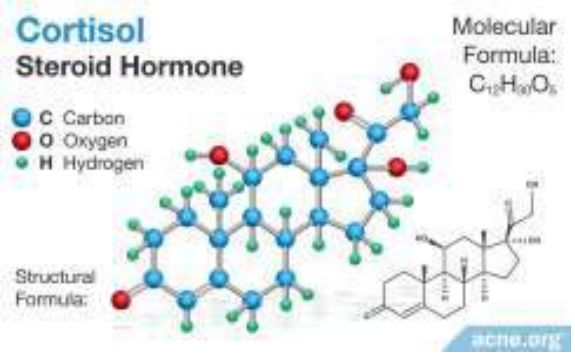
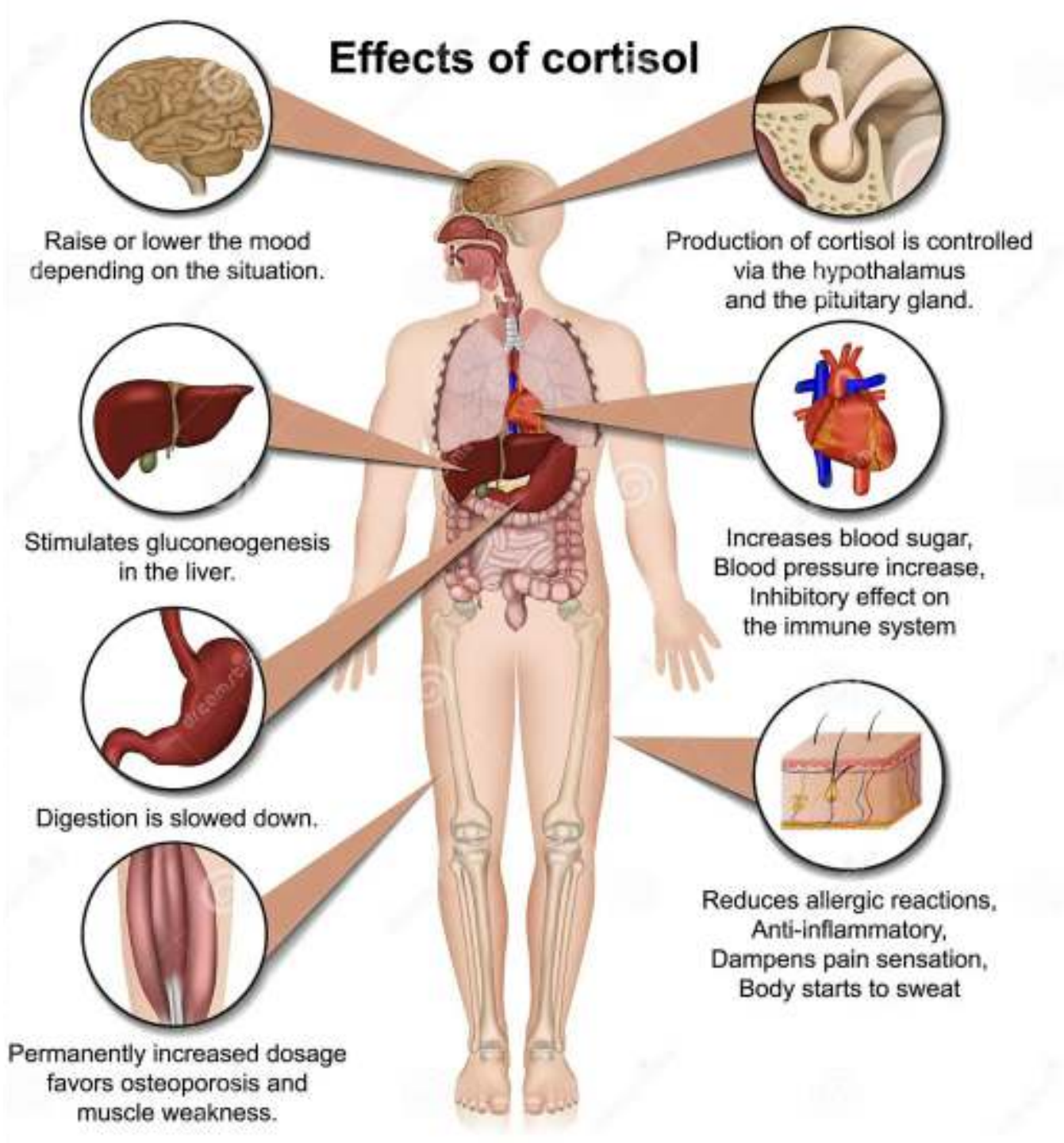
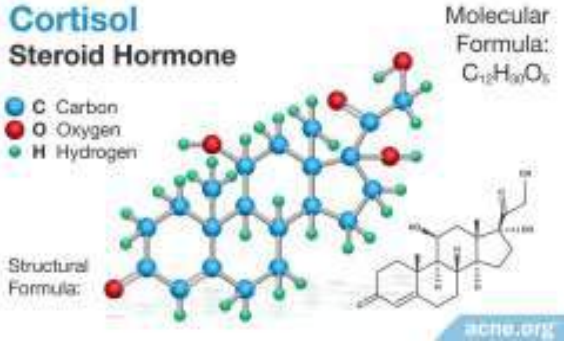

Cortisol
Steroid Hormone
Molecular Formula: $C_{21}H_{30}O_5$
C Carbon
O Oxygen
H Hydrogen
Structural Formula:
acne.org


Effects of cortisol
Raise or lower the mood depending on the situation.
Production of cortisol is controlled via the hypothalamus and the pituitary gland.
Stimulates gluconeogenesis in the liver.
Increases blood sugar, Blood pressure increase, Inhibitory effect on the immune system
Digestion is slowed down.
Reduces allergic reactions, Anti-inflammatory, Dampens pain sensation, Body starts to sweat
Permanently increased dosage favors osteoporosis and muscle weakness.


