Occupational Therapy & CDKL5 – Jeanette Jones, MOT, OTRL
3rd International CDKL5 Family Conference – Chicago, 2016

**Occupational Therapy & CDKL5**

3rd International CDKL5 Family Conference
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**Overview**

- Explanation of OT and areas covered in treatment
- Sensory integration concepts and how the systems are addressed in treatment
- Activities of daily living
- Motor skill development (fine, oral)
- All discussed using a specific case study with child with CDKL5

**What is Occupational Therapy?**

Occupational therapy helps people achieve maximum performance in their occupations. When we are treating the pediatric population, we are focused on helping children with basic activities of daily living, play, function in school, and interaction with family and peers.

*Jessica Hunt, 2012*

**Challenges OT May Face**

- Profound disabilities
  - Decreased communication
  - Decreased motor abilities
  - Decreased motor planning skills and apraxia
    - Example: mounting/dismounting equipment
  - Medically fragile; can impact regulation, readiness to participate in challenges
  - Engage at the level and work up
  - Task analysis
  - Celebrate all achievements!

**System Interaction**

Motor

Sensory

Social Emotional

**Where to Begin…**

- Begin with sensory to support regulation, engagement, and interaction with others, environment, and task
- Proximal to distal strengthening
- More intense treatment sessions → better progress
- Expert in the field, parents expert on child
- Every child is unique!
  - Base treatment upon individual profile, modify as necessary!
Areas of Treatment

- Sensory processing
- Strengthening
- Activities of daily living
- Fine motor skills
- Oral motor skills

What is Sensory Processing?

Our ability to **take** information in from the environment, **organize** that information, and **interact and adjust** to the environment.

The Seven Systems

- Visual system
- Auditory system
- Tactile system
- Gustatory system
- Olfactory system
- Proprioceptive system
- Vestibular system

Regulation

- We use our sensory systems to support a state of regulation, one in which we are calm, attentive, organized, and able to meet environmental and social demands
- Regulation is the goal!

Goals of Using Sensory Strategies

- Increase engagement and interaction
- Increased ability to hold still and pay attention
- Increased ability to tolerate change
- Increased ability to generalize skills
- Increased social language
- Increased fine motor skills
- Increased praxis
- Increased organization
- Increased quality of life for family

Vestibular System

- Responds to acceleration and deceleration as well as angular and linear movement
- Detects change in direction and rate of movement
- Orient us to gravity, up and down
- Tells us where we are in space
- Maintains tone
- Stabilizes our visual field
- Produces postural control
- For all these things to take place, both receptive systems in the inner ear must be working
- Can be alerting or disorganizing
**Kiera’s Vestibular Processing**

- Used to alert her overall arousal level
- Enjoys swinging
- Slow, rotary supports engagement in tasks and with therapist
- Also used to address postural control strengthening

**Proprioceptive System**

- Unconscious awareness of body positions
- Relationship of body parts to each other
- Relationship of our bodies to other people and objects
- Tells us how much force to use
- Gradation of movement
- Provides conscious awareness of our bodies

**Kiera’s Proprioceptive Processing**

- Proprioceptive work is used to improve her overall body awareness
- Completion of obstacle courses
- Activate muscles and joints through resistance, thereby increasing overall strength
  - Can include AROM or PROM activities
- Began simple- worked to more complex

**Example of Proprioceptive Work**

**Tactile System**

- Sense of touch
- Skin covers most of our bodies
- One of the first modes of communication with the environment

**Kiera’s Tactile Processing**

- Primary regulatory system
- Used for calming and engagement
- Dry tactile stimuli
- Fidgets
Tactile Processing

Visual System
- Visual system important for task engagement
- Cortical blindness - vision therapy for individual treatment
- Field of vision
- Flashlights, tracking, Lite Brites
- Paired with organizing sensory activities
- Calming lights

Activities of Daily Living
- Increased work with improving independence in a variety of ADLs
  - Shoes/socks
  - Grooming work
  - Feeding

Kiera’s Activities of Daily Living
Shoes/socks - donning and doffing
- Increased adaptive strategies, such as visual cues, extended socks
  - Seating and positioning
  - Increased trials and repetitions

Grooming tasks
- Example: Hair brushing
  - Task Analysis
  - Preparatory work with range of motion, strength, motor planning
  - Make adaptations as necessary

Fine Motor Skills
- Promotes independence with activities of daily living
- Supports academic performance
- Strengthening work
Kiera’s Fine Motor Work

**Strengthening work**
- Theraputty, play dough, squish balls, tennis ball
- Started here!

**Engagement in pre-handwriting tasks**
- Coloring pages, horizontal and vertical strokes, loops/circles
- Increased work on grasp of utensils

**Dexterity tasks**
- Lacing beads, coins in a slot, bilateral tasks

Fine Motor Tasks

Oral Motor Skills

- Oral motor desensitization/readiness
- Feeding work (oral motor strengthening)

Oral Motor Skills

**Desensitization/readiness to engage in oral motor work**
- Vibration
- Cold
- Beckman stretches
- All facilitated with Kiera

Oral Motor Skills

**Feeding**
- Began with strengthening and endurance work
  * Chewy tubes, Theratubing, Ark Grabbers*
- TalkTools Oral Motor Protocol
  * Bite Blocks, Horns and Straws*
- Feeding
  * Slow chew, cube feed, straw work*
System Interaction

Motor
Sensory
Social-Emotional

Important to Involve Other Disciplines

- Holistic approach
- Physical therapy
- Speech-language therapy
- Cranial sacral therapy
- Intensity of treatment sessions
- Every discipline works together for improved performance and increased gains!

Questions?

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