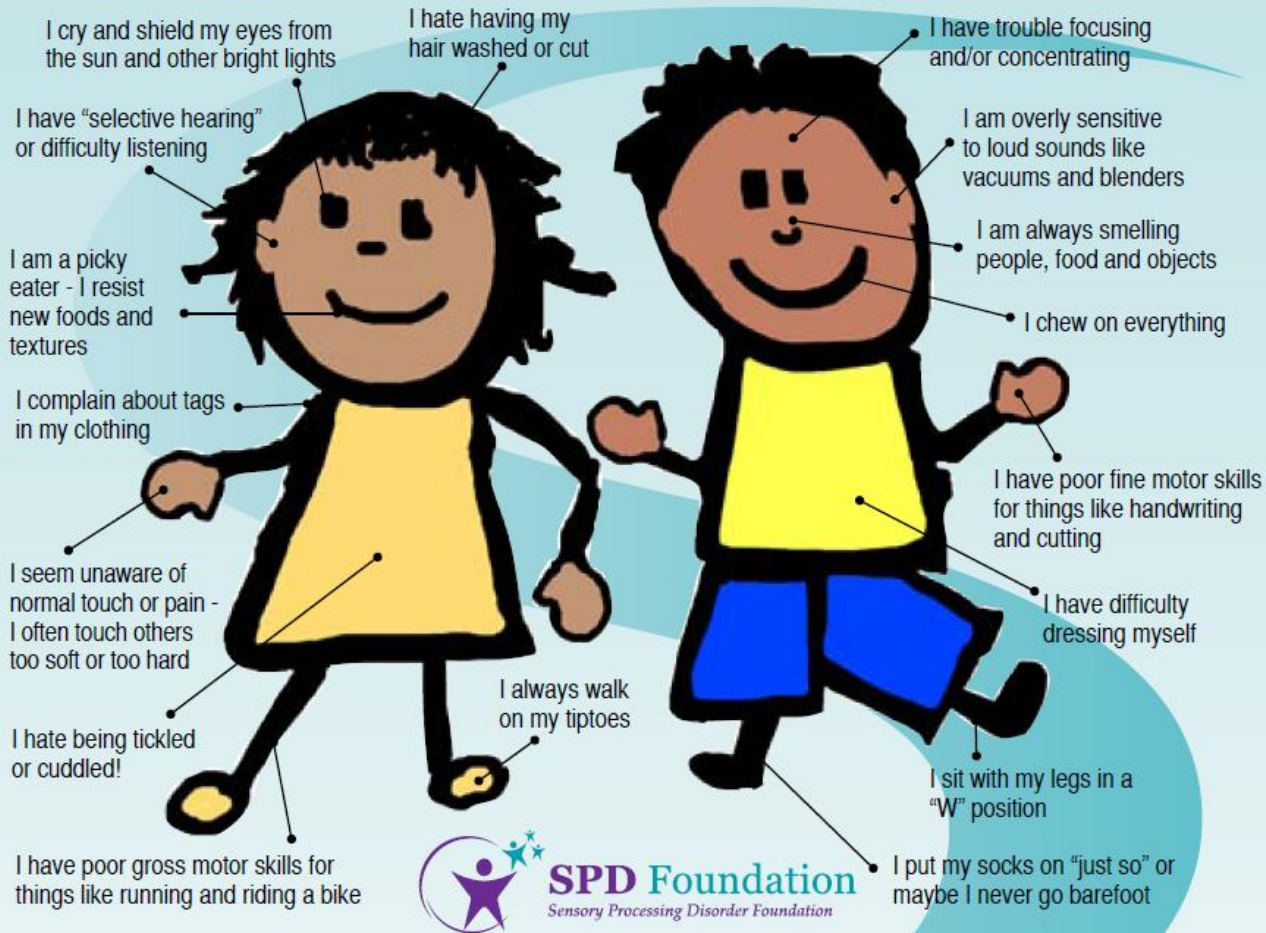


Common Characteristics of SID

- ▶ Decreased coordination
- ▶ Low muscle tone
- ▶ Behavior challenges
- ▶ Delay in speech and motor skills
- ▶ Does not interact in environment
- ▶ Under or overactive
- ▶ Toe Walking

- ▶ **This is not an all inclusive list!

Do You Know Me?