Cortisol
Steroid Hormone
Molecular Formula: $C_{21}H_{30}O_5$
C Carbon
O Oxygen
H Hydrogen
Structural Formula:
acne.org

I want it, and i want it NOW!

THE EFFECTS OF HIGH CORTISOL
MALE PATTERN HAIR LOSS OR RECEDING HAIR
DIABETES AND HYPOGLYCEMIA
INSOMNIA
FACIAL HAIR
BUFFALO HUMP
STRESSED
BELLY FAT
ANXIETY
MUSCLE WEAKNESS
ROUND FACE
LOW VITAMIN D
TWITCHING ON EYE LID
CATARACTS (CALCIUM ON EYES)
CRAVES SALTY FOOD OR CHOCOLATE
BONE LOSS
INCREASED THINKING
LACK OF BILE
IMMUNE WEAKNESS
HIGH BLOOD PRESSURE
HIGH BLOOD SUGAR
ADRENAL
HIGH CORTISOL
ACID REFLUX AND ULCERS
HIGH CHOLESTEROL
PENDULOUS ABDOMEN
MEMORY PROBLEMS
OVERLY ALKALINE BODY
ACNE
ACID REFLUX
LOW TOLERANCE TO STRESS
NEEDS COFFEE TO KEEP AWAKE
VIRTILIGO (LOSS OF SKIN COLOR PIGMENT)
HEAVY LEGS AFTER INCLINE EXERCIE
INFLAMMATION ARTHRITIS BURSITIS
ALLERGIES
CRAMPS IN CALF'S AND TIGHTER MUSCLES
HEAL SPURS
DIZZY AS YOU STAND UP TOO FAST

WHAT STRESS DOES TO THE BODY

SHORT TERM

FEELING WORRIED, NERVOUS OR UNABLE TO SWITCH OFF.

HEART BEATS HARDER AND FASTER TO PUMP MORE BLOOD TO THE MAJOR MUSCLES.

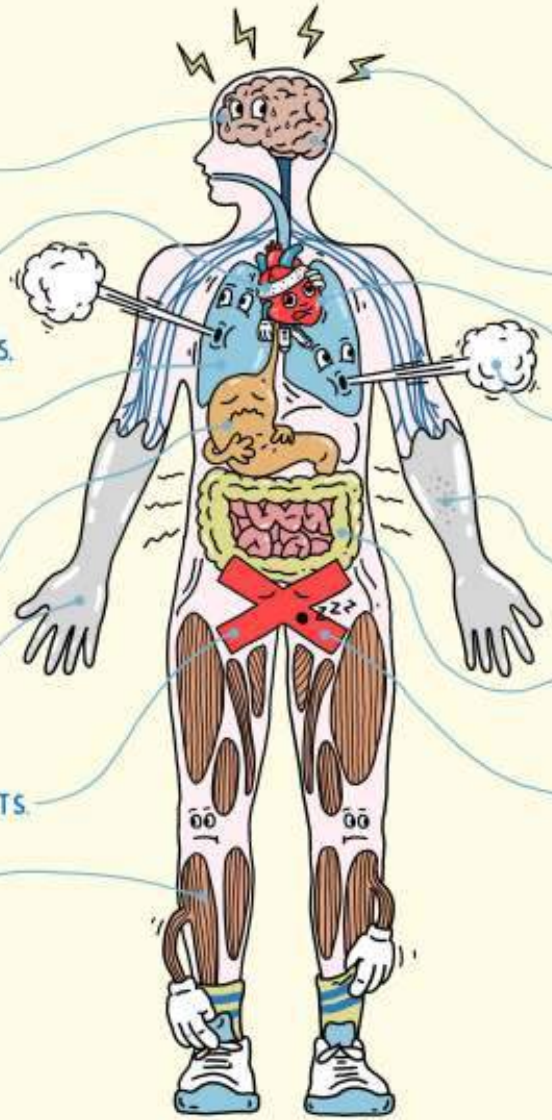
BREATHING QUICKENS TO SEND MORE OXYGEN AROUND THE BODY.

TUMMY ISSUES DUE TO THE RUSH OF STRESS HORMONES.

SKIN BECOMES MORE SENSITIVE AND OILY.

PROBLEMS BETWEEN THE SHEETS.

MUSCLES TENSE UP AS IF THEY'RE PREPARING TO MAKE A RUN FOR IT.



LONG TERM

TENSION HEADACHES AND MIGRAINES.

MENTAL HEALTH PROBLEMS.

SERIOUS HEART PROBLEMS.

TROUBLE BREATHING, HYPERVENTILATION AND PANIC ATTACKS.

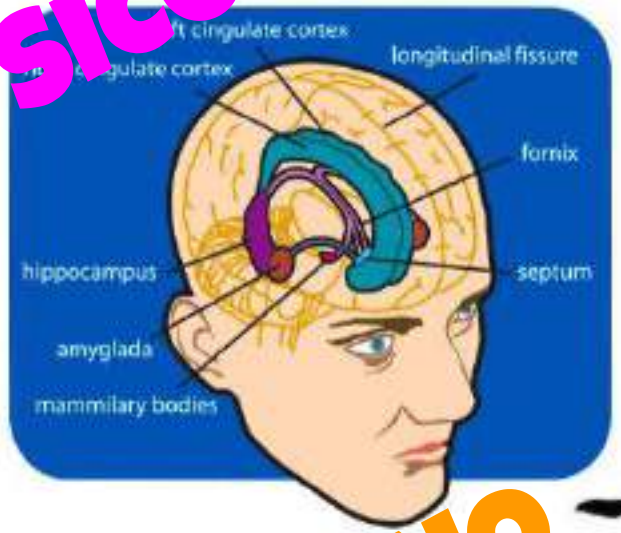
SKIN AND HAIR CONDITIONS EG ACNE, HAIR LOSS.

