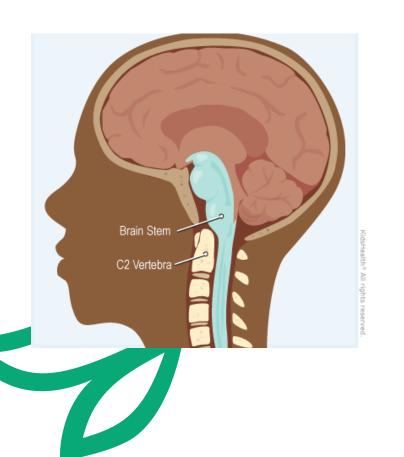


# **The Brain Stem**



- Connects the Brain with the Spinal Cord
- Monitoring and Regulating Basic body functions for survival:

Consciousness

Breathing

**Swallowing** 

**Heart Rate** 

**Blood Pressure** 

Sleep Cycles

# The Limbic System

- Responsible for emotional maturity, behaviour control, and healthy relationships
- Survival reflexes (fight, flight, freeze) are determined via the limbic system, the survival centre of the brain.
- Develops at 9 months

## Home of the **Amygdala**

- Strongly linked to human emotions

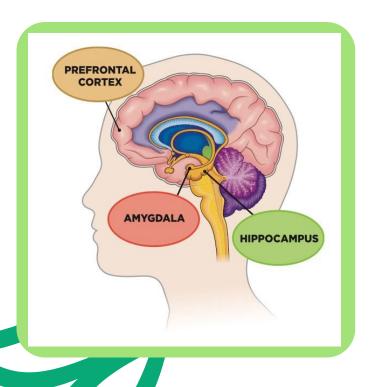
strongly linked to emotions – acts an alarm bell and instructs how we respond. Drives our FFF response. Strong links to sensory info.

## Home of the **hippocampus**

- connected with the amygdala
- Organises and stores memories
- Can't manage stress
- Links emotions and sensations to memories



# **The Prefrontal Cortex**



- The thinking centre
- Area for conscious thought, awareness, planning, decision making
- It helps us to deal with thoughts, emotions and reactions to situations
- And stops us from doing impulsive/ dangerous things, to keep us safer.
- Thinking, recalling facts, descriptions, understanding, time frames etc all take place in the cortex.

- Low levels of stress increase functions, higher levels of stress and being flooded by adrenaline overloads us and reduces function in these areas.
- Trauma disconnects this part from the rest of the brain – it goes 'offline

# Survival Responses to Trauma

## **Trauma Responses**



Fight: Confront the threat.

anger rage confrontation high energy



Flight: Run away from the threat.

anxiety
panic
avoidance
high energy



Freeze: Shut down to block out the threat.

dissociation numbness shutdown low energy



#### Fawn: Appease the threat.

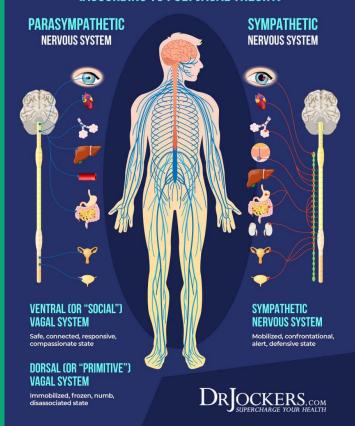
people-pleasing codependency lack of boundaries

# THE POLYVAGAL THEORY OF STRESS RESPONSE



## **AUTONOMIC NERVOUS SYSTEM**

#### (ACCORDING TO POLYVAGAL THEORY)



# The Window of Tolerance

### How Trauma Can Affect Your Window of Tolerance

#### HYPERAROUSAL

This is when you feel extremely anxious, angry, or even out of control. Unfamiliar or threatening feelings can overwhelm you, and you might want to fight or run away.



#### DYSREGULATION

This is when you begin to feel agitated. You may feel anxious, revved up, or angry. You don't feel out of control, but you also don't feel comfortable.

#### WINDOW OF TOLERANCE

This is where things feel just right, where you are best able to cope with the punches life throws at you. You're calm but not tired. You're alert but not anxious.



Your Work with Your Practitioner Can Help to Enlarge Your Window of Tolerance.

> They can help you stay calm, focused, and alert even when something happens that would usually throw you off balance.

#### DYSREGULATION

This is when you begin to feel like you're shutting down. You may feel a little spacy, lose track of time, or start to feel sluggish. You don't feel out of control, but you also don't feel comfortable.



Stress and Trauma Can Shrink

Your Window of Tolerance.

may be harder to stay

When you're outside

tolerance, you may

thrown off balance.

This means that it

calm and focused.

your window of

be more easily

#### HYPOAROUSAL

This is when you feel extremely zoned out and numb, both emotionally and physically. Time can go missing. It might feel like you're completely frozen. It's not something you choose – your body takes over.

#### nicabm

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#### **POLYVAGAL CHART**

The nervous system with a neuroception of threat:

# Conservation of Energy

Dissociation Numbness

Depression

Raised pain threshold

Helplessness

DORSAL VAGAL

(LIFE THREAT) Hypoarousal

Shame

Shut-Down Hopelessness

Preparation for death

Trapped

"I CAN'T" "I CAN"

AROUSAL INCREASES

## movement away

movement towards

Rage Anger

Irritation Anxiety

Frustration

Panic Fear

Worry & Concern

SYMPATHETIC

(DANGER) Hyperarousal

The nervous system with a neuroception of safety:

Calmness in connection

Settled

Groundedness

Connection • Safety Oriented to the Environment

VENTRAL VAGAL (SAFETY)

Curiosity/Openness

Compassionate

Mindful / in the present

VVC is the beginning and end of stress response.

When VVC is dominant, SNS and DVC are in transient blends which promote healthy physiological functioning.

## PARASYMPATHETIC NERVOUS SYSTEM

DORSAL VAGAL COMPLEX

#### Increases

Fuel storage & insulin activity • Immobilization behavior (with fear)
Endorphins that help numb and raise the pain threshold
Conservation of metabolic resources

#### Decreases

Heart Rate - Blood Pressure - Temperature - Muscle Tone Facial Expressions & Eye Contact • Depth of Breath • Social Behavior Attunement to Human Voice • Sexual Responses • Immune Response

#### SYMPATHETIC NERVOUS SYSTEM

#### Increases

Blood Pressure • Heart Rate • Fuel Availability • Adrenaline Oxygen Circulation to Vital Organs . Blood Clotting . Pupil Size Dilation of Bronchi . Defensive Responses

#### Deceases

Fuel Storage • Insulin Activity • Digestion • Salivation Relational Ability . Immune Response

#### PARASYMPATHETIC NERVOUS SYSTEM

VENTRAL VAGAL COMPLEX

#### Increases

Digestion • Intestinal Motility • Resistance to Infection
Immune Response • Rest and Recuperation • Health & Vitality Circulation to non-vital organs (skin, extremities)
Oxytocin (neuromodulator involved in social bonds that allows immobility without fear) • Ability to Relate and Connect Movement in eyes and head turning . Prosody in voice . Breath

#### Decreases

**Defensive Responses**