If I have several of these characteristics I may have Sensory Processing Disorder

I have Sensory Processing Disorder - SPD, for short. That means my brain can't process sensations the way other people's brains do. When my brain gets information through any of my senses - sight, smell, hearing, taste, touch, movement - it doesn't always know what to do with the information. I can become very disorganized and confused! Sometimes I over-react to all this sensory input or maybe I don't react enough. Depending on what senses are involved, I may have trouble with jobs that come naturally to other kids, even feeding myself or putting on clothes. This makes it really hard for me to function at school, in public, and even at home. I might have trouble learning or making friends, and I may have a lot of tantrums and meltdowns. I can be really shy and withdrawn from everyone, even my own mom and dad!

Because I never know what's going to set off my sensory alarms, I'm often afraid of activities all the other kids enjoy. It's tough being sensational.

So do you know me? Or someone like me? Scientists say as many as 1 in 20 kids has symptoms like mine. You can do lots of things to make stuff easier. Please, be patient and understanding with kids like me. If you're my teacher or my doctor or anyone in my life, learn all you can about Sensory Processing Disorder. The Sensory Processing Disorder Foundation makes that super easy by running the biggest SPD website in the whole wide world and by putting on all sorts of cool educational events. If you're my parent, please remember there is hope and help for me in occupational therapy with a sensory integration approach.

For more information visit www.spdfoundation.net

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COMMON DIAGNOSES ASSOCIATED WITH SENSORY INTEGRATION DYSFUNCTION

- ▶ Autism spectrum disorders
- ▶ Dyspraxia
- ▶ ADD/ADHD
- ▶ CP
- ▶ Down Syndrome
- ▶ Any genetic or neurological disorder

CONTRIBUTING FACTORS OF SENSORY INTEGRATION DYSFUNCTION

- ▶ Premature birth
- ▶ Genetic predisposition
- ▶ Birth trauma and hospitalization
- ▶ Adopted children
- ▶ Heavy metals
- ▶ Prenatal circumstances
- ▶ Unknown reasons
- ▶ May couple with other diagnoses or conditions

SI Dysfunction (cont.)

- ▶ ****important note:** We all have some sensory preferences and some behaviors are appropriate with age. However a child with SID demonstrates **difficulty with everyday activities** and consistently shows characteristics that are not age appropriate.