INCREASED RISK OF TYPE 2 DIABETES.

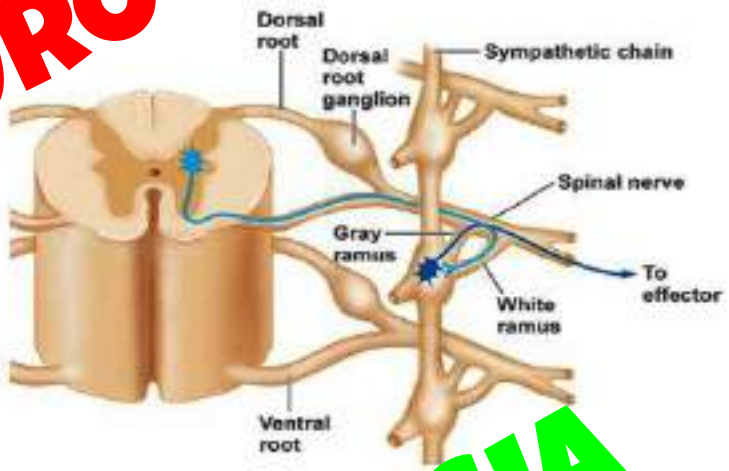
FERTILITY PROBLEMS (FOR MEN AND WOMEN).

