

# **Body Awareness & Mindfulness**

## **Your Body/ Brain Connection**

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**Doctor of Physical Therapy**  
**Human Movement Specialist**



**MOVE** **for** **HEALTH**  
**PHYSICAL THERAPY**

# THE MIND-BODY Connection

Understand your brain to understand your body

## FRONTAL LOBE

- problem-solving
- speaking
- emotions
- judgment
- thinking



## PARIETAL LOBE

- spatial orientation
- body awareness / sensations.
- left from right
- taste / touch
- reasoning



## TEMPORAL LOBE

- language
- memory
- hearing
- object recognition



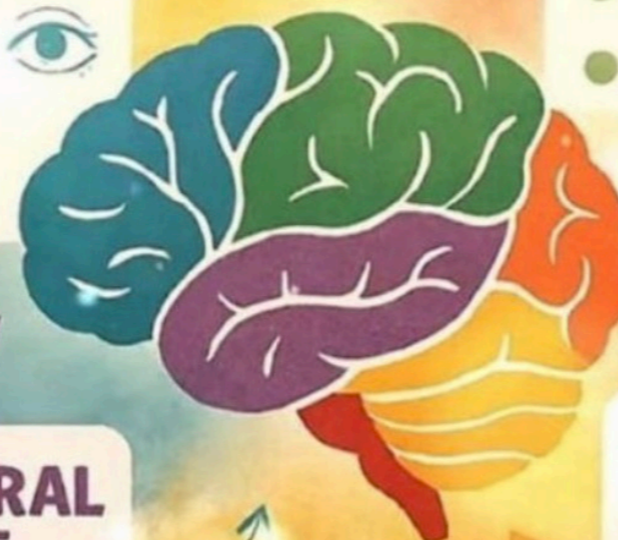
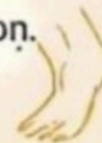
## BRAIN STEM

- breathing
- heart rate
- alertness
- body temperature
- sleep pattern
- consciousness



