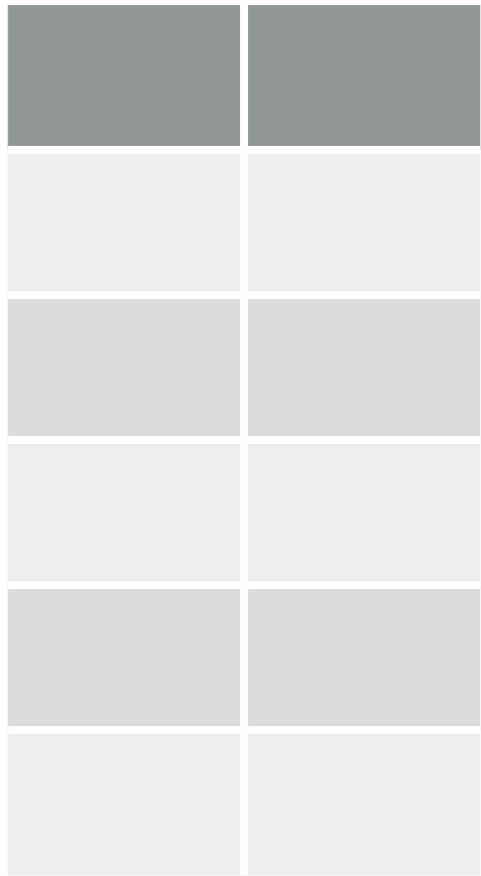




UNDERSTANDING THE RELATIONSHIP BETWEEN SENSORY PROCESSING & EARLY CHILDHOOD MENTAL HEALTH

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Current Behaviors of Concern



Learning Objectives

Describe

Describe the sensory systems

Identify

Identify adaptive response as self-regulation & daily activities

Recognize

Recognize adaptive response difficulties in self-regulation & daily activities

Far Sensory Systems

- Sight
- Smell
- Touch
- Taste
- Hearing

These senses detect information from outside the body.



- Touch
- Vestibular
(balance/gravity/movement)
- Proprioceptive
(joint/muscle/body position)

These senses detect what is happening within the body.



Near
Sensory
Systems

What is Sensory Processing?

Sensation integration adaptive response

From input (sensation) through the brain as “middle man” that “makes sense” of senses and organizes body (integration) to output (adaptive response)

Adaptive response is manifested in our **self-regulation** and performance of daily activities.

Regulation



Self-regulation- the ability to adjust or regulate the level of alertness depending on the time of the day and the experience presented



Dysregulation-A state of distress



Co-regulation - when a person needs another person to calm or soothe them

Figure AB-17: Limbic System
(Cross-Coronal Section)

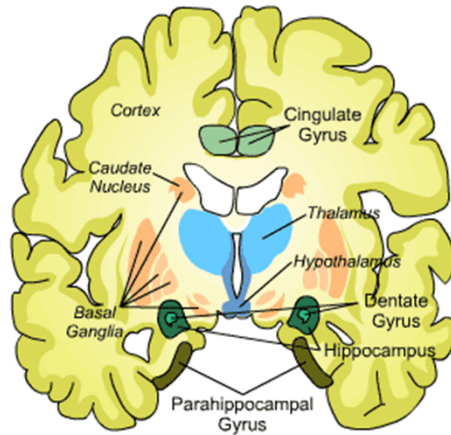
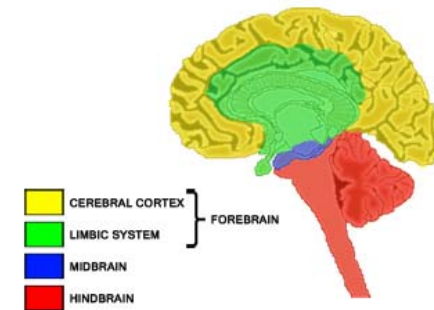
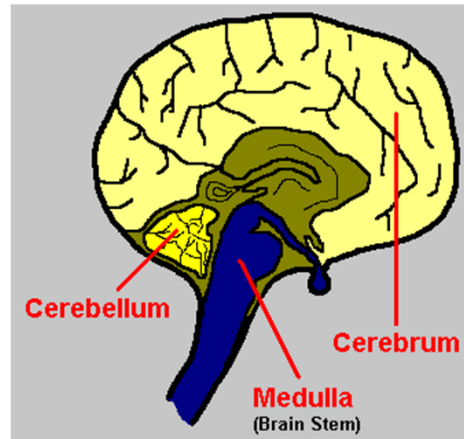


Diagram colors are consistent with Figure AB-16.



