

Interoception

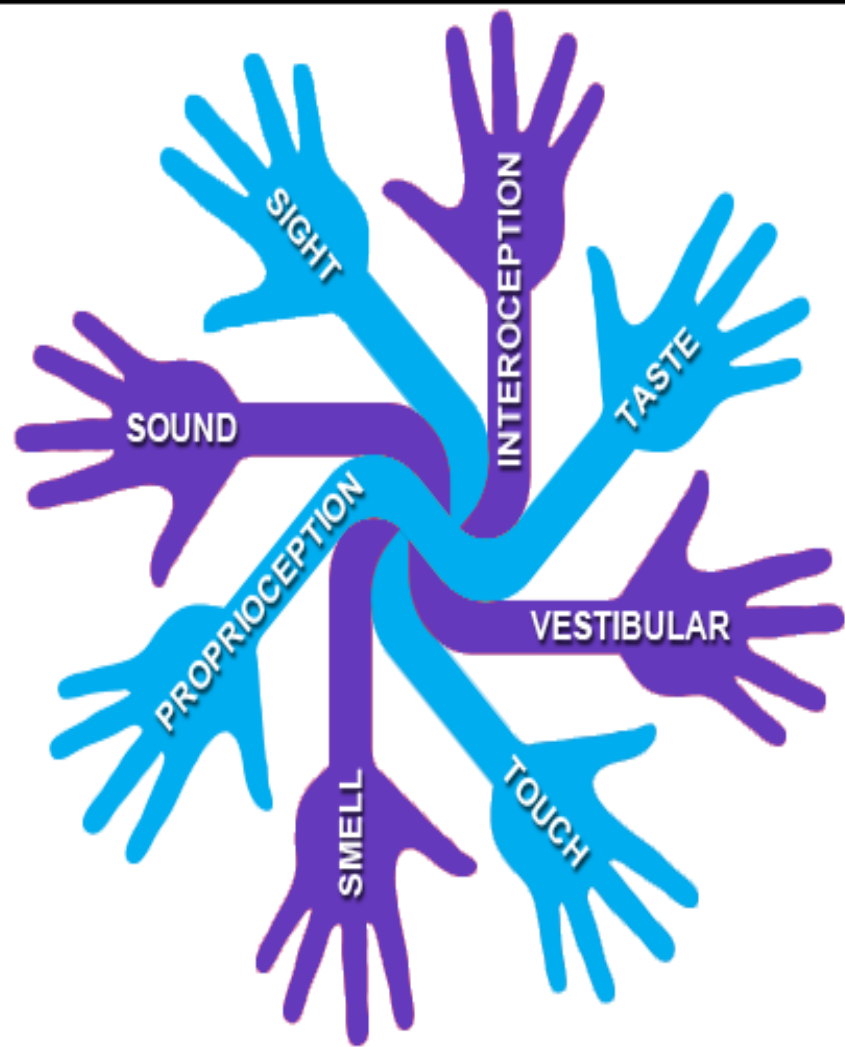


Mehrnaz D. Azimi Green, OD, FCOVD
Kraskin Invitational Skeffington Symposium 2019
Washington, DC