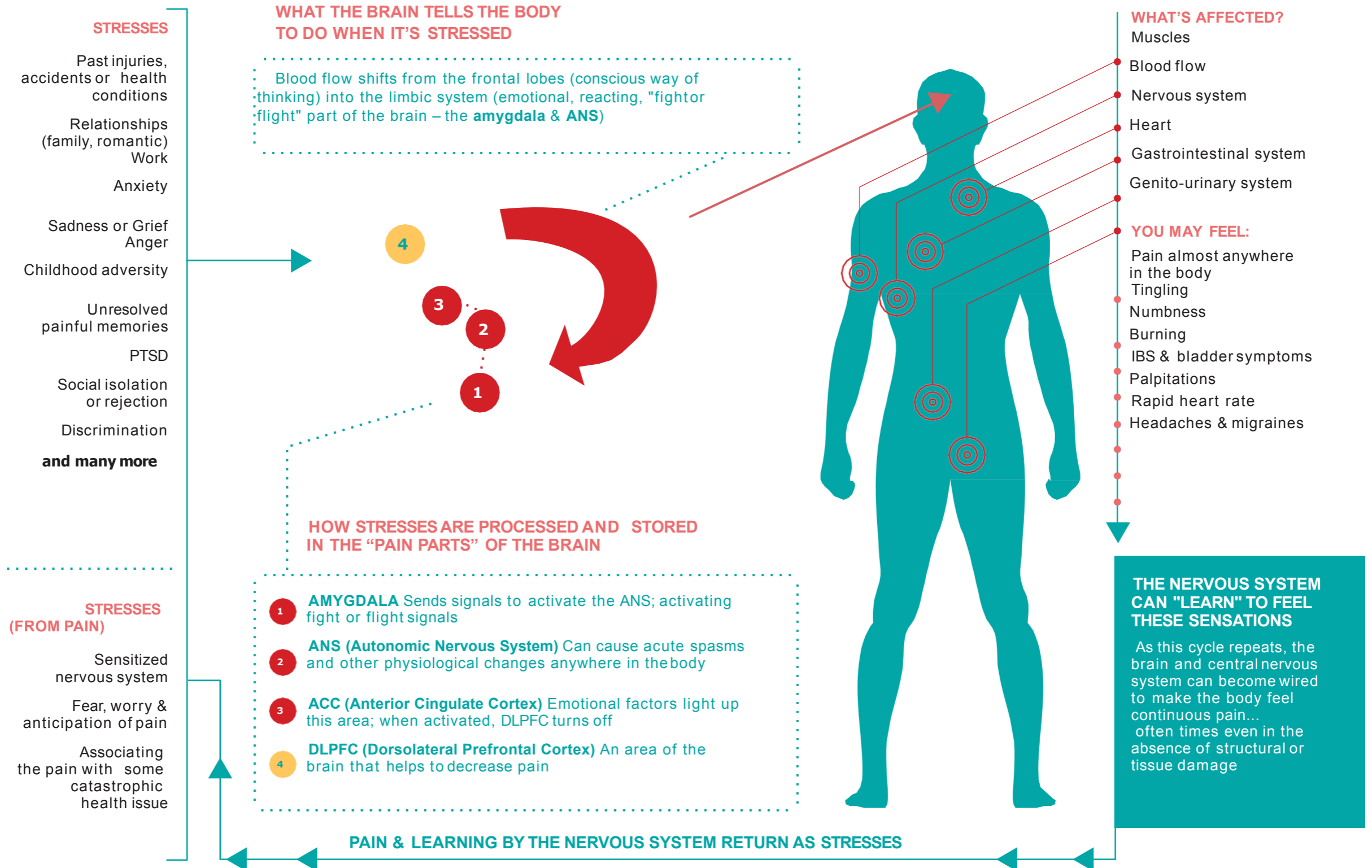
## OCCIPITAL LOBE

- vision
- color perception
- coordination.
- balance



# Stress & Pain Responses

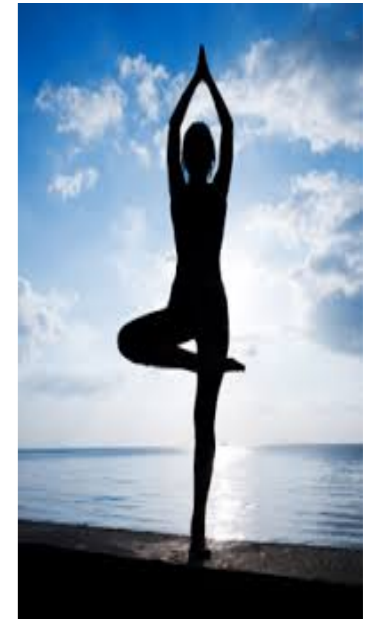
NEUROSCIENCE EXPLAINS HOW STRESS CAN FUEL PERSISTENT PAIN (Curable.com)



## Breaking the Cycle of Stress & Pain

# Physical Therapy Approach - Mind & Body Connection

- Diaphragmatic Breathing Patterns
- Function = Exercise + Activity
- Electrical Stimulation/ TENS
- Manual Therapy (Hands-On): Soft Tissue & Joint Mobilization
- Trigger Point Dry Needling
- Body & Mind Awareness
- Sleep/ Rest & Recovery Positions
- Move Well without Pain



# “Rest & Digest” vs “Fight or Flight”

- **Diaphragmatic Breathing**
  - “Palms-Up” (open posture) – 2 min cycle
  - Breathe In/ Out through Nose in 4/7/8 ratio, 3-4 cycles
  - Normal pattern is 2/4 with relaxed neck/ shoulders
  - 90% of Pulmonary Capacity!
    - Engages **Parasympathetic Nervous System**
    - Aids metabolism, digestion, creative thinking
    - Feelings of “Calm,” “Relaxation,” “Body Awareness”
  - Reverses Sympathetic Nervous System (Fight or Flight)
  - Neck/ shoulder muscles are accessory - 10% reserve
  - Decreases cortisol & epinephrine production
  - Decreases HR & BP; muscular stress and tension
  - Reverses feelings of “Fear, Anxiety, Stress”

# Rest & Digest Strategies

## Trigger Point Releases

- Tennis Ball Accupressure Technique (lying down or sitting)
  - <5-10 lbs of pressure with relaxation (no pain)
  - Sustained until trigger points release/ relax
- Enhanced body awareness & relaxation
- Perform before bedtime & periodically during the day
  - Prevent muscle tension, spasms, cramps
  - Body relaxation into pillow and mattress
- Incorporate Sleep/Rest Positions – individualized
- Trigger Point Dry Needling (TPDN)