LET'S GO "BRAINY"

How do you self-regulate?



At home...



At work...



In the car...



Other places...

Airplanes
Medical appointments
?

Self- Regulatory Behaviors: Big People

Kicking leg

Doodling

Twisting hair

Chewing on pen cap

Drinking ice water

Listen to music

Sleeping

Eating chocolate

https://www.google.com/search?q=chewing+pen+caps&rlz=com.microsoft.en-USIE-Address&rlz=117WQIB_enUS531&tbm=isch&imgil=0vxhE4biN18DUM%253A%253BIEYL7_NyNUbsnM%253Bhttps%25253A%25252F%25252Fwww.flickr.com%25252Fphotos%25



Self-Regulatory Behaviors: Little People

Screaming

Falling down

Running away

Shutting
down/Ignoring/Daydreamin
g

Sleeping

Sucking/Nursing

Hair twirling

Lovey Blanket or stuffed animal

Reframing Behavior?

How could they be regulating for the child?	

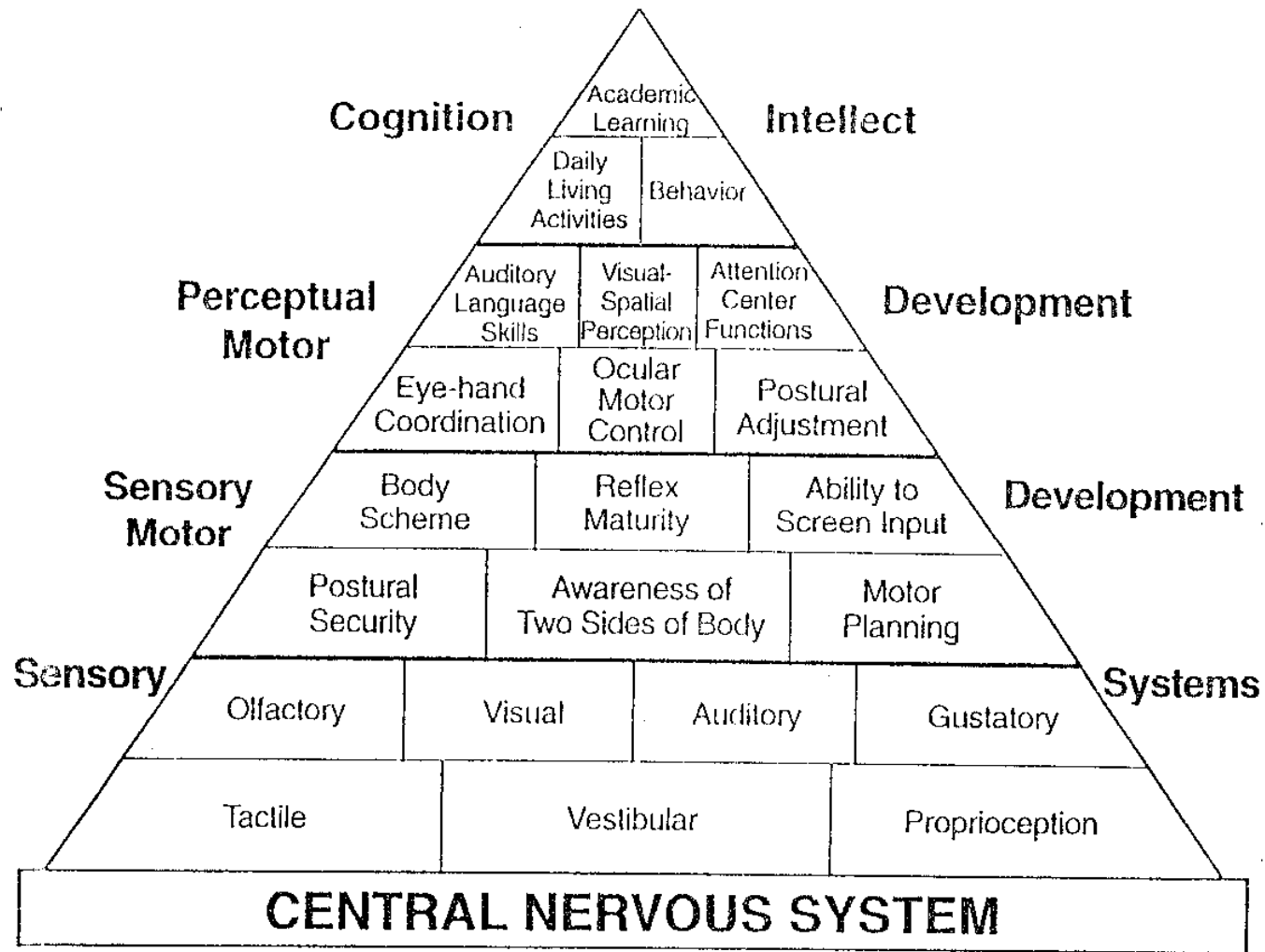


Figure 1-3. Printed with permission.

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1-4 "How does your engine run?"

What is Sensory Processing?

- How does this sensory system get its start?
- Just “right state” for learning: revved up enough to stay awake, but not too revved up so that you cannot pay attention.
- Computer analogy: input, processing info, output.
- Well integrated sensory processing contributes to an individual’s ability to self- regulate/ to get in a “just right state” for the “occupation”

Adult Activities

Daily Activity	Senses
Driving	Vision, Hearing, Proprioceptive, Smell
Attending a meeting	
Dip netting	
Picking berries	

Adult Activities

Daily Activity	Adaptive Response
Driving	
Attending a meeting	
Dip netting	
Picking berries	

Adaptive Response

https://www.youtube.com/watch?feature=player_embedded&v=Oo85Bkm-Ano

Daily Activity

Senses

Child
Activities

Hypersensitivity

- The brain processes sensations too intensely
 - Lack Filters

These children may:

- Appear to overreact to casual touch
- Are negative and defiant at times and fearful or cautious at others
- Avoid movement and crowded situations

Hyposensitivity

The brain processes sensations less intensely than normal.
The child is not getting adequate sensory information.

These children may:

- Bump into walls or people
- Appear withdrawn
- Fatigue easily
- Look "spacey"
- Are oblivious to painful sensations
- Are unable to read body language or facial expressions

It's
complicated



Mixed presentation



Presentation may be influenced by time of day, sleep, hunger, allergies, emotions, relationships, environment, expectations...

When
should we
be
concerned?



When sensory-based
behavior interferes
with daily activities



What are you seeing
with your kids that
may make you
concerned?



When does a
personal preference
become disruptive?