Sit back and close your eyes



Our 8 Senses



Interoception

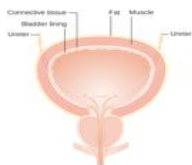
Heart



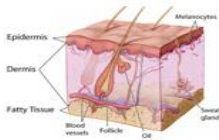
Kidneys



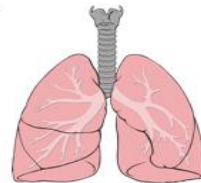
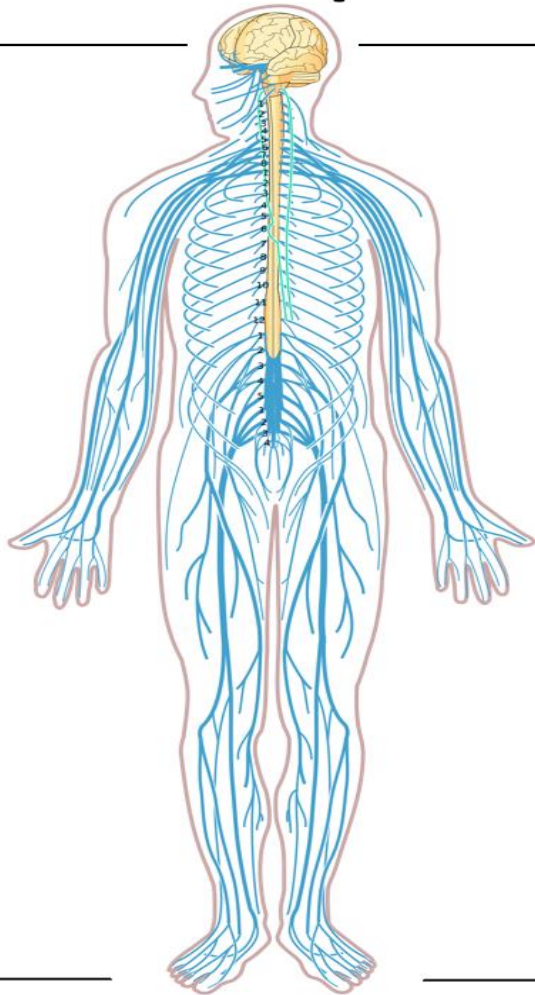
Bladder



Skin



Hormones



Lungs



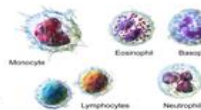
Stomach



Intestines



Bone

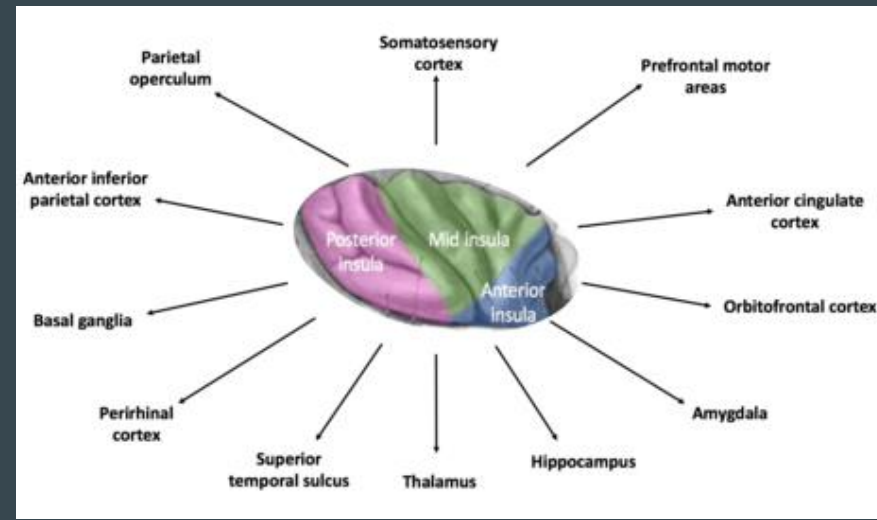
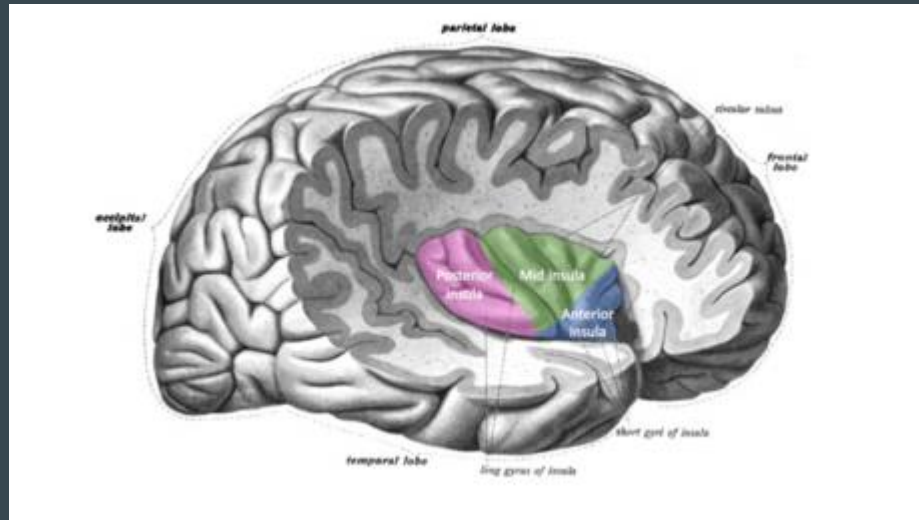