# **Sleep Hygiene & Metabolic Recovery**

**7.5 hours/night: metabolic waste products removed in non-REM sleep via CSF and ISF**

**Circadian Biology - same sleep/ wake pattern 7 days/ week; natural light exposure (especially in AM)**

**Cool, dark, quiet bedroom; avoid screens & blue light**

**Regular pattern of exercise & meals**

**3 hours between last meal & bedtime**

**(+/-) Napping, <1 hour intervals**

**(+/-) Supplements: Melatonin & Magnesium Citrate**

**Sleep Apnea: 34% M and 17% W in US; home sleep test 80% Sp/ Sn**

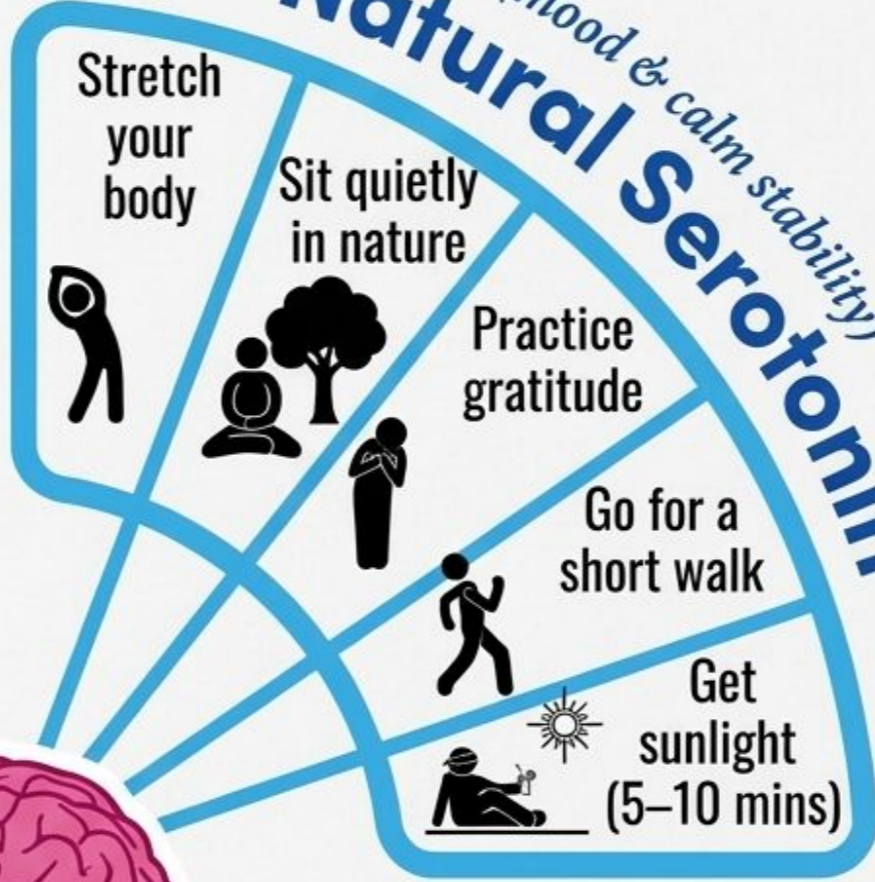
# Natural Dopamine

(motivation & reward)



# Natural Serotonin

(mood & calm stability)



# Natural Endorphins

(energy & pain relief)



# Natural Oxytocin

(connection & bonding)



# The Brain's Positive Reward for Function: Exercise + Activity

- **Dopamine/ Neurotransmitters**
- **Endorphins & Enkephalins**
  - **Euphoria**
  - **Natural pain killers**
    - **3-10X > Morphine**
- **Endocannabinoids**
  - **Alleviate pain, decrease anxiety, heighten senses**
  - **Moderate exertion/ endurance**  
(no effect with low or high intensity)
  - **A Reward for Persistence**



