

Field, T. Touch Research Institute <www6.miami.edu/touch-research>


Silva et al. (2009). QST program Sensory Massage.<www.qsti.org>


- Basic mindfulness activities improved executive functioning in elementary school students, with the greatest improvement seen in children with the initially worst attention and self-control difficulties (Flook et al., 2010).

- Mindfulness intervention with adolescents who had conduct disorder significantly reduced their anxiety, depression (Biegel et al., 2009), aggression, antisocial (Diamond & Lee, 2011; Singh et al., 2007), and self-injurious behaviors (Miller et al., 2007).

- Pediatric PTSD interventions that improved self-regulation included exercise, mindfulness, sensory enhanced yoga, and massage (Perry, 2009; Stoller et al., 2012).

- Yoga and meditation improved behavior in students with special needs (Koenig et al., 2012).

- Focus on feet significantly improved behavior in adolescents with Prader-Willi Syndrome (Singh et al., 2008) and aggression in conduct disorder (Singh et al., 2007).
SITTING UPRIGHT IN SEAT DO 3 REPETITIONS
★ Zip FRONT & BACK OF, NOT TOUCHING BODY
ZIPPING YOUR TRUNK UPRIGHT AND YOUR LIPS
★ SIGN LANGUAGE CHEER DO SIGN LANGUAGE CHEER
★ BOTH HANDS TOUCH HEAD, SHOULDERS, STOMACH (OR SUBSTITUTE)
★ NOSE BREATHE: TAKE 3 DEEP BREATHS
IN STOMACH GOES OUT, FINGERS OPEN WIDE,
OUT STOMACH GOES IN FIST THUMB, DOUBLY SLOW BREATH
★ BIRD-TAKE 3 DEEP BREATHS
WINGS UP BREATHE IN
WINGS DOWN BREATHE OUT
MINDFUL CLOCK SITTING/STANDING, BODY AWARE P. 5

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(Greenland, 2010; Koester, 2012)

★ MINDFUL CLOCK SITTING
TIC SWAY FORWARD TOC SWAY BACK
LIKE A SWAY FORWARD CLOCK SWAY BACK
‘TILL WE SWAY FORWARD FIND OUR SWAY BACK
CENTER MOVE CENTER
TIC SWAY LEFT do a righting reaction (head and trunk flex uphill)
TOC SWAY RIGHT do a righting reaction (head and trunk flex uphill)
LIKE A (Sway Left) do a righting reaction (head and trunk flex uphill)
CLOCK (Sway Right) do a righting reaction (head and trunk flex uphill)
‘Till WE (Sway Left) do a righting reaction (head and trunk flex uphill)
FIND OUR (Sway Right) do a righting reaction (head and trunk flex uphill)
CENTER (Move Center)
★ MINDFUL CLOCK STANDING
TIC SWAY FORWARD TOC SWAY BACK
LIKE A SWAY FORWARD CLOCK SWAY BACK
‘TIL WE SWAY FORWARD FIND OUR SWAY BACK
CENTER MOVE CENTER
TIC -SQUAT DOWN
TOC -STAND ON TOES
LIKE A -SQUAT DOWN
CLOCK- STAND ON TOES
‘Til WE -SQUAT DOWN
FIND OUR-STAND ON TOES
CENTER MOVE CENTER
★ SENSORY: Front-Back-Top-Bottom-
★ TENSE & RELAX MUSCLES
TENSE AFTER I SAY 1-2-3-GO IMMEDIATE RELAX
TENSE PRUNE & GRAPEFRUIT DRINK FACE (3 X)
ELEVATE BOTH SHOULDERS (3 X)
MAKE FISTS TO SQUEEZE ORANGES INTO JUICE (3 X)

★ CIRCLES
Neck, Shoulders, Hips-Circle then Infinity

★ FOCUS BOTTOM OF THE FEET /PALMS after press together (Singh et al., 2011)
• **Flex & Extend Shoulder & Ankle:**
  - **Same side:** Right shoulder-ankle simultaneously
  - **Opposite:** Right shoulder left ankle simultaneously
  - **Same half:** Right shoulder, left ankle, and left shoulder half way up and down, by joining right shoulder

• **4-4-6-2 Breathing:**
  - 4 seconds BREATHS IN
  - 4 seconds HOLD BREATH
  - 6 seconds BREATHE OUT
  - 2 seconds HOLD BREATH

(Brown & Gerbarg, 2012)
Mindfulness is paying attention to what you are currently doing, which is important for all functional occupations and new learning. It can also be a valuable daily or crisis coping strategy.