REACH OUT.COM

PSICO

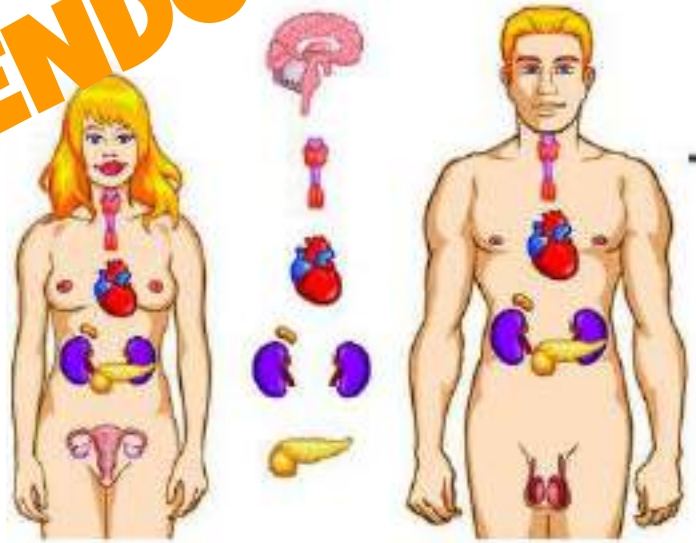


NEURO

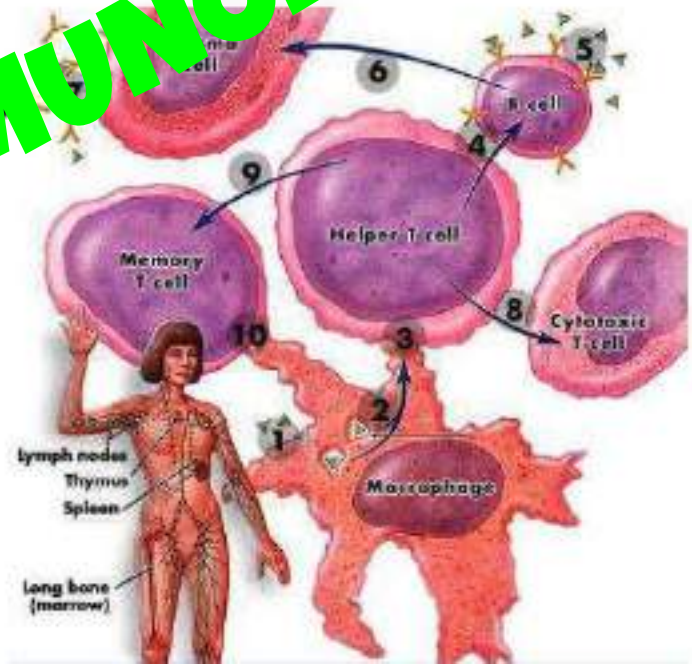


PNEI

ENDOCRINO



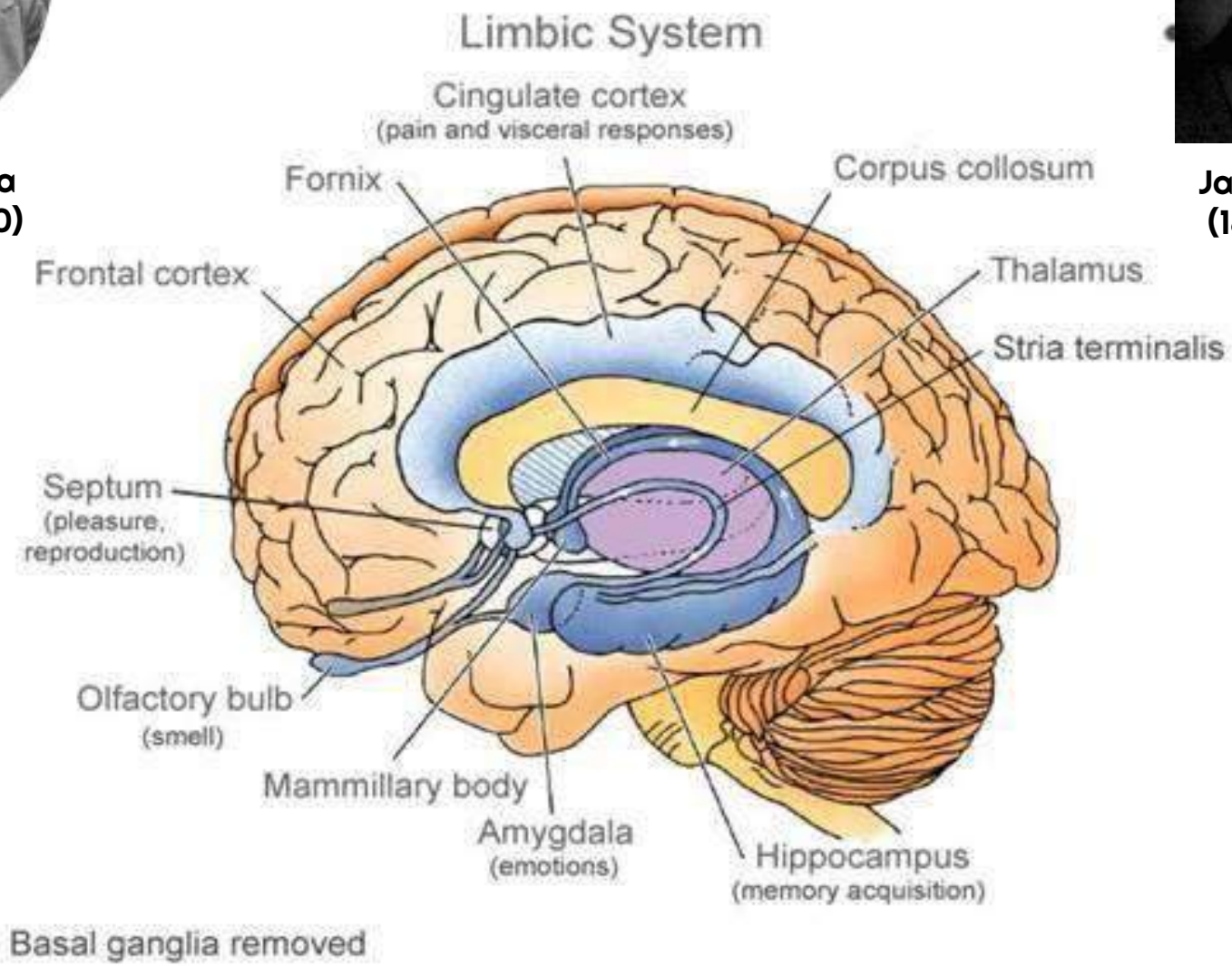
IMMUNOLOGIA



IL SISTEMA LIMBICO

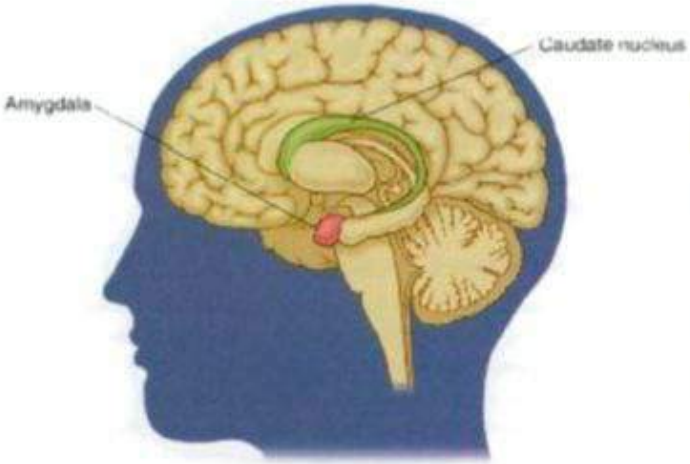
Paul Broca
(1824-1880)

James Papez
(1883-1958)



Amigdala

Paul D. MacLean
(1913 – 2007)