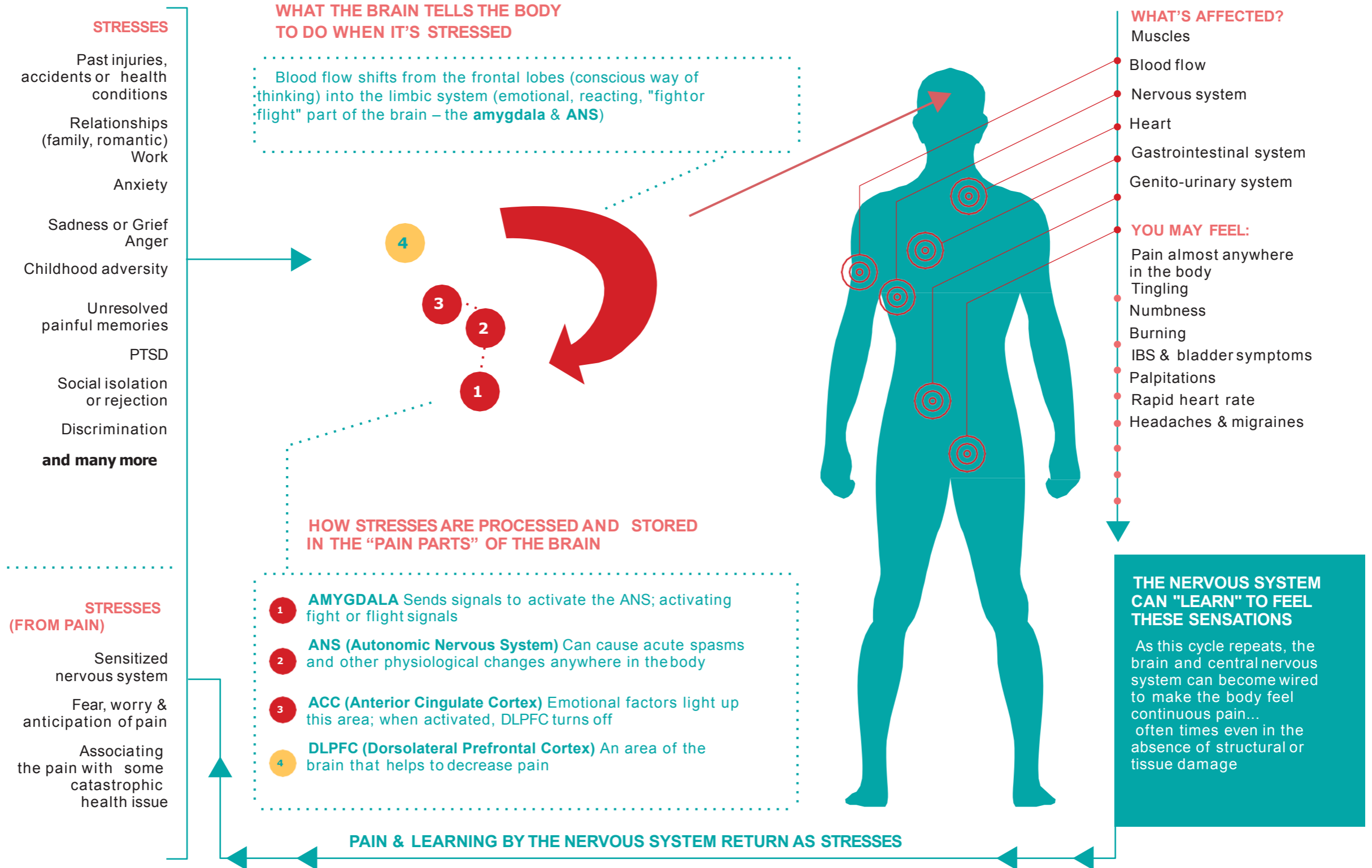
# Human Movement – a Persistence Response

- **Endocannabinoid receptors in Amygdala & Prefrontal Cortex**
  - Reduce Anxiety & Stress Responses
  - Induce State of Contentment
  - Mood Elevation
  - Also in Dogs (“Human’s Best Friend”)
- **Increases Dopamine Production**
  - Feelings of Optimism
- **Enhances Social Connection**
  - Feeling Close to Others
  - Bonding, Sharing, Cooperating



# Stress & Pain Responses

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## Breaking the Cycle of Stress & Pain



**LISTEN TO**

**SIGNALS**

**FROM**

**MIND**

**&**

**BODY**

# How Move for Health Physical Therapy @ The Center Can Help You...

## Injury & Wellness Consultation

Darcy Higgins, PT, DPT  
Doctor of Physical Therapy

## Coordination with Your Physician

1st & 3rd Tuesday of each month  
9-10 AM

434-939-8002

[dhigginspt@gmail.com](mailto:dhigginspt@gmail.com)



**MOVE** for **HEALTH**  
**PHYSICAL THERAPY**

# **Move For Health Physical Therapy Group Classes**

**Core Stability, Functional & Balance Training**

**60-min ZOOM classes, once/week**

**Thursdays: 9:30-10:30 AM & 7:30-8:30 PM**

**access via email invitation**

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