In OT think about client preferences and developmental levels to choose among mindfulness options:

- Weight lifting, Isometrics, Cardio exercise
- Crafts & Fine Motor Hobbies
- Movement/Dance/Stretching
- Yoga, Brain Gym, Bal-A-Vis-X
- Progressive Relaxation
- Mindfulness/Meditation
- Self-Massage, Therapyball, Sensory Activities
- Massage
1. Sensory Discrimination Disorders—difficulty distinguishing, interpreting, and organizing sensory information for functional use, contributing to disorganization and school difficulties. Sensory Discrimination Disorders can be for tactile, proprioceptive, vestibular and interoception sensory input e.g., hunger (Miller & Collins, 2012; Miller et al., 2007; Watling et al., 2011)

Tx-Light touch, deep pressure touch, Awareness of front-back, top-bottom of body through movement, obstacle courses, touch. Core input.
BACK X & SPINE CRAWL

X MARKS THE SPOT   X on entire back

WITH A DOT DOT DOT   3 dots with your fist

AND A LINE LINE LINE   3 horizontal lines

AND A QUESTION MARK   ? on entire back

“CRACK AN EGG ON YOUR HEAD fist egg

LET THE YOKE RUN DOWN” finger yoke (2 X)

CREEPY CRAWLIES UP YOUR SPINE

    spine crawl with knuckles both sides spine

CREEPY CRAWLIES DOWN

    palms down both sides spine
2. Sensory Based Motor Disorders

A. Dyspraxia—sensory integration difficulties resulting in problems planning and doing non-habitual skilled motor tasks (Schaaf & Mailloux, 2015). More common in PDD, predicting difficulties in social, imitation (Dzuik et al., 2007), sensory processing, language, & behavior skills (Lane et al., 2010). Sig greater SI and praxis problems in Sx (Chan et al., 2009) and Child neglect (Bauer et al., 2009). Praxis:

a. Ideation-Know what want to do

b. Motor Planning-Steps/sequence

c. Execution-Act

B. Postural Disorders—Dynamic balance difficulties (seen in sensory motor “soft signs”)
HOT CROSS BUNS ACTIVITY P. 12

(Meta-cognition: Sensory Discrimination, Sensory Based Motor)
BODILY-KINESTHETIC, INTERPERSONAL, AUDITORY, VISUAL & MUSICAL INTELLIGENCE

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• HOT (HIGH NOTE HIGH FIVE)

• CROSS (LOW NOTE LOW FIVE)

• BUNS (MEDIUM, HORIZONTAL FIST)

• ONE A PENNY TWO A PENNY

(No response)

• HOT (HIGH NOTE HIGH FIVE)

• CROSS (LOW NOTE LOW FIVE)

• BUNS (MEDIUM, HORIZONTAL FIST)
3. Sensory Modulation Disorders: Difficulty regulating sensory reception to respond to take in functionally important environmental information and screen out functionally irrelevant input. 2-5 year olds with PDD had significantly greater hyper-reactivity, hypo-reactivity, and self-regulation difficulties (Ben-Sasson et al., 2007; Silva & Schalock, 2011). Assessed by Sensory Processing Measure: Preschool (2-5 yrs.), Home or Classroom (5-12 years) or Sensory Profile.

a. Sensory Overresponsivity - Sensory Sensitive/Hyper-reactivity) react more to sensory. More than half of youth with Autism Spectrum Disorders showed auditory and tactile overresponsivity related to decreased amygdala & sensory cortex habituation (Green et al., 2015)

b. Sensory Underresponsivity - (Low Registration/Hypo-reactivity) do not notice sensory input, habituate quickly

c. Sensory Seeking- actively seek out sensory input

d. Sensory Avoiding- actively avoid sensory input (Watling et al., 2011; Schaaf & Mailloux, 2015)
SENSORY MODULATION STYLE

RATE from 0 (I'm Not/Strongly Disagree) to 5 (I Am/Strongly Agree)

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HYPORESPONSIVE
Low Registration

Quiet Alert State

HYPERRESPONSIVE
Sensory Sensitive
If significantly Hypo and/or Hyper-responsive Decrease, then if needed sequentially increase sensory input to maintain a Quiet Alert State

HYPO- RESPONSIVE
Low Registration

Quiet Alert State

HYPER- RESPONSIVE
Sensitive Sensitive
FOURTH BLOG SUPPLEMENT SLIDE

FAB ENERGY LEVELS/COLORS “Scents”

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LOW ENERGY

Hypo-Responsive

BLUE “Blueberry”

Feel: Numb
Act: Withdraw

MEDIUM ENERGY

Quiet Alert State

GREEN “Apple”

Feel: Happy
Act: Learn

HIGH ENERGY

Hyper-Responsive

YELLOW “Lemon”

Feel: Annoyed
Act: Scream

VERY HIGH ENERGY

EXTREMELY HYPER-RESPONSIVE

RED “Cherry”

Feel: Mad
Act: Hit
Interactions Between the Categories of Sensory Processing Disorder

Reference: (Miller et al., 2007)

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A. Sensory Discrimination Disorders

C. Sensory Modulation Disorders

B. Sensory Based Motor Disorders
PROGRESSIVE SENSORY-BASED INTERVENTION

1st Sensory Modulation Disorder
- Low Registration
  - Sensory Seeking
  - Sensory Sensitive
    - Gravitational Insecurity
    - Tactile Defensiveness
  - Sensory Avoiding

2nd Sensory Discrimination Disorder
- Interoception
  - Pain
  - Hunger
  - Thirst

3rd Sensory Based Motor Disorder
- Praxis
- Postural Disorder
- Ideation
- Motor Planning
- Execution

Gustatory
- Olfactory
- Visual
- Auditory

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References: (Miller et. al., 2007; Schaaf & Mailloux, 2015)