4 Patterns of Sensory Processing

Seeking/Seeker

Obtaining input

Seeks out more intense and longer sensory experiences

Avoiding/Avoider

Bothered by input

Moves away from sensory input

Patterns of Sensory Processing

Registration/Bystander

Misses input

Does not notice sensory input

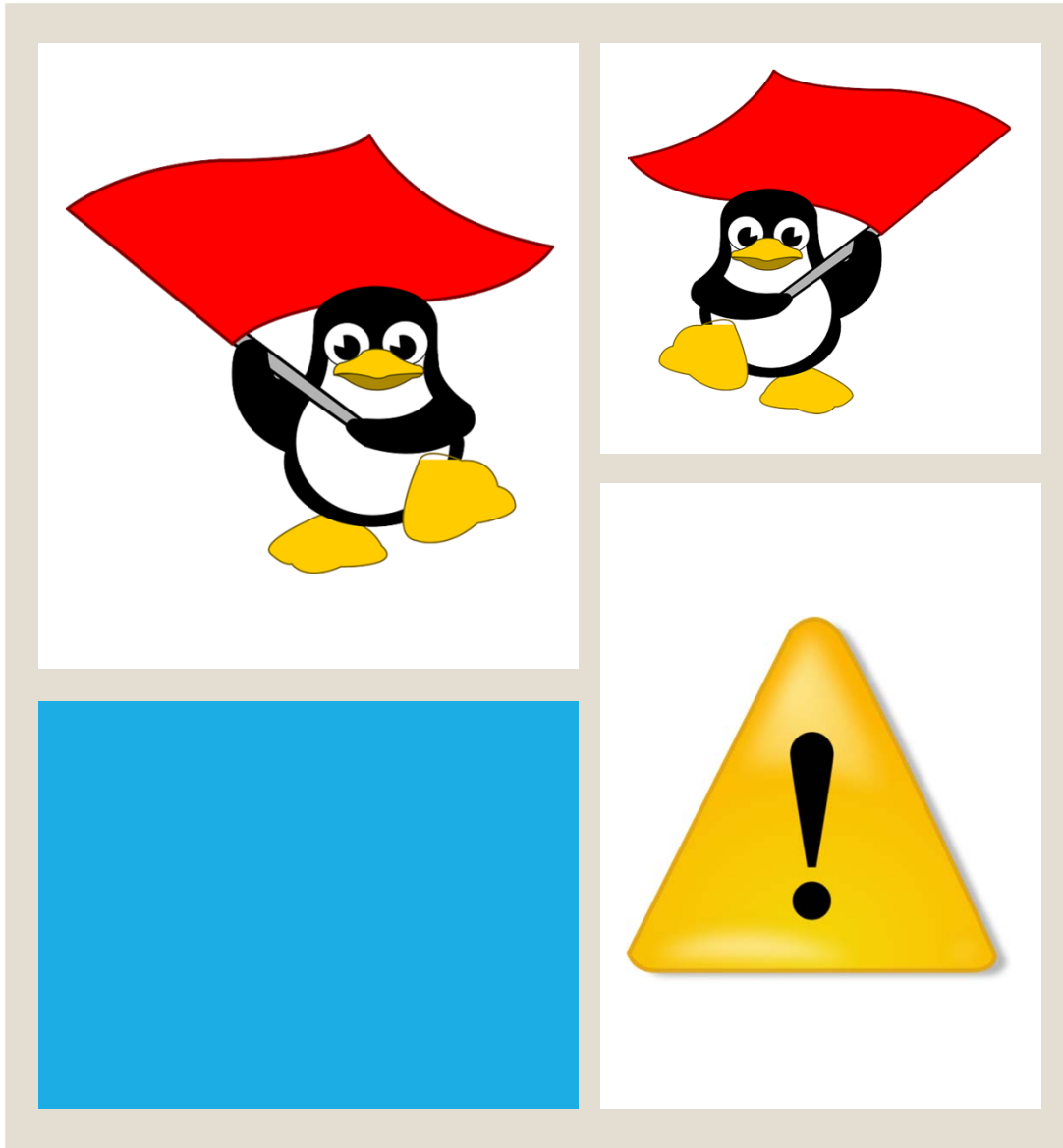
Sensitivity/Sensor

Detects input

What's "typical"?

Age-appropriate behavior

- 12-24 months – No! frustration
- 24-36 months - independence, imitation, poor impulse & emotion control
- 3-4 years – Do it myself!, cooperative play, empathy, imagination
- 4-5 years – better impulse control, adults as role models, reflects on feelings



RED FLAGS
FOR SENSORY
PROCESSING
DIFFICULTIES

Auditory:

- Child responds negatively to loud sounds
- Child cannot filter out background noise
- Child holds hands over ears
- Child seems oblivious within an active environment

Sensory Processing Disorders retrieved 8/25/14 from www.developmental-delay.com/page.cfm/250

Auditory-Language Processing Problems

- Unable to pay attention to one voice or sound without being distracted by other sounds
- Distressed by noises that are loud, sudden, metallic or high pitched
- Has trouble putting thoughts into words
- Has trouble staying on topic

Visual

- Child prefers to be in the dark
- Child hesitates going up and down stairs
- Child avoids bright lights
- Child stares intensely at people or objects
- Child avoids eye contact



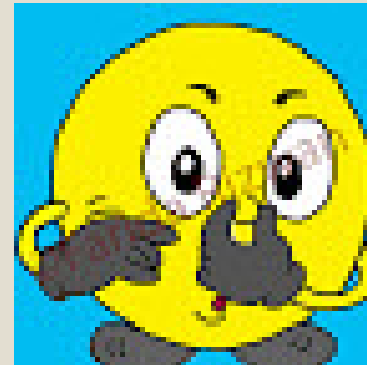
Sensory Processing Disorders retrieved 8/25/14 from www.developmental-delay.com/page.cfm/250

