

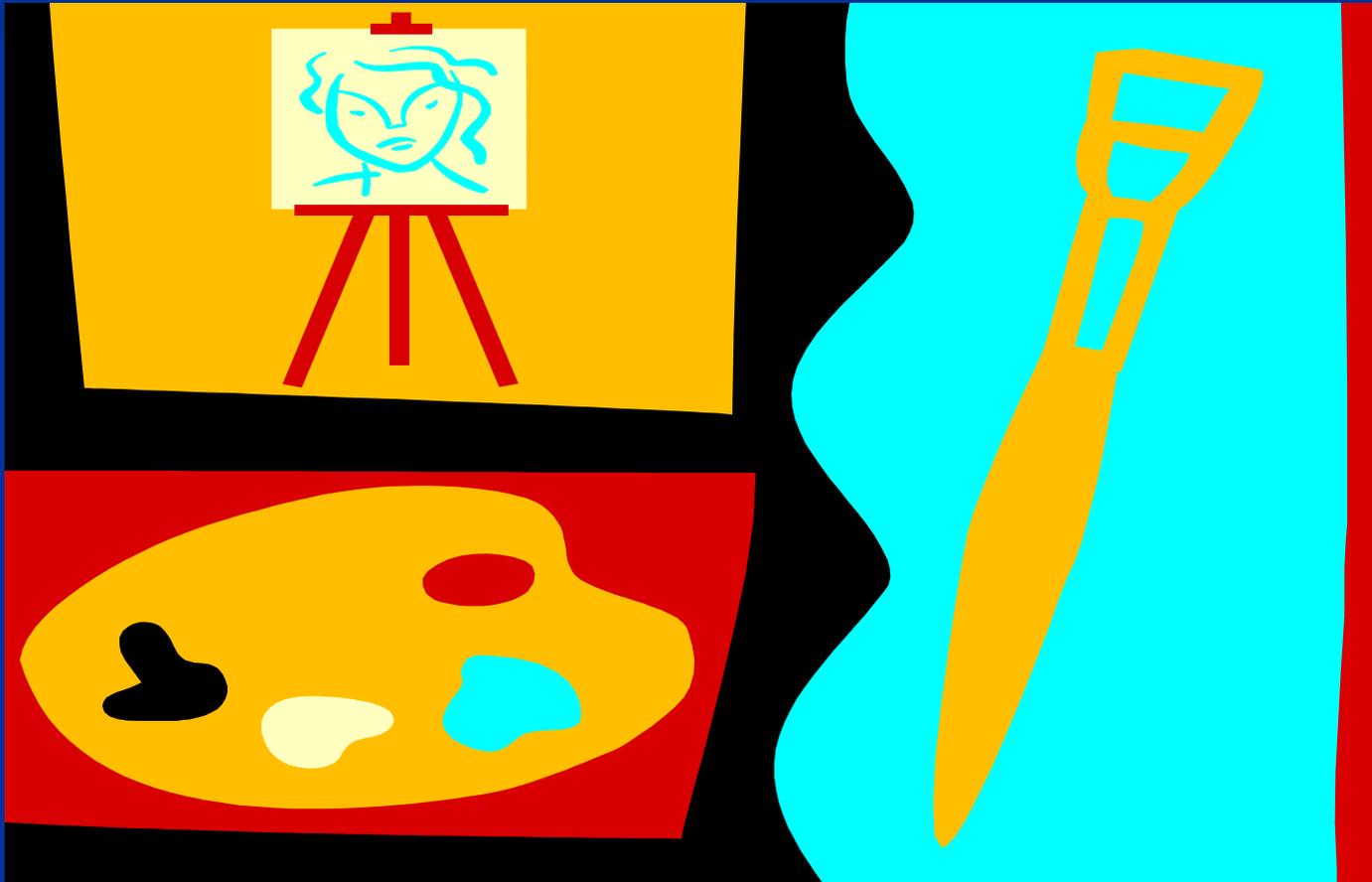
TAPPING YOUR  
SENSES TO CREATE  
BALANCE WITHIN

Maryann Sowerbutts

Occupational Therapist

# Occupational Therapy's focus in Mental Health

- What is Occupational Therapy?