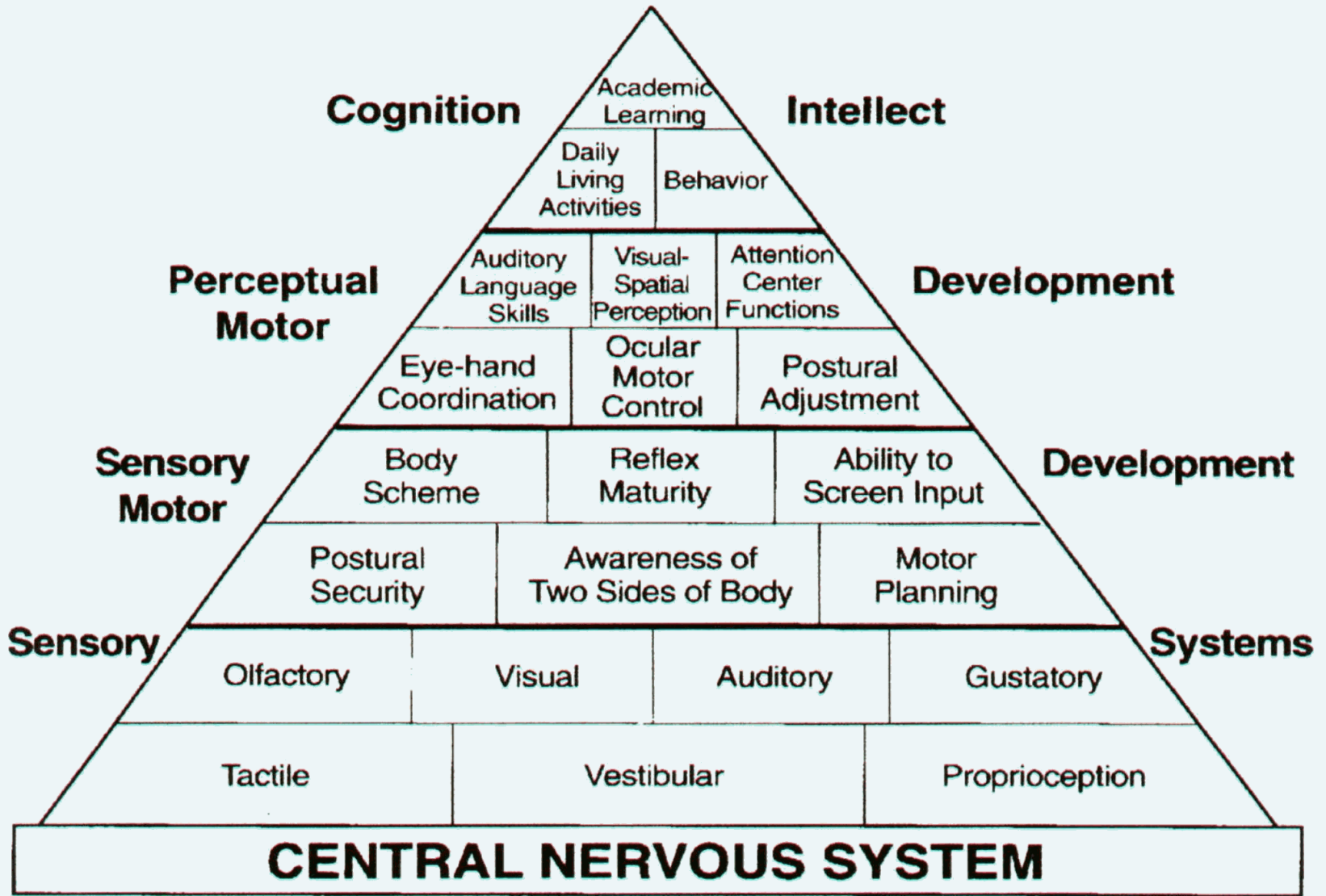


Figure 5. Pyramid of Learning. (Williams & Shellenberger, 1-4)

Main Sensory Systems

- ▶ Tactile (Touch)
- ▶ Proprioceptive (Body awareness)
- ▶ Vestibular (Movement through space)
- ▶ Visual (Eyes)
- ▶ Auditory (Ears)
- ▶ Olfactory (Smell)
- ▶ Taste

Tactile



Proprioceptive



Vestibular



Visual



Auditory



Smell and Taste



Main Components of Sensory Integration

1. Sensory Modulation
2. Self Regulation
3. Sensory Defensiveness

Sensory Modulation (SM)

- ▶ SM is the ability of an individual to take in relevant information from the environment, screen out unimportant information (i.e. background noises) and respond appropriately.
- ▶ Contributes to our ability to self-regulate and manage our behaviors and emotions in a socially acceptable manner
- ▶ Allows us to function in an optimal range of arousal by shutting out irrelevant information (changes throughout the day)

Sensory Overload

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

<https://www.youtube.com/watch?v=K2P4Ed6G3gw>

Self Regulation (SR)

- ▶ SR is the ability of an individual to maintain a regulated state while the demands of the environment are changing.

Sensory Defensiveness (SD)

- ▶ SD occurs when an individual has an aversive or defensive reaction to non-noxious stimuli from one or more of the sensory systems.
 - ▶ Children often highly sensitive to textures of clothing, food, or objects that come in contact with skin or mouth
 - ▶ Children often avoidant of changes in their typical routine