Visual/Perceptual Sensory Processing Problems

- Closes or covers one eye, squints or shields eyes
- Has trouble looking from one place to another
- Dislikes moving objects, animals, or people
- Has trouble tracking moving objects
- Poor sizing and spacing of letters when writing
- Confuses right & left, up & down
- Poor fine motor skills
- Fatigues easily

Taste/Smell

- Child avoids certain tastes/smells that are typically in his/her diet
- Child routinely smells nonfood objects
- Child seeks out or avoids certain tastes or smells



Sensory Processing Disorders retrieved 8/25/14 from www.developmental-delay.com/page.cfm/250

Oral Sensory

- Overly sensitive to texture of foods
- Overly sensitive to temperature of foods
- Is unable to lick crumbs off lips or imitate simple tongue movements
- Drools when concentrating
- Chews on clothing when stressed
- Poor articulation
- Overstuffing mouth while eating



Vestibular

- Child becomes anxious or distressed when feet leave the ground
- Dislikes swinging, spinning or sliding
- Easily becomes motion sick
- Hates roughhousing
- May have loose & floppy body
- Feels threatened when head is upside down or tilted
- Child seeks movement constantly
- Child takes excessive risk, no concern for safety

Proprioception

- Deliberately bumps & crashes into objects or people
- Stomps feet on ground when walking
- Child continually seeks movement
- Has trouble positioning body when someone is helping him dress
- Over or under grips crayons & pencils
- Has difficulty grading the amount of pressure needed
- Child hangs on other people, furniture, and objects
- Tires easily-poor endurance in gross motor activities.



Touch (Tactile)

- Child avoids messy play
- Child is sensitive to certain fabrics, textures
- Over/Under reacts to physically painful experiences
- React negatively and emotionally to light touch sensation
- May not like teeth or hair brushed



What does it look like?

- Jumps from one activity to another frequently and it interferes with play
- Has difficulty paying attention
- Is accident prone
- Has difficulty making friends
- Has difficulty expressing emotions
- Seemingly unprovoked aggression
- Withdrawn



End Part 1

Intermission

Begin Session 2

A Child's View on Sensory Processing:

<https://www.youtube.com/watch?v=D1G5ssZIVUw>

Learning Objectives

- Review previous objectives
- Identify emotional factors and reactivity that relate to sensory dysregulation
- Learn and apply strategies to address sensory related behavior
- Identify when to refer for evaluation

Emotional
Factors that
contribute to
Sensory
Dysregulation:



