



MAHEC PROJECT ECHO:

**Developing Resilience for
The Healthcare Workforce**

PAUSING TO TAKE A BREATH

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BREATHING & THE BODY

Breathing is intended to involve the diaphragm, a large muscle/tendon located in the abdomen (ceiling of abdominal cavity; floor of thoracic cavity).

When using the diaphragm, our belly rises when we inhale and falls when we exhale.

Deep breathing may seem unnatural and uncomfortable. It takes practice. Especially in Western cultures, we tend to use our neck, chest and shoulder muscles, which leads us to take breathes that are shorter and more shallow. Body image and the desire for a “flat” stomach have an impact.

Taking shorter and shallower breaths limits the diaphragm’s range of motion and the lower part of the lungs do not get a full supply of oxygenated air. This can contribute to increased stress and anxiety.

Our brain or body sensing that we cannot breathe or are not getting enough oxygen tends to lead to panic responses; the brain has a hard time focusing on other things. It focuses on the threat and on survival.

FIGHT/FLIGHT/FREEZE

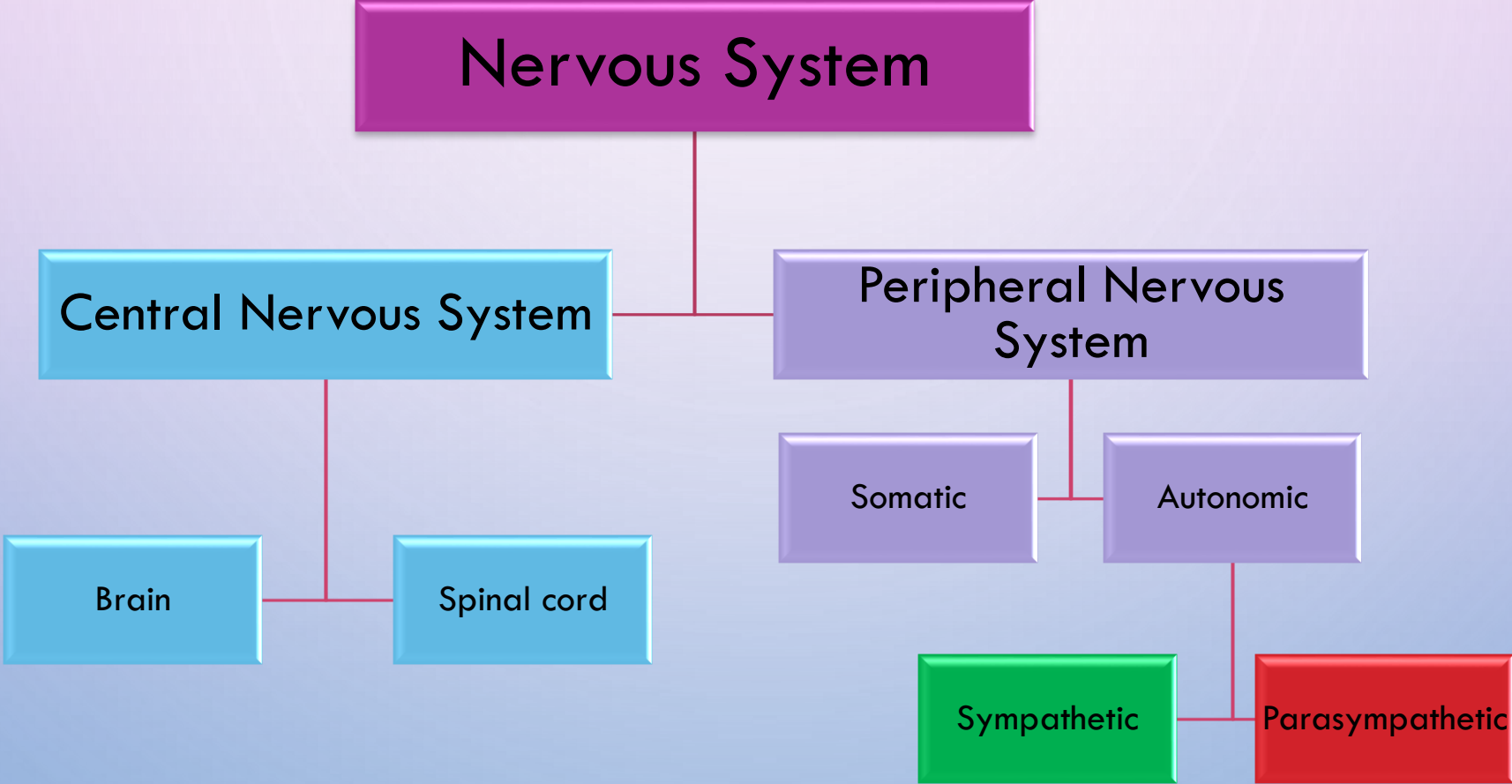
FIGHT/FLIGHT/FREEZE

- The body's stress response, as we prepare to cope with stimuli that has been assessed as dangerous.
- Helpful when the danger is a "tiger."
- May be less helpful when the stimuli either is not actually dangerous and/or is more of a "paper tiger."
- Can become problematic when the "alarm" system turns on frequently and/or remains "on" for extended periods of time.
- "Toxic" stress
- Prolonged stress response can lead to exhaustion and contribute to health challenges including high blood pressure; immune system suppression; and anxiety and depression.

NERVOUS SYSTEM AND FIGHT/FLIGHT/FREEZE

- CENTRAL NERVOUS SYSTEM (BRAIN, SPINAL CORD)
- PERIPHERAL NERVOUS SYSTEM
 - SOMATIC (Sensory organs, muscles, voluntary movement)
 - AUTONOMIC (Involuntary regulation of arousal and emotions)
 - SYMPATHETIC (INCREASE AROUSAL)
 - PARASYMPATHETIC (SLOW AROUSAL, MAINTAIN FUNCTIONING)