Immune c

Interoception

- Hunger
- Fullness
- Thirst
- Needing the Bathroom
- Nausea
- Constipation
- Pain
- Illness
- Sleepiness
- Body Temperature
- Itch
- Heartbeat
- Respiration
- Muscle Tension
- Sexual Arousal
- Physical Exertion
- Sensory Overload
- Emotions

The Insula is the Interoceptive Center of the Brain



Interoception is Multifaceted

Facet	Operational definition
Attention	Observing internal body sensations
Detection	Presence or absence of conscious report
Magnitude	Intensity
Discrimination	Localize sensation to a specific channel or organ system, and differentiate it from other sensations
Accuracy (or sensitivity)	Correct and precise monitoring
Self-Report	Reflect upon one's own experiences of interoceptive states, make judgments about their outcomes, and describe them through verbal or motor responses

Interoceptive Awareness (IA)

The ability to notice the body signal and connect meaning to that body signal



Interoceptive Awareness (IA): Healthy Levels

- Self-awareness
- Self-regulation (body state regulation and emotional regulation)
- Social thinking
- Flexibility of mind
- Problem solving
- Intuitive social skills
- Social participation

Poor IA Linked to many Disorders

- Anxiety
- Depression
- SPD
- ADHD
- Eating Disorders
- Obesity
- Schizophrenia
- Dementia
- OCD
- Trauma Disorders
- Panic Disorder
- Suicide Attempters & Planners
- Drug & Alcohol Addiction
- Chronic Pain Syndromes
- Autism

Interoception & Emotions

Emotions linked to physical sensations

There are emotional triggers that we feel in our bodies, interoception allows us to identify our emotions



Sensory Modulation Disorder

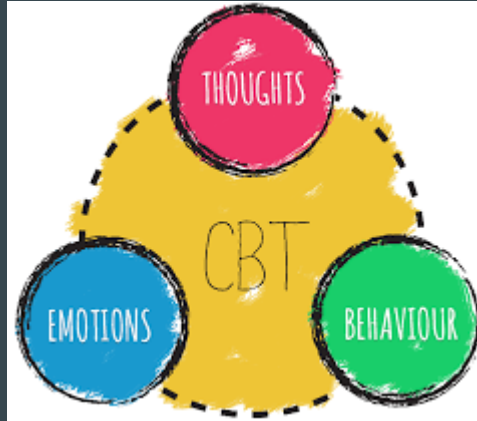
- Hyper-responsive
- Hypo-responsive

Sensory Discrimination Disorder

Body signals are noticeable, but not clear enough to give specific detail about the exact location or type of feeling

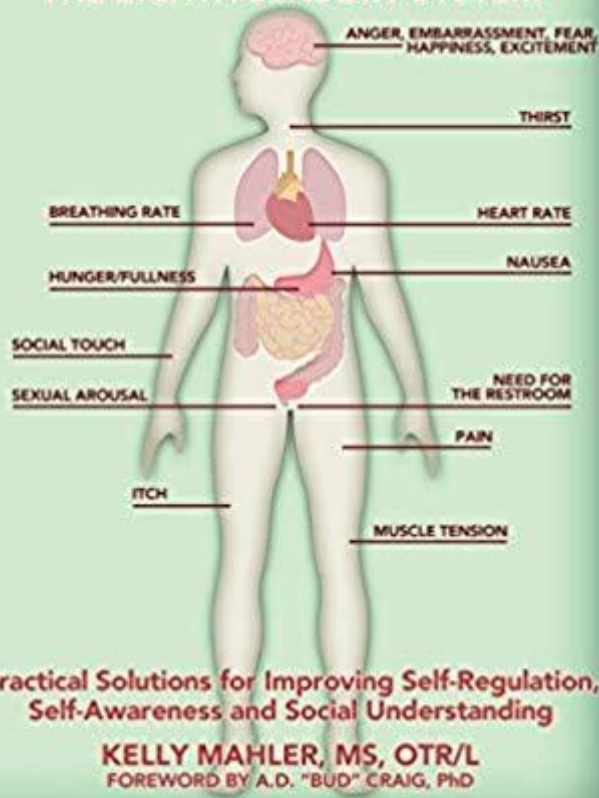


Multiple Treatments



INTEROCEPTION

THE EIGHTH SENSORY SYSTEM



Practical Solutions for Improving Self-Regulation,
Self-Awareness and Social Understanding