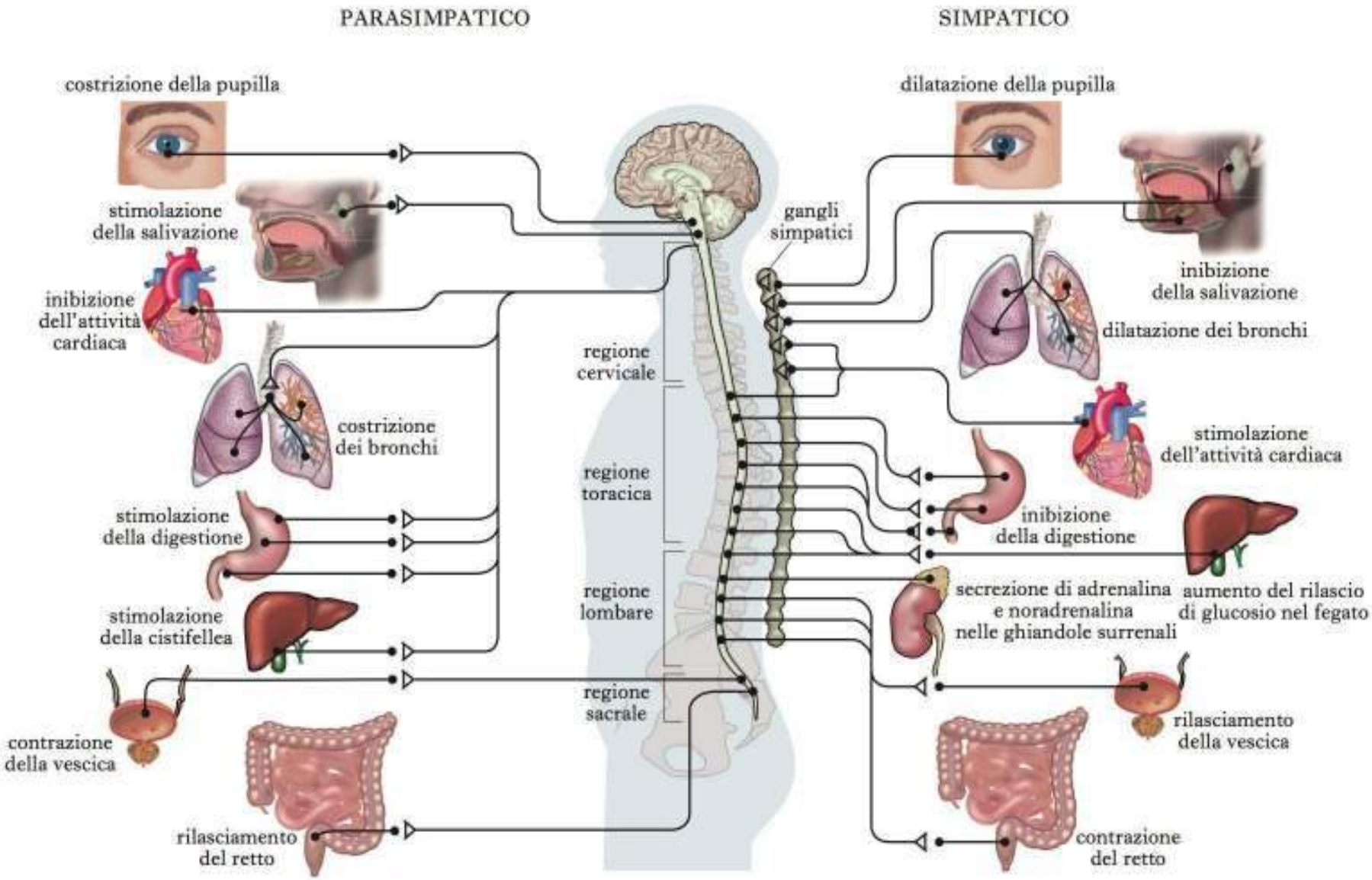
È il centro di integrazione di processi neurologici superiori come le **emozioni**, coinvolta anche nei sistemi della memoria emozionale. È attiva nel sistema di **comparazione** degli stimoli ricevuti con le esperienze passate e nell'elaborazione degli stimoli olfattivi. Lavora in connessione con **l'ippocampo**