Sensory defensiveness

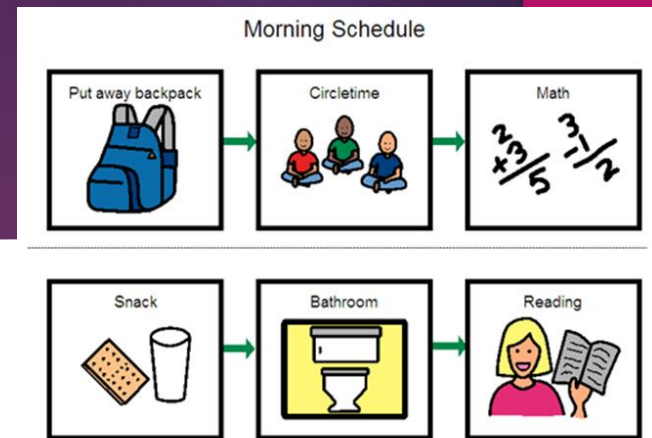


SENSORY THRESHOLDS

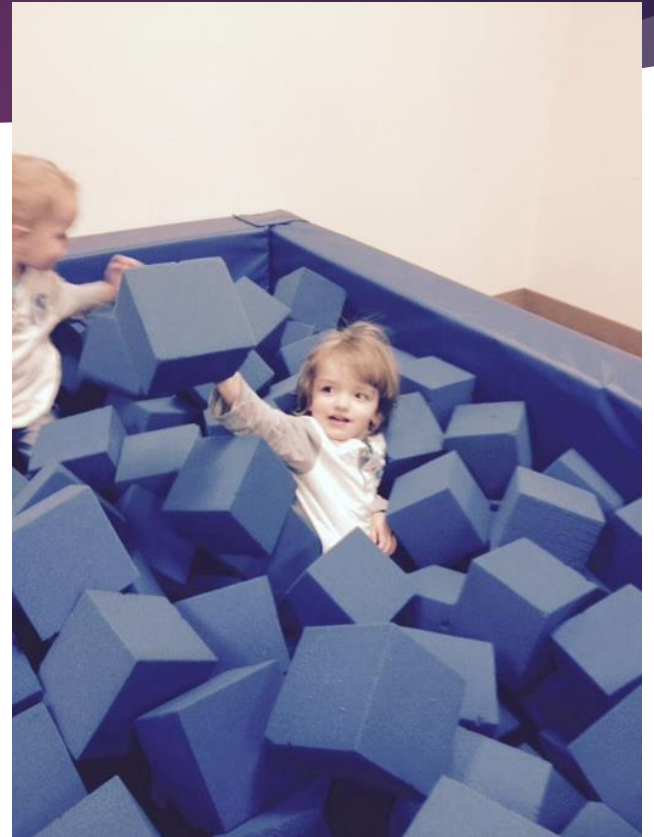
- ▶ **Low sensory threshold:** Children that are **hypersensitive** (oversensitive) require lower levels of sensory input to reach the point of registration- These children often become overloaded if more than one sense is stimulated (i.e. vision and auditory)-easily over stimulated, often defensive, or over responsive, avoid situation.
 - ▶ Fright, flight, fight response
- ▶ **High sensory threshold:** Children that are **hyposensitive** (undersensitive) require increased levels of sensory input to reach the point of registration- These children are often seekers of input.

TREATMENT

- ▶ Occupational Therapist
- ▶ Eval of sensory system
- ▶ Develop a Sensory Diet – list of activities that help the sensory system.