KELLY MAHLER, MS, OTR/L
FOREWORD BY A.D. "BUD" CRAIG, PhD

2 Types of Interception Strategies

1. Adaptations for reduced IA
2. IA Builders

Framework for IA Builders

- BODY-Build the learner's ability to NOTICE body signals in a concrete and slow method
- EMOTION - Guide the learner to CONNECT body signals to emotion
- ACTION-Guide the learner to find a variety of feel-good actions that help the learner REGULATE

Teach Awareness of Different Body Parts

Body Check Chart






















Teach State Changes



Teach Awareness of Feeling



Teach Vocabulary

Daily Check In				
Sleep				
Tired 	Sleepy 	Awake 	Alert 	
Eating				
What? 	when 	Hungry 	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Body Check-In				
Brain 	Head 	Eyes 	Nose 	
Mouth 	Throat/Neck 	Voice 	Heart 	
Lungs 	Intestines 	Hands 	Feet 	

Connect to Emotions



Teach Self Regulation Skills

When I feel...



WILD, SILLY, WOUND UP



Angry, Mad, Frustrated



CONFUSED,
LOST, DON'T
UNDERSTAND



UPSET, DISAPPOINTED, SAD

I can...



Take deep,
slow breaths



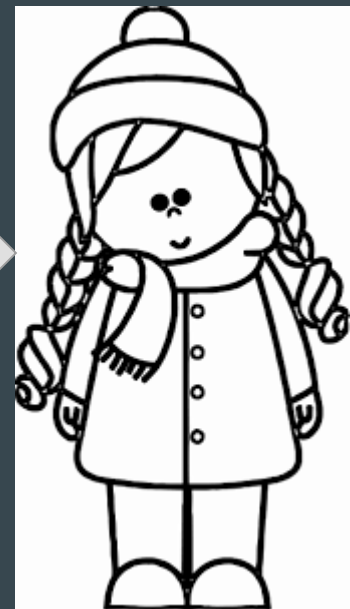
Ask for a short break to count
slowly and calm down



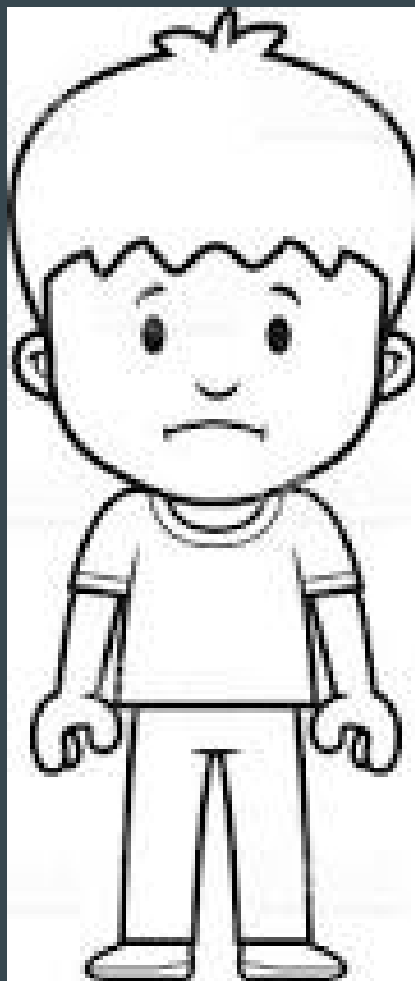
Talk to an adult. They want to
help me learn and grow!