Mentre l'ippocampo "rimembra" i fatti, l'amigdala ne giudica la **valenza emozionale**. L'amigdala quindi fornisce a ogni stimolo il livello giusto di attenzione, lo arricchisce di emozioni e, infine, ne avvia l'immagazzinamento sotto forma di ricordo.

L'amigdala è dunque **l'archivio della nostra memoria emozionale**, per ciò analizza l'esperienza corrente, con quanto già accaduto nel passato: quando la situazione presente e quella passata hanno un elemento chiave simile, l'amigdala lo identifica come una associazione ed agisce, talvolta, prima di avere una piena conferma. Ci comanda precipitosamente di reagire ad una situazione presente secondo paragoni di episodi simili, anche di molto tempo fa, con pensieri, emozioni e reazioni apprese fissate in risposta ad eventi analoghi.

L'amigdala può reagire prima che la corteccia sappia che cosa sta accadendo, e questo perché l'emozione grezza viene scatenata in modo indipendente dal pensiero cosciente, e generalmente prima di esso.

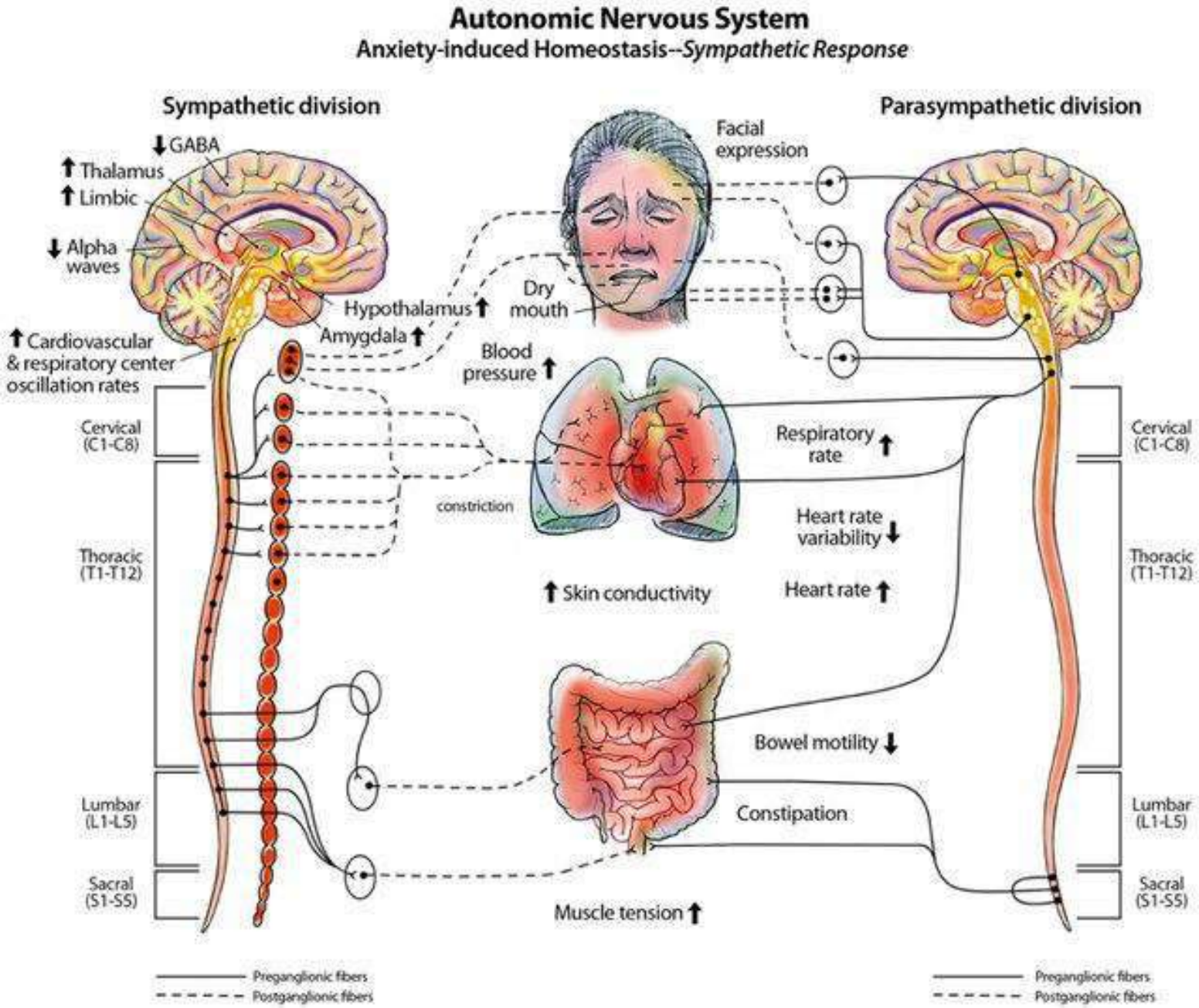
IL SISTEMA NERVOSO AUTONOMO



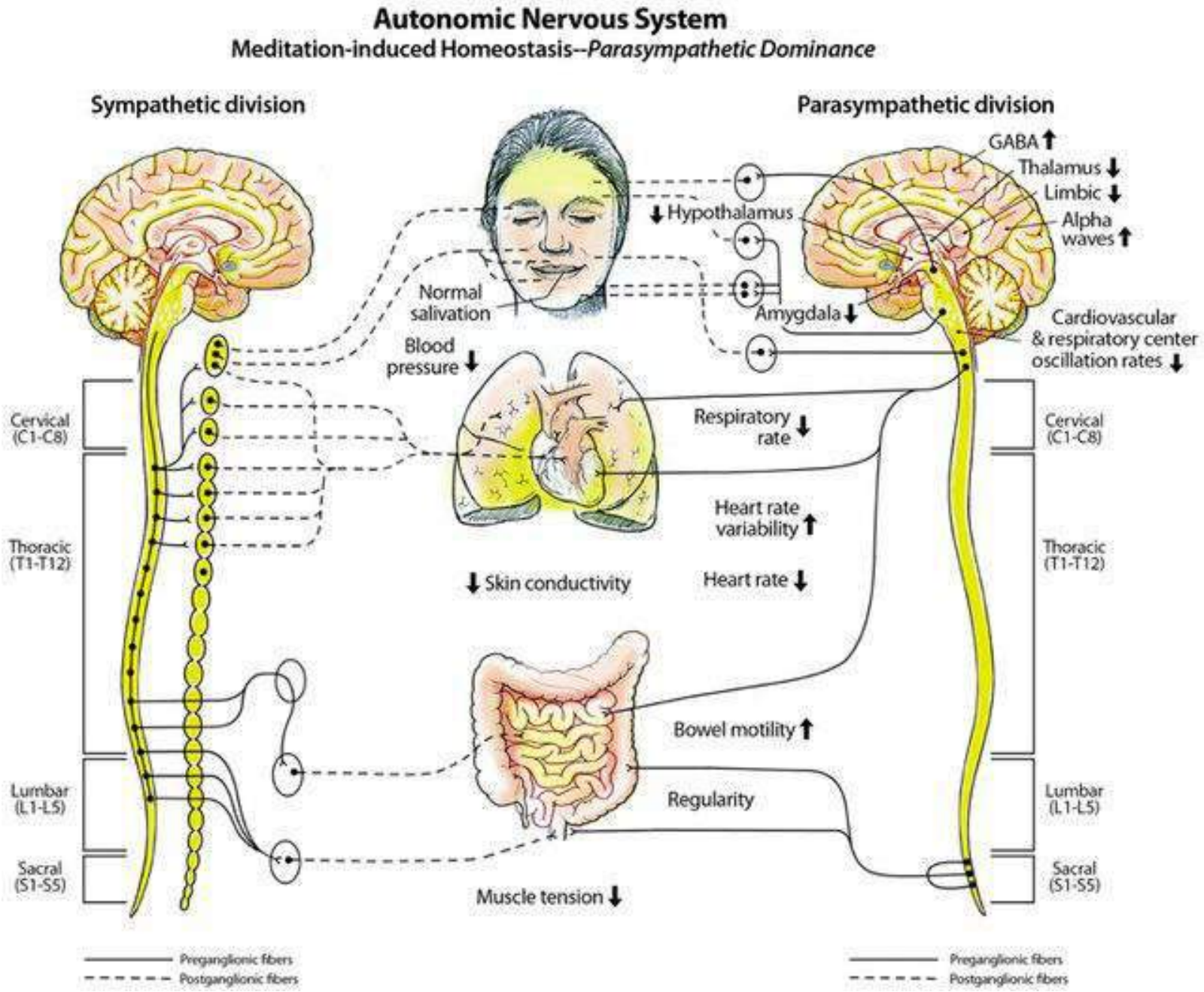
In 1925, scientist Heinrich Hering prophesied that:

"The wise use of the autonomic system will someday represent the core skill in the art of healing"

Heinrich Ewald **Hering**,
(*Vienna* 1866 -, 1948)