# Occupational Therapy

- A therapy that uses functional activities and Activities of daily living to help people become as independent as possible.
- OT started out in Mental Health settings
- Most OT's work in Physical Dysfunction settings
- OT's work with individuals across all ages

# From stimuli to response

1. The brain is always receiving information from the sense organs.
2. The brain prioritizes the information allowing it to disappear if it is irrelevant.
3. If it is deemed important then the brain strengthens the signal sending it to the corresponding regions.
4. Sometimes the brain further instructs the body to move.
5. Safety and Survival always comes first, learning last.

# Nervous System

- CENTRAL NERVOUS SYSTEM

- Brain & Spinal Column



- PERIPHERAL NERVOUS SYSTEM

- All other nerves going to & from the Spinal Column including the limbs and organs
- Includes Somatic Nervous System and the Autonomic Nervous System

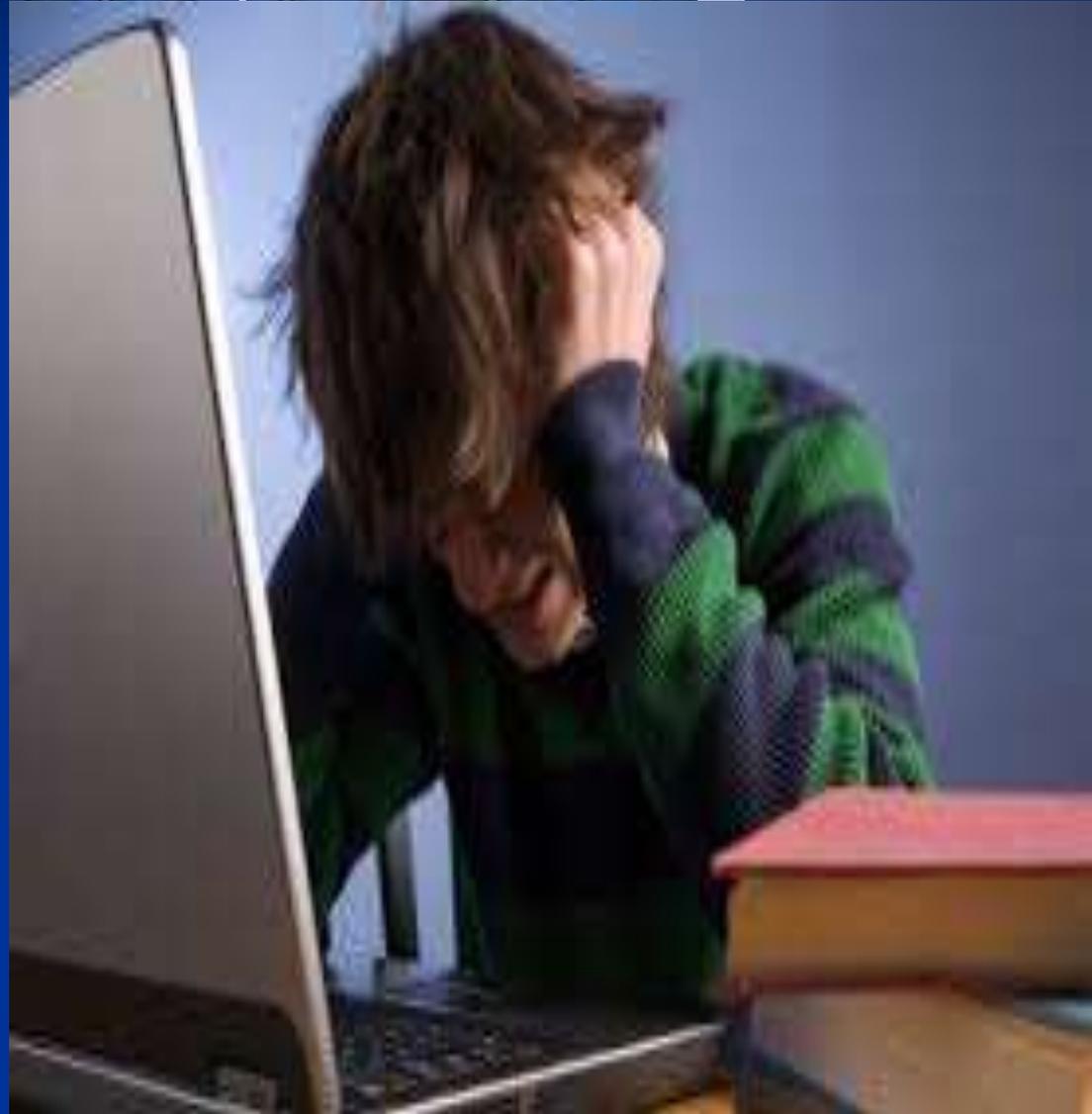


# Autonomic Nervous System

- Comprised of both Sympathetic and Parasympathetic NS which are constantly coordinating our ability to learn and our states of arousal
- Integrates autonomic and neuro-endocrine functions for homeostasis
- Every behavior has a subsequent autonomic response

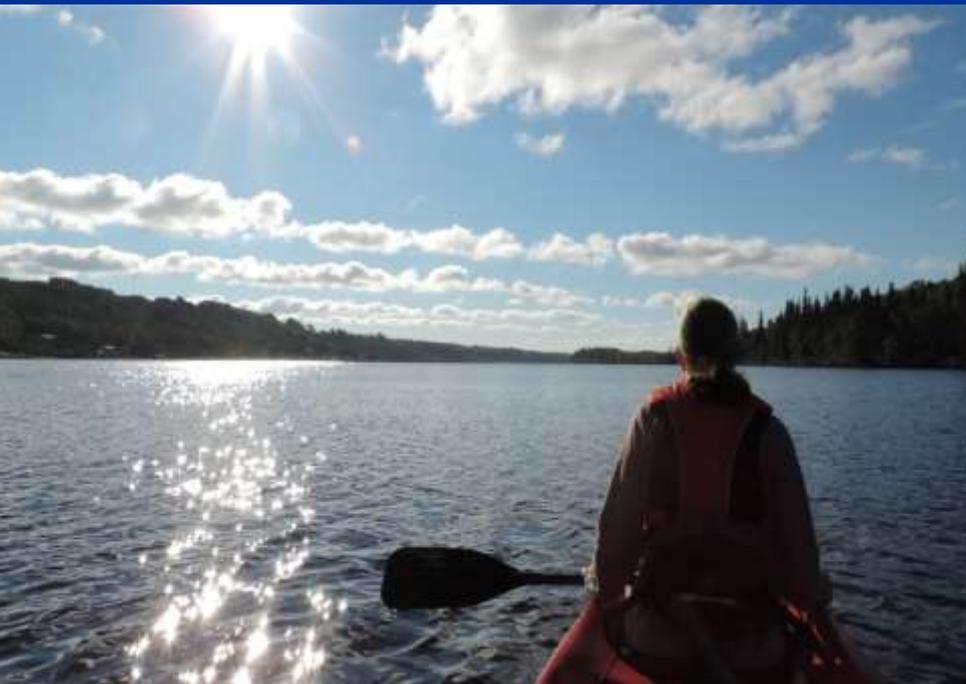
# Stress Reaction activates Sympathetic NS-Alerting

- Sympathetic NS  
Increases
  - HR, BP, RESP
  - Vasoconstriction to  
internal organs
  - Vasodilatation to  
skeletal muscles
  - Release of Nor  
epinephrine
  - Produces high states of  
arousal
  - Fight or Flight