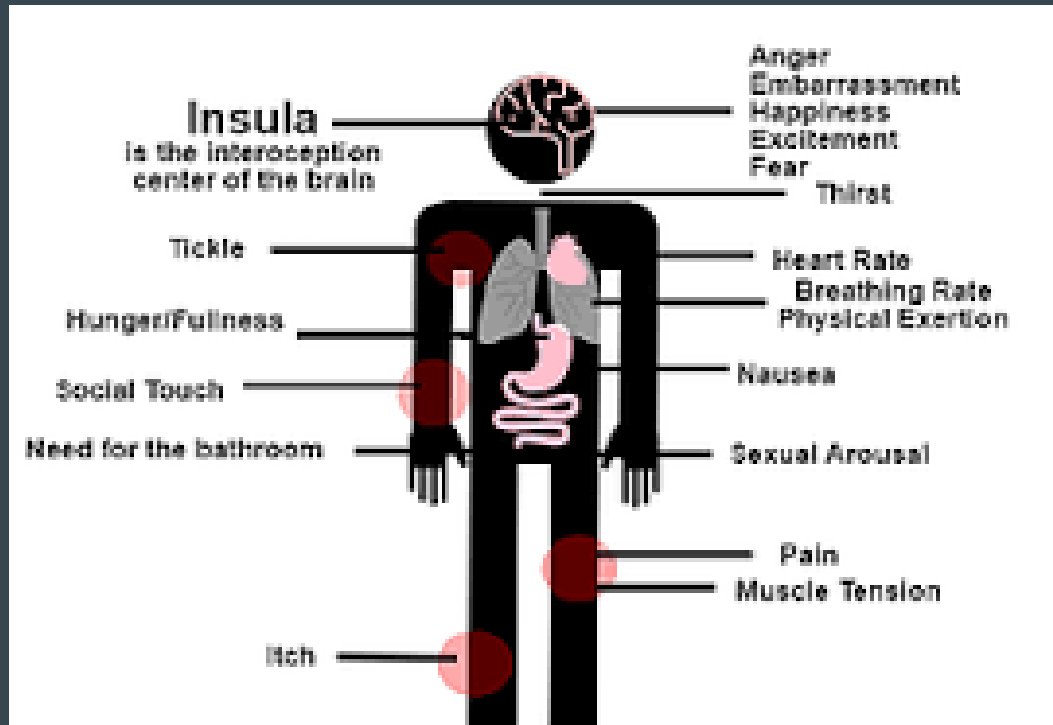
Talk about my feelings
with a friend or a teacher



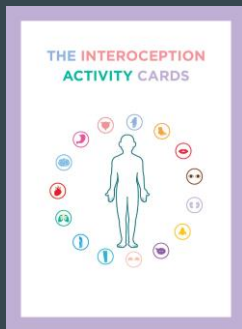
Case



Conclusion



Thank You!- Questions?



Interoception

The Eighth Sense

In Sensory Processing Disorder the interoceptive Sense can wreak havoc on a child's wellbeing and mental as well as physical health

Thirst

Heart and Breathing rate

Itch

Arousal

Muscle soreness or tension

Emotions, embarrassment, fear, anger, sadness

Nausea/Hunger

Urge to use the bathroom

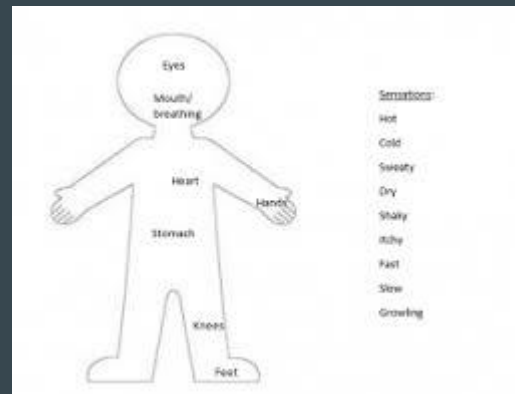
Social touch

Pain

Interoceptive Underresponsivity
A child can be unaware of hunger pains or thirst, get hurt without noticing or not feel pain internally although something is wrong.

Interoceptive Overresponsivity
A child may have constant aches and pains, always be hungry and/or thirsty and be hyper aware of touch or textures.

www.OlympiaTherapy.com



THE SENSORY SYSTEMS

The Interoception System

The interoception system is the internal sensory system of the body. The receptors for this system are located in the organs, muscles, and skin. Interoception is responsible for the sensations of hunger, thirst, temperature changes, bathroom needs, and any other internal body sensation.

Sensitivity Symptoms

- Difficulty with toileting (bed wetting and accidents)
- Unable to track hydration or food intake (never feel thirsty or hungry or may always feel thirsty or hungry)
- Difficulty in recognizing and communicating internal body states or sensations (feeling hot/cold, pain, etc.)
- Difficulty regulating emotions and feelings (not feeling they are angry before they verbally or physically lash out)
- Distracted by internal sensory input such as hearing their heartbeat
- Unable to tell how loud their voice is in an environment; may use sound to cover up unwanted sensory stimuli

Activity Suggestions:

- Mindfulness activities
- Yoga
- Heavy work activities
- Alerting activities
- Proprioceptive and Vestibular input
- Visual prompts and cues to identify and communicate emotions
- Social stories

WWW.GROWINGHANDSANDKIDS.COM