RISPOSTE ASSOCIATE ALLA DOMINANZA SIMPATICA

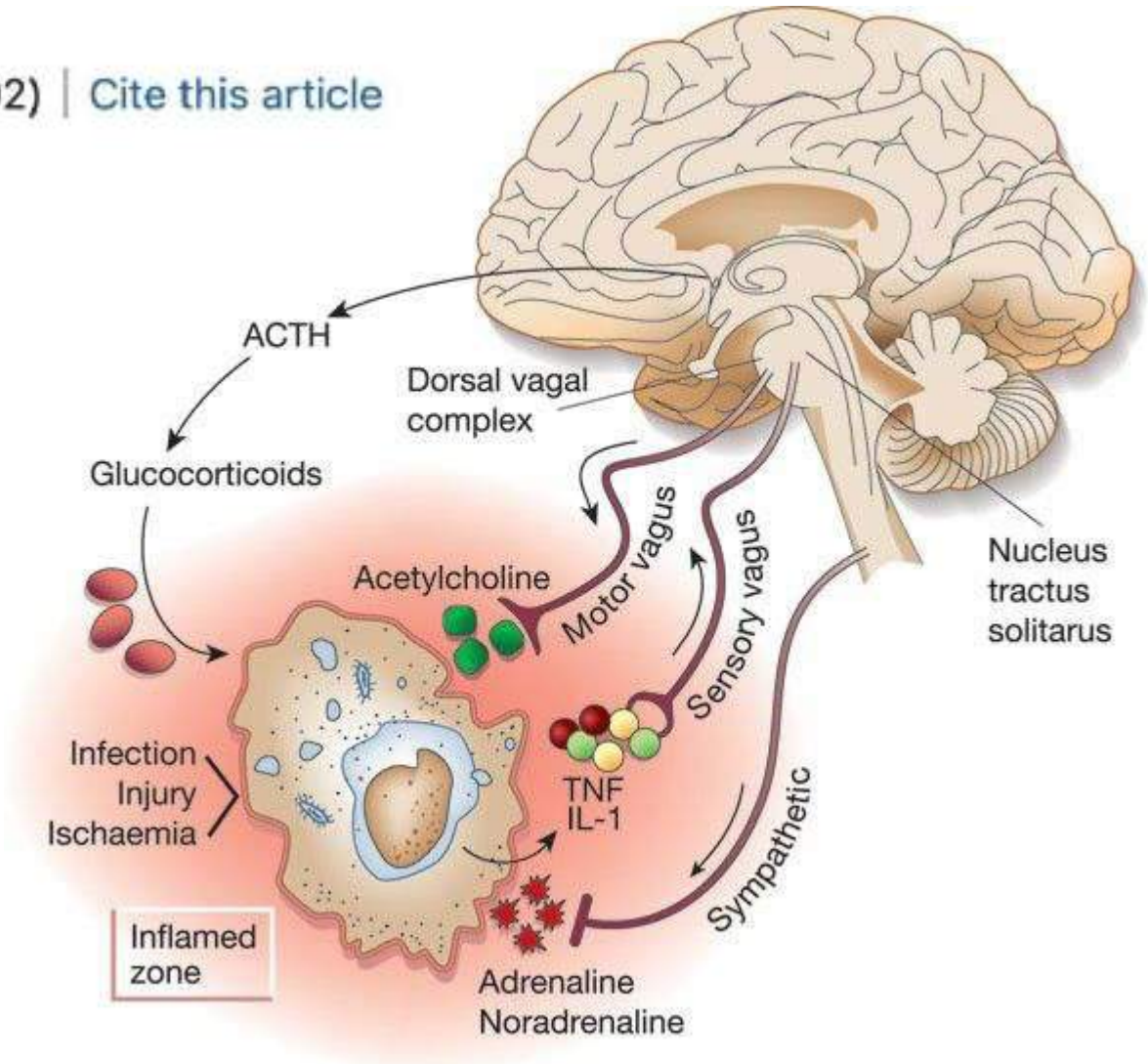


RISPOSTE ASSOCIATE ALLA DOMINANZA PARASIMPATICA

The inflammatory reflex

Kevin J. Tracey

Nature **420**, 853–859(2002) | Cite this article



nature

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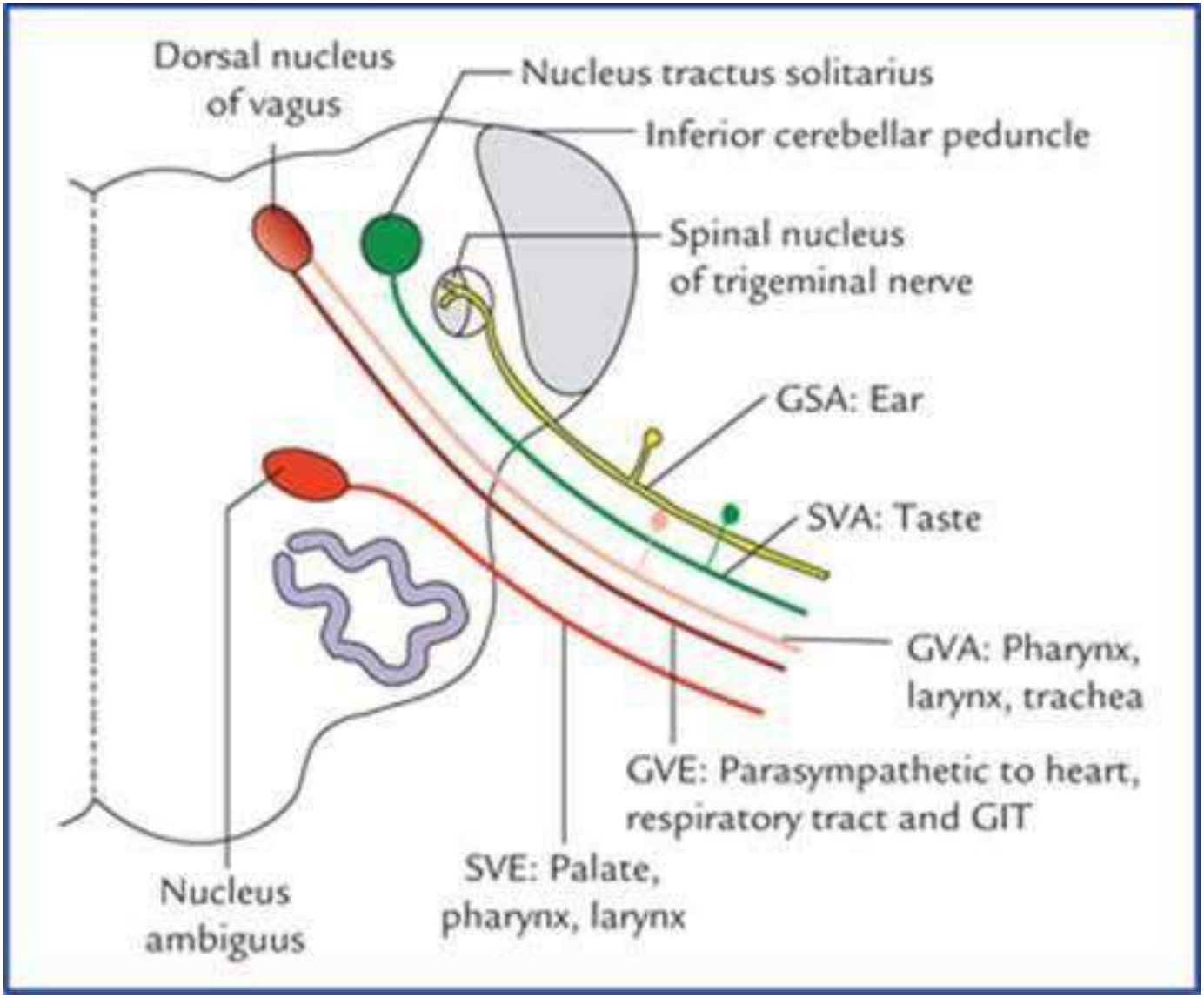
The polyvagal theory: New insights into adaptive reactions of the autonomic nervous system