Trauma



Poor attachment/disrupted
attachment



Dysregulated care providers

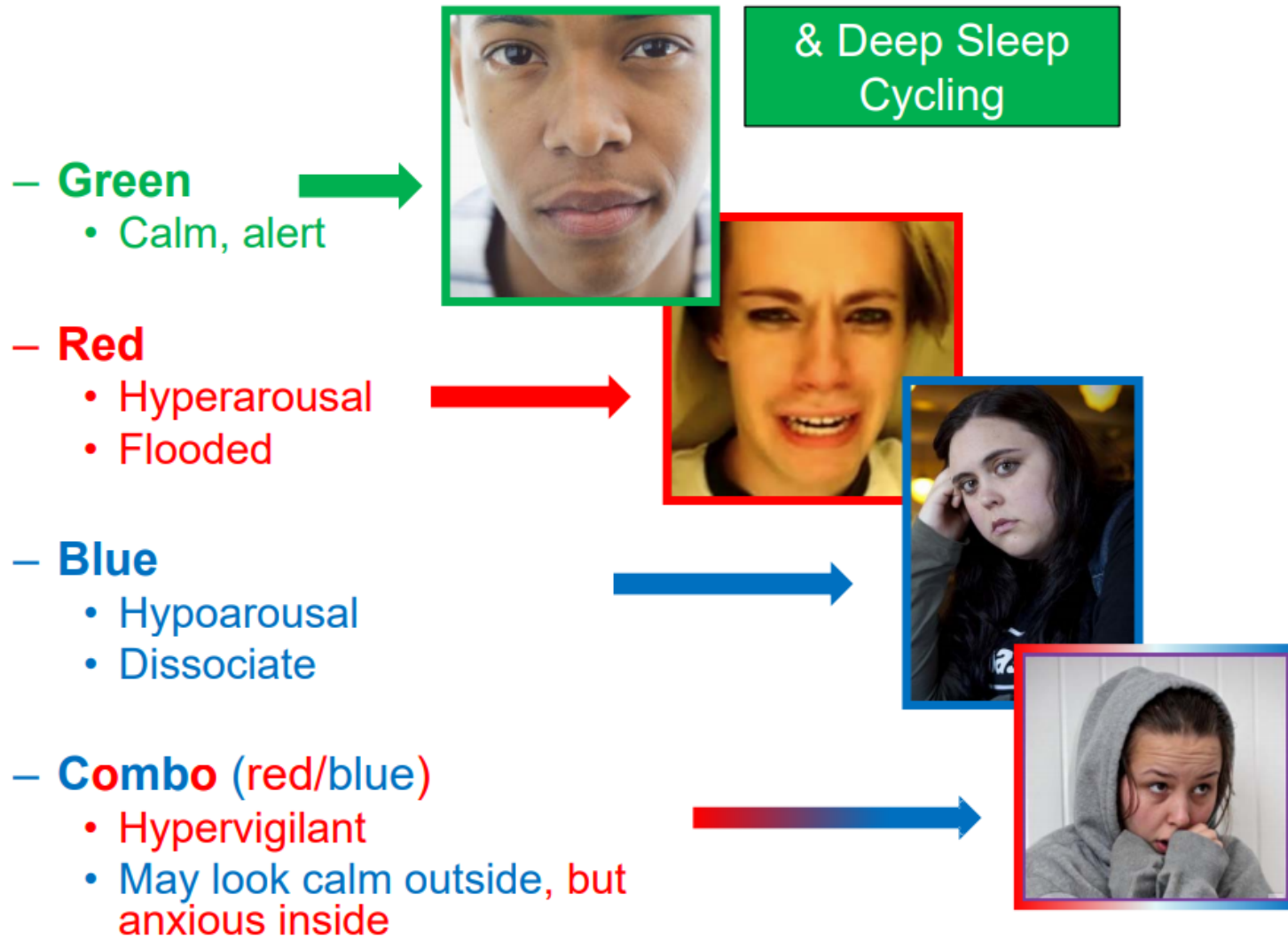


Prolonged stress

Regulation and Stress Response

- A way to think about what children and adults look like when they are in a 'just right', 'too flooded', or 'too slow' place
- The goal is to have both care taker and child in 'just right'