# Parasympathetic NS activates - Calming

- Parasympathetic  
Decreases



HR, BP, RESP

Vasoconstriction to skeletal  
muscles

Vasodilatation to internal organs

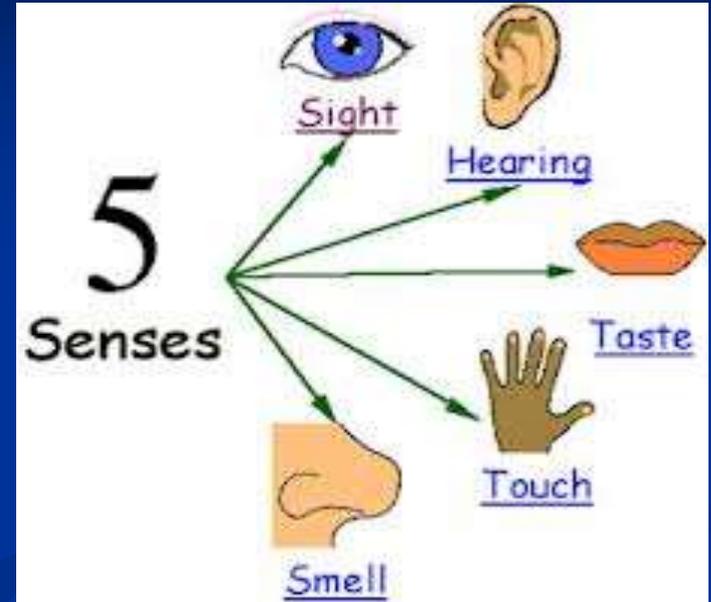
Release of Acetylcholine &  
Nicotine

Produces calmness

Rest and Digest, Breed and Feed

# SENSES

- Olfactory/Smell
- Gustatory/Taste
- Visual
- Auditory
- Touch



- Tactile/Deep Touch
- Proprioceptive
- Vestibular



# WHY SENSORY STRATEGIES?

- When we are feeling distressed, anxious or overwhelmed sensory strategies can be very helpful because they are immediate and available to all of us.
- All the sensory systems have a range and can either be calming or alerting
- After we assess our current state we can use these systems as we need them to regulate the responses in our bodies and change our internal chemistry. So, for example if we know we just had a stress response we can use our knowledge of strategies to produce the opposite, a calming affect on our system
- It is customized to our own preferences and history
- We all have different “thresholds”, so one person may need more input before they become aware of something another individual will need less.
- Most experiences are multi-sensory, it is rare that we experience just one sensation at a time.

# GENERAL CHARACTERISTICS

## CALMING:

- Mild/Soft
- Slow
- Rhythmic
- Simple
- Familiar
- Soothing
- Expected

## ALERTING

- Strong/Pronounced
- Fast
- Non-Rhythmic
- Complex
- Novel
- Irritating
- Surprising

# Visual sense



Vision is a complex and encompassing system that helps to integrate & coordinate many of the other sensorimotor systems

- It is constantly alerting and protecting us
- Crucial role in movement activities
- Helps us to perceive our environment
- Recognizes colors, patterns, depth and dimension

# Comfort Room Development

- There was a non-descript room, underutilized often used for storage. It was not therapeutic for patients or staff usage. After I obtained a grant the room was developed into a “Comfort Room”. A “Comfort Room” is a room which is used by staff and clients to promote more effective coping strategies and to defer the use of more restrictive measures such as restraints and seclusion.