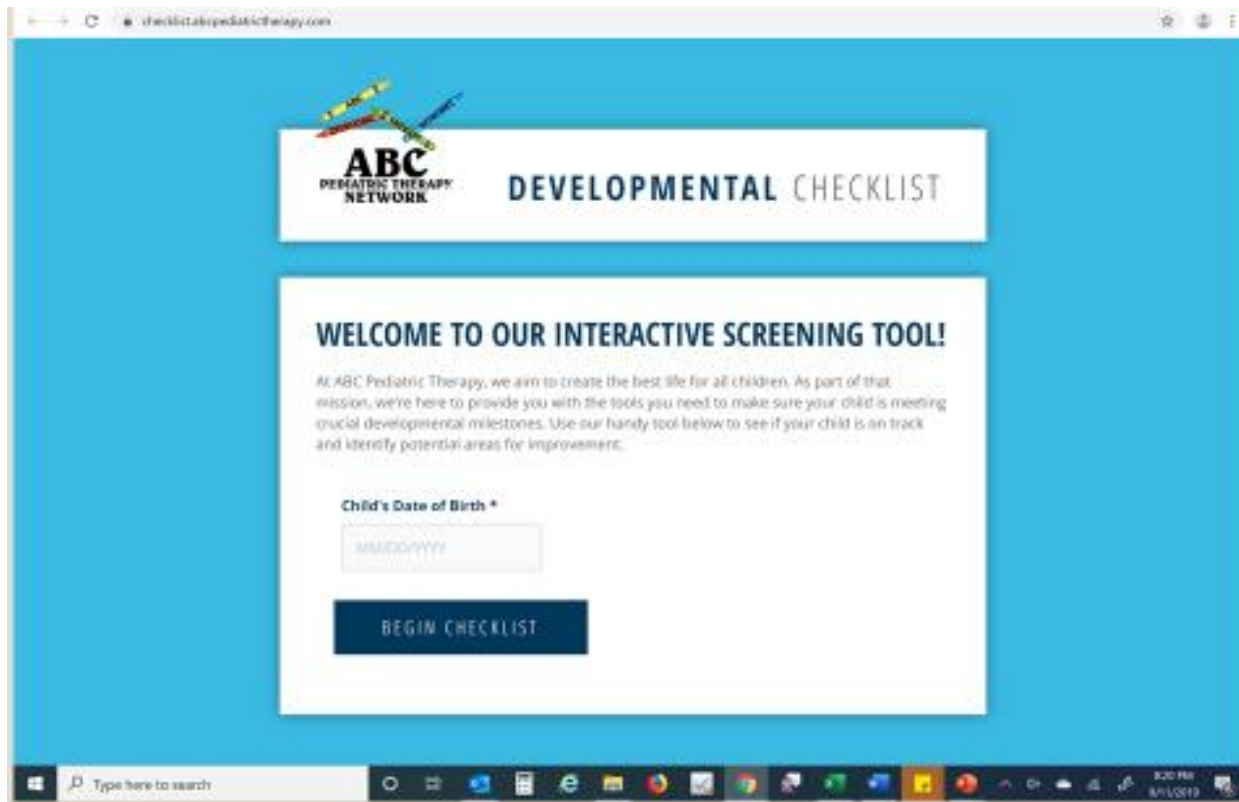




SI vs Behavior


- ▶ Look at trends
- ▶ What happened right before the meltdown?
- ▶ Are there other signs that there could be a sensory concern?
- ▶ Does the child have the language skills to communicate their wants and needs?

Interactive Screening Tool



The screenshot shows a web browser window with the URL checklist.pediatrictherapy.com. The page has a blue background and features the ABC Pediatric Therapy Network logo, which includes a colorful graphic of a child's legs and arms. The main heading is "DEVELOPMENTAL CHECKLIST". Below this, a white box contains the text "WELCOME TO OUR INTERACTIVE SCREENING TOOL!" followed by a paragraph explaining the tool's purpose. A form field for "Child's Date of Birth" is present, with a placeholder "MM/DD/YYYY". A dark blue button labeled "BEGIN CHECKLIST" is positioned below the form field. The Windows taskbar is visible at the bottom of the browser window.

checklist.pediatrictherapy.com

 **DEVELOPMENTAL CHECKLIST**

WELCOME TO OUR INTERACTIVE SCREENING TOOL!

At ABC Pediatric Therapy, we aim to create the best life for all children. As part of that mission, we're here to provide you with the tools you need to make sure your child is meeting crucial developmental milestones. Use our handy tool below to see if your child is on track and identify potential areas for improvement.

Child's Date of Birth *

MM/DD/YYYY

BEGIN CHECKLIST

Type here to search

8:20 PM 3/1/2019

Collaborating with Teachers

- ▶ Loop together everyone involved through email – school therapists, outpatient therapists, teachers, etc.
- ▶ Communicate often

RESOURCES FOR PARENTS

- ▶ *Biel, Lindsey (2005) *Raising a Sensory Smart Child: The Definitive Handbook for Helping your Child with Sensory Integration Issues*. New York, NY: Penguin Books
- ▶ *Kranowitz, Carol (1998) *The Out-of Sync Child: Recognizing and coping with Sensory Integration Dysfunction*. New York, NY: Berkley Publishing Group
- ▶ *Kranowitz, Carol (2003) *The Out-of Sync Child has fun: Activities for Kids with Sensory Integration dysfunction*. New York, NY: Berkley Publishing Group

ABC Services

Therapy Services

- ▶ Physical Therapy
- ▶ Speech Therapy
- ▶ Occupational Therapy
- ▶ Funding support
- ▶ Patient Advocate

Community Outreach

- ▶ Sensory Santa
- ▶ Miracle league
- ▶ Bike riding clinics
- ▶ Playgroups
- ▶ Parent learning seminars
- ▶ Community education!



Convenient locations

- ▶ **Beavercreek: (937) 427-9200**
- ▶ **Miamisburg: (937) 281-1286**
- ▶ **West Chester: (513) 755-6600**
- ▶ **RedBank Road: (513) 271-2419**
- ▶ **Western Hills: (513) 922-5437**



i will let them be little
fill their hearts with
Laughter
help them grow wings
nurture their sense
of **wonder**
inspire them to believe
and love them like there
is no tomorrow