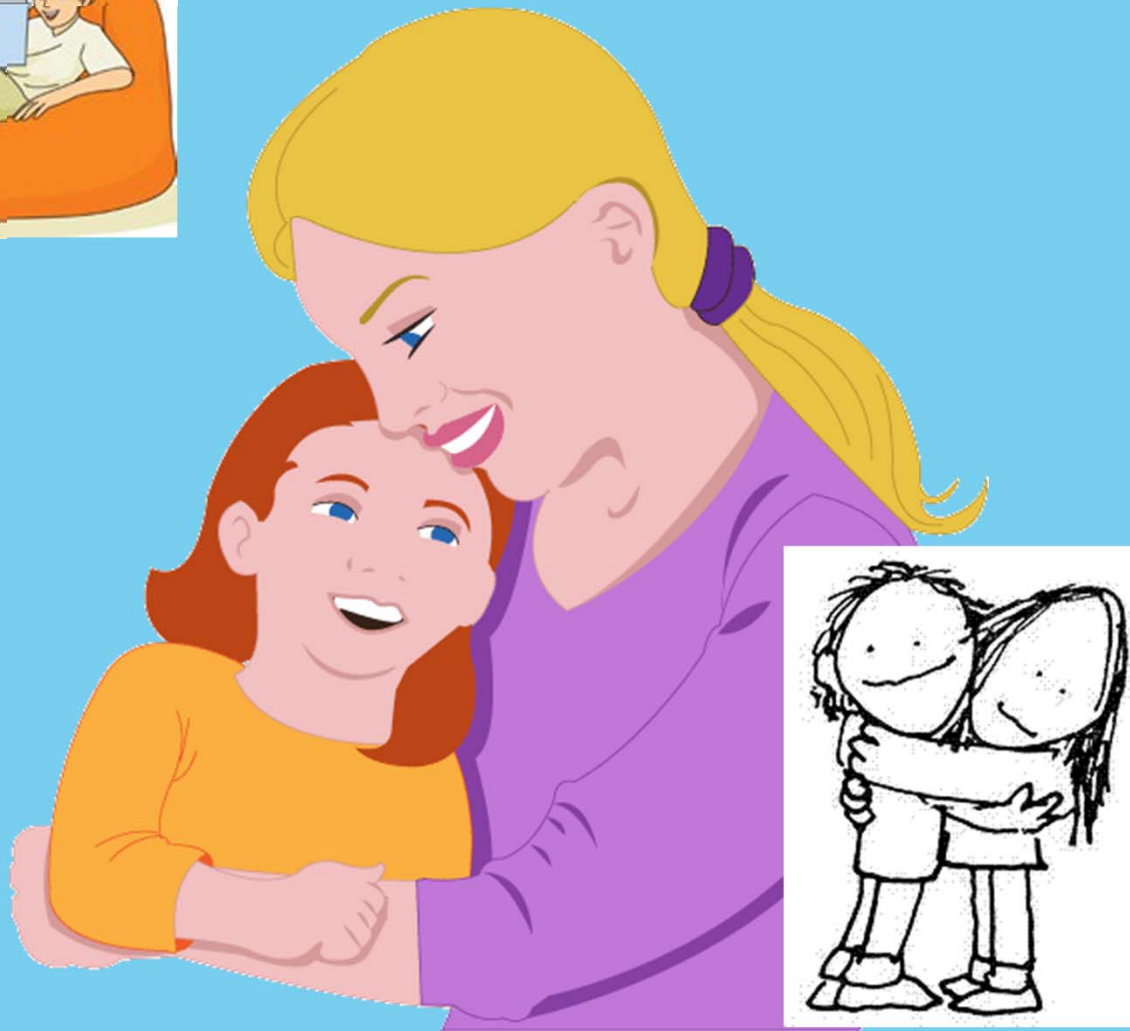
Arousal Zones Across the Lifecycle



Emotional Reactivity: Signs of poor sensory integration

- Overly aggressive so others to keep their distance
- Overly passive in movements and interactions Defensive about behaviors
- Fatigued, fearful, or anxious

So now what?



Calming
the system
enough to
engage
children in
learning



Safe and Engaging Environments

- Provide a sensory sensitive environment
- Keep yourself regulated & "warm"
- Use consistent limits & expectations
- Keep routines
- Prepare for transitions
- Respect child's physical boundaries and tolerance level

4 Patterns of Sensory Processing

Seeker (Active)

Seeks out more intense and longer sensory experiences

Needs action and input

Avoider (Active)

Bothered by sensory input
Small cup kid-a little goes a long way

Moves away from sensory input

Bystander (Passive)

React more slowly to sensory input
Large cup kid-needs a lot to react

Sensor (Passive)

Picky about what they want to do.
They can't figure out what to attend to.

May be more sensitive to details that are not important to others.

Read a Child's Signs

- Think of a child you know
- What is the pattern of child's behavior?
 - Specific sensory triggers?
 - Particular time of day?
 - Particular environments?
 - Particular people ?
 - Transitions?

Sensory Strategies for Success



BASIC



CALMING



ALERTING

Basic Strategies

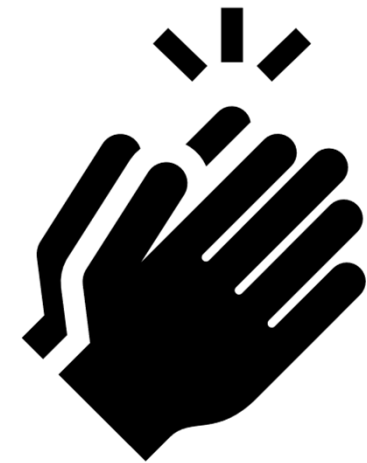
- Prepare child for transitions
- Set Limits
- Age-appropriate expectations
- Developmentally appropriate expectations
- Redirection
- Distraction
- Limited choices
- Identify and prepare for triggers (people, places, times)
- Caregiver regulation
- Think space
- Limit screen-time
- Knowing when to stop a strategy
- Name the child's regulation state (red, green, blue)