- HYPOTHALAMUS RECEIVES FEAR SIGNALS
 - HPA pathway

NERVOUS SYSTEM



THE HPA PATHWAY

HYPOTHALAMIC-PITUITARY-ADRENAL (HPA) PATHWAY

- WHEN A PERSON PERCEIVES A STRESSOR, THE HYPOTHALAMUS ACTIVATES THE PITUITARY GLAND TO SECRETE THE ADRENOCORTICOTROPIC HORMONE, OR ACTH, WHICH STIMULATES THE ADRENAL CORTEX.
- THE ADRENAL CORTEX RELEASES STRESS HORMONES CALLED CORTICOSTEROIDS THAT ACT ON OTHER BODY ORGANS TO TRIGGER AROUSAL AND FEAR REACTIONS.

THE LIMBIC SYSTEM

Lilienfeld et al., Psychology: From Inquiry to Understanding. Pearson.

WISE MIND vs. PRIMITIVE “CROCODILE” BRAIN

Dr. Daniel Siegel’s “Hand Model” of the Brain.

ENGAGING THE BODY'S BRAKE: PARASYMPATHETIC SYSTEM

- ENGAGE THE PARASYMPATHETIC SYSTEM
 - DEEP BREATHING
 - MINDFULNESS
 - MEDITATION
 - GROUNDING
 - PROGRESSIVE MUSCLE RELAXATION
 - MIND-BODY MOVEMENT
 - "SENSING IN"

BENEFITS OF DEEP BREATHING/ “BELLY BREATHING”

- Increases air (and therefore oxygen) into the lungs
- Allows more full oxygen exchange (incoming oxygen/outgoing carbon dioxide)
- Improves respiratory function
 - Uses less energy
- Can slow the heartbeat
- Can lower/stabilize blood pressure

BENEFITS OF DEEP BREATHING/ “BELLY BREATHING”

- Increases endurance
- Improves cortisol levels; sustained attention; and affect
- Increases calm; moves toward resilient zone
- Improve concentration and attention
- Assists in management of anxiety and in emotional regulation
- Can reduce physical reactions to stress, including other body systems (e.g., GI symptoms)
- Decreases muscle tension

BELLY BREATHING & BUBBLE BREATHING

Belly Breathing or Bubble Breathing

"Belly Breathe with Elmo" (Sesame Street)

https://www.youtube.com/watch?v=_mzbzdopyla

Diaphragmatic breathing

DEEP/BELLY BREATHING

- COMPARING BREATHING
 - Block the shoulders from activating
 - Hand on chest/stomach
 - Lie down and use a cup
 - Bubbles
- WHEN BREATHING DEEPLY, THE AIR FILLS THE LUNGS FULLY AND THE BELLY RISES.
- DEEP/BELLY BREATHING
- GET INTO A COMFORTABLE POSITION
 - SAFETY
- FOCUS
 - TRY TO FOCUS ONLY ON YOUR BREATHING