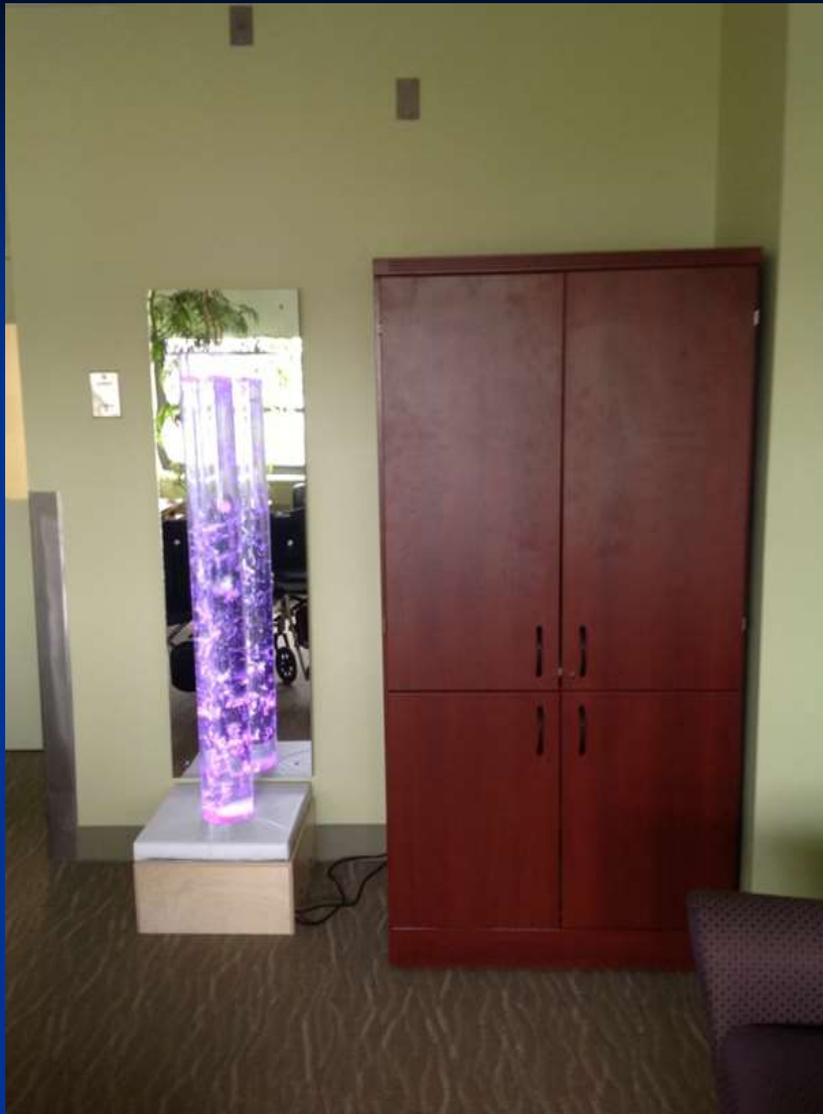




## Applying knowledge of sensory strategies:

- OUR COMFORT ROOM:
- ROOM COLOR: Pastel Colors are generally more calming. Green is a color found abundantly in nature. ROOM DÉCOR: Studies show people in hospitals prefer paintings of natural images to abstract art. Patient art was utilized in addition to a formal artist's mural. Plants add another touch of nature and life. Comfortable furniture and a rug help the room to feel less institutional.
- ROOM LIGHTING: Dimmer switches and a room darkening shade were used so light could be adjusted.
- SENSORY ITEMS: A glider rocker, bubbletube, & a computer and stereo speakers were added. The bubbletube uses water, a universal element

- YOUR HOME ROOMS:
- Think about the function you want to achieve in the room. A dining room will be different from a bedroom. Choose your color with this in mind. Primary colors are more alerting.
- Add personal artifacts meaningful to you, pictures, artwork, manipulatives.
- Try to utilize as many items that stimulate your senses. A rocker stimulates your Vestibular system and generally calms people.
- Can you incorporate sound, texture and scent?
- Most people can't buy a large bubbletube but what about a fountain or fish tank.
- Also pay attention to the furniture. You can easily change out cushions, blankets or throws if you cannot replace or add different pieces.









# Auditory/Hearing

- Loudness is influenced by amplitude and frequency affects pitch. Sound impacts mood, and our arousal level.
- First sense to be fully developed at birth
- Very personal, influenced by age, culture, ethnic background
- Rhythm effects our heart rate respond and our respiration



# Applying knowledge of Sensory Strategies:

- Multi-modal: We learn better when more sensory strategies are integrated.
- There is also a stronger impact when more than one sense is utilized. We are able to use a projected image to calm or stimulate along with the chosen music.
- Music has universal appeal. We should have a library of different musical genres and one of different sounds.
- Incorporating items such as chimes, or clocks for a calming or alerting effect.