Calming Strategies

- “Heavy work” :
 - pushing/pulling heavy objects such as loaded laundry basket
 - Heavy blankets and stuffed animals to carry and hold
 - Sucking thick yogurt/milkshake through a straw
 - Chewy food items (cheese, bagels, dried fruit)
- Snug clothing and big hugs
- Water play with warm water
- Gentle, rhythmical linear rocking
- Big breaths and pre-school yoga
- Aromatherapy with calming scents, eg lavender essential oil
- White noise (classical music)
- Natural lighting (avoid florescent or bright lights)

Alerting Strategies

- "Heavy work"
- Quick movements
 - Jumping
 - Clapping
 - Spinning
 - Running
 - Climbing
- Eating crunchy foods
- Drinking and eating cold items





Given what you know, what strategies would you try now?

Revisit the
Child:

OTHER FACTORS
CONTRIBUTING TO
SENSORY PROCESSING
DIFFICULTIES

GI factors



GERD/reflux



Food allergies and sensitivities



Constipation



Hungry



Low blood sugar levels

Physical Factors:



ENT (ears, nose, throat) issues



Vision



Developmental Factors



Specific Diagnoses

Sleep factors:

Too much? Not enough?

Too hot? Too cold?

Too light? Too dark?

Too noisy? Too quiet?

Inconsistent sleep routine?

Screen time too close to bedtime?

Guthrie, L. (2013). Effects of Screentime Before Bedtime retrieved 8/25/14 from <http://babygooroo.com/2013/01/effects-of-screen-time-before-bedtime/>

Substance
exposure
can
impact
self-
regulation:



Meth – sleep disturbances , 7-8 months



Tobacco – failure to thrive, colic, irritability



Alcohol (FASD) – easily overloaded, hyperactive, difficulty concentrating, impulsive, stubbornness.



Opioids – resistant to cuddling and soothing, poor focus, sleep disturbances.

Where to go next?

Always a Concern

- Unaware of touch or pain
- Responds to touch with aggression or withdrawal
- Afraid of or becomes sick with movement and heights
- Upset in loud or busy environments
- Difficulty with imitating movement
- Trouble with balance or bilateral coordination

Sometimes a Concern

- Engages in unsafe behaviors
- Insists that sounds are too loud
- Very cautious
- Very picky eater
- Concern on developmental screening (ASQ-3)

What is OT?

- Occupational therapy
 - Helping individuals be successful within the “occupations” of their day
- Compensate, adapt, modify
- Graduate level education
- Professionally licensed
- Variety of settings

Community Resources

- Social/Emotional Behavioral Services
- Early Intervention
- Physicians
- School District
- Headstart

Resources: Websites

- <http://spdsupport.org/> (Support and resources for Sensory Processing Disorder (SPD) families)
- <http://asensorylife.com/> (Sensory information and resources developed by Angie Voss, OTR)
- www.sensoryresources.com (resources about sensory related topics)
- <http://out-of-sync-child.com/> (links to books, articles, podcasts, and webinars that are SI related)
- www.spiralfoundation.com: (Sensory Processing Institute for Research and Learning; recommend clicking on "resources", then "fact sheets", then "fact sheet for parents")
- <http://spdfoundation.net/> (Sensory Processing Disorder Foundation; recommend clicking on "About SPD" to get started)
- www.sensory-processing-disorder.com (Lots of practical information and activity suggestions)
- <http://www.developmental-delay.com/> (a website for a specific clinic in TN, but lots of good information/articles in the left hand column under "HOME")
- <http://www.happiestbaby.com/> (Dr. Karp /5 S's, colic, and more!)
- www.zerotothree.org (a wide variety of developmental information)

Resources: Books

- The Out of Sync Child by Carol Stock
- The Out of Sync Child has Fun by Carol Stock
- The Sensory Sensitive Child by Karen Smith and Gouze
- Sensational Kids by Lucy Jane Miller
- Sensory Integration and the Child by A. Jane Ayres

Resources

- American Occupational Therapy Association at www.aota.org
- Regional Center
- Local School Districts
- Private clinics
- The Out of Sync Child by Carol Kranowitz available at most bookstores and at www.amazon.com
- SI Network at www.sinetwork.org
- Sensory Integration International website www.siinternational.org
- www.RADTeach.com by Judy Willis, M.D., M.Ed. – Brain Based Learning

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