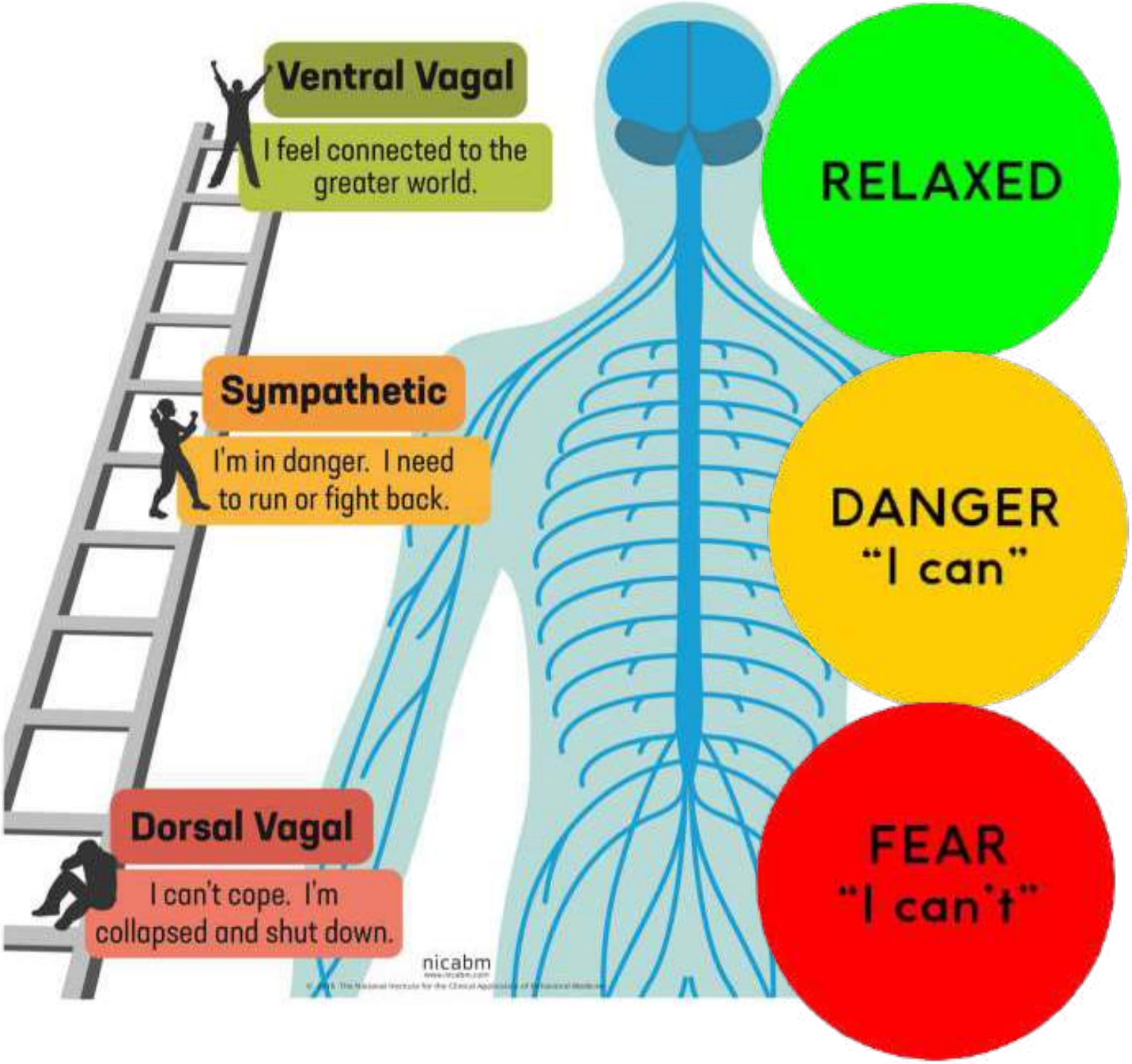
STEPHEN W. PORGES, PhD
Brain-Body Center, Department of Psychiatry, University of Illinois at Chicago