# Tactile system/Deep Touch

- Tactile receptors register sensations of temperature, pressure, vibration, movement, and pain
- Helps the brain to differentiate boundaries.
- Deep pressure helps the body to feel organized, less chaotic
- Touch has significant effect on emotions
- As we age we are touched less and mentally ill individuals are touched less
- Strong emotional bonds are formed as we touch one another
- Lighter touch is generally more alerting to our systems

# Tactile Stimulation

## CALMING

- Strong handshake, touch on the shoulder
- Using weighted items
- Warm wrap
- Warm water
- Manipulating smooth items
- Pushing something, heavy work
- Lifting groceries, gardening

## ALERTING

- Someone brushing up against you
- Being touched lightly
- Cool towel
- Cold water
- Rough or texturized surfaces
- Sudden tap or sharp prick
- Novel or unpredictable surface

# Tactile Stimulation



# Vestibular



- ❑ Constantly assesses our changes in positioning and movement
- ❑ Critically linked with the visual, tactile, auditory and proprioceptive system
- ❑ Inner ear contains the receptors. Otoliths when stimulated release Serotonin, Semi-circular canals release Adrenaline
- ❑ Sensory organs in the Semi-circular canal help to regulate balance

# Vestibular System

## Calming

- Linear movement generally is calming, so straight driving, rocking back and forth, gliding on a porch swing
- Slow, steady movement



## Alerting

- Rotary movement is alerting to our system in general terms so moving in circular fashion, driving switchbacks, spinning in circles
- Quick, jerky movement





# Proprioception

- Receptors in our joints(position), tendons(load), muscles and ligaments(stretch detectors) tell our body where we are in space
- Tells us how much force to exert
- Helps us to feel grounded, secure and calm
- Becomes impaired under the influence of alcohol & certain drugs

# Proprioception

## Calming

- Slow, steady pressure
- Weight lifting or heavy work
- Yoga, Tai chi



## Alerting

- Rapid, changing movement
- Aerobic exercise
- Jumping





# Gustatory/Taste

Very individualistic

Food preferences associated with culture and locale

People seek oral motor stimulation to help with comfort, attention and overall control

Sweet, Sour, Bitter, Salty and Savory

# Olfactory/Smell

- Primitive, protective & powerful
- Unlike the other senses, smell bypasses the Thalamus & goes directly to the Limbic system, our seat of emotions
- Strong associations with scent
- Need to be conscious when using aromas because it is highly individualized and also because of allergic potential



# Taste and Smell

## Calming

- Natural smells
- Mild
- Pleasant
- Bland
- Sweet

## Alerting

- Smells that remind us of danger i.e. smoke, gas or pungent odor
- Strong
- Noxious
- Spicy
- Bitter

## Food Therapy

Smell is closely tied to our limbic and hippocampal regions of the brain, these have to do with emotions and memory.

So I have had clients who I haven't seen in years recall to me the food dishes that we made years earlier. It has been one of the most powerful therapy tools I have used. It cuts across all barriers. It is part of our celebrations as well as our traditions. It brings us comfort and nourishment.

- In the past there was a troubled client who was in & out of institutions. He had a tumultuous past that included gang activity. He refused to attend any of the scheduled groups and when he did attend was hostile and disruptive. Upon questioning the client about his interests he expressed that he used to cook professionally and enjoyed this activity. I encouraged him to join the cooking group and lead us in preparing a meal. Not only did he perform his duties, he demonstrated a proficiency, stayed on task, taught his fellow peers about techniques and helped oversee the group as a whole, all the while maintaining good behavioral control. He received accolades from his fellow group members and staff alike. Afterwards he thanked me for encouraging him to join the group and reported, "It really helped me to feel better".

“the best & most beautiful things in the world cannot be seen  
or even touched. They must be felt with the heart.”  
- Helen Keller



Maryann Sowerbutts  
Occupational Therapist  
[msotr14@gmail.com](mailto:msotr14@gmail.com)