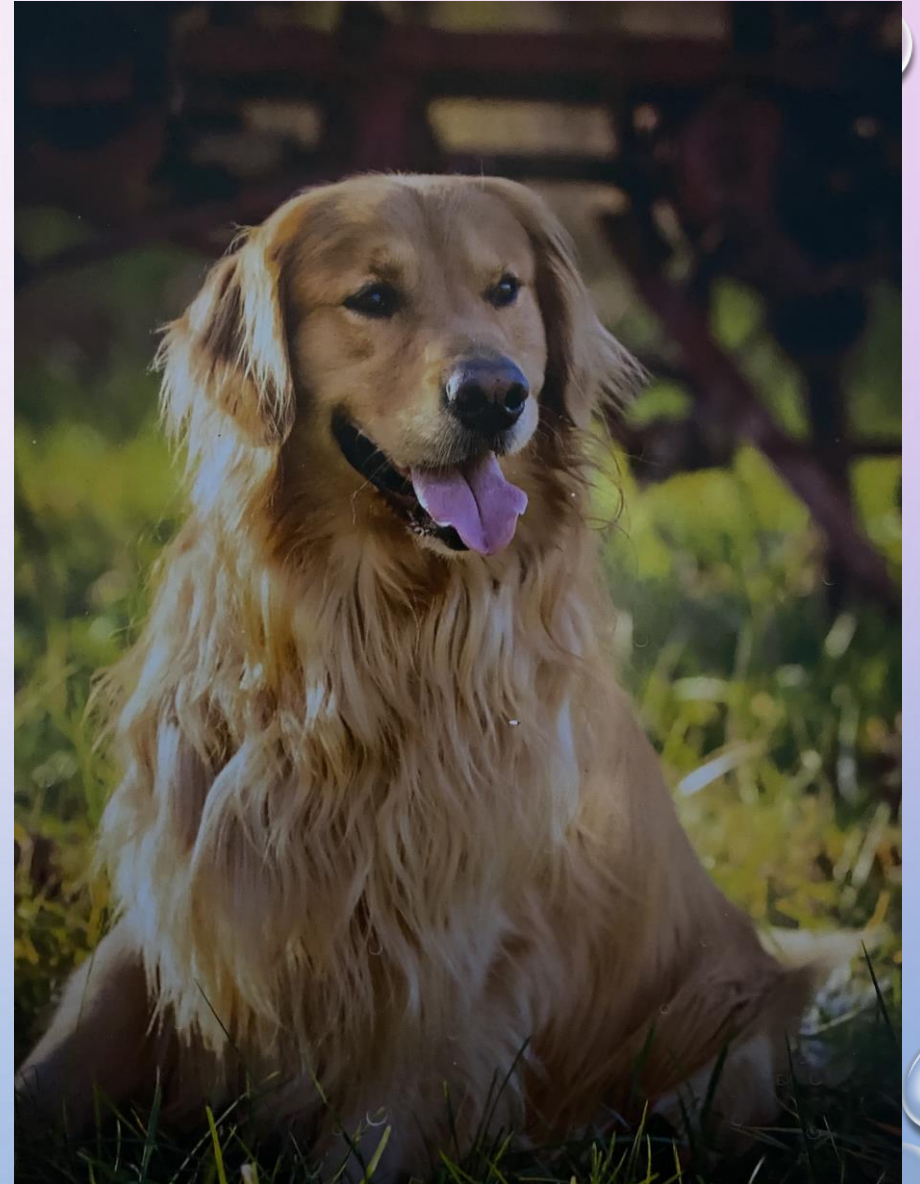
DEEP/BELLY BREATHING

- BREATHE (4-5-6)
- BREATHE IN SLOWLY, PREFERABLY THROUGH YOUR NOSE
 - YOUR BELLY SHOULD RISE/INFLATE
 - USE OF THE DIAPHRAGM INVOLVES CORE ABDOMINAL MUSCLES
- HOLD THE AIR
- BREATHE OUT SLOWLY, PREFERABLY THROUGH YOUR MOUTH
- MAY WANT TO COMBINE WITH MULTISENSORY SUPPORTS AND/OR GUIDED IMAGERY
- PRACTICE

Note: Some yoga practices distinguish diaphragmatic belly breathing and diaphragmatic rib cage breathing.

HANDLE STRESSFUL
SITUATIONS JUST LIKE A
DOG DOES.

IF YOU CAN'T EAT IT OR
PLAY WITH IT, JUST PEE ON
IT AND WALK AWAY.



PAUSE AND . . .

THAT'S ME!

- BREATHE



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- *Images as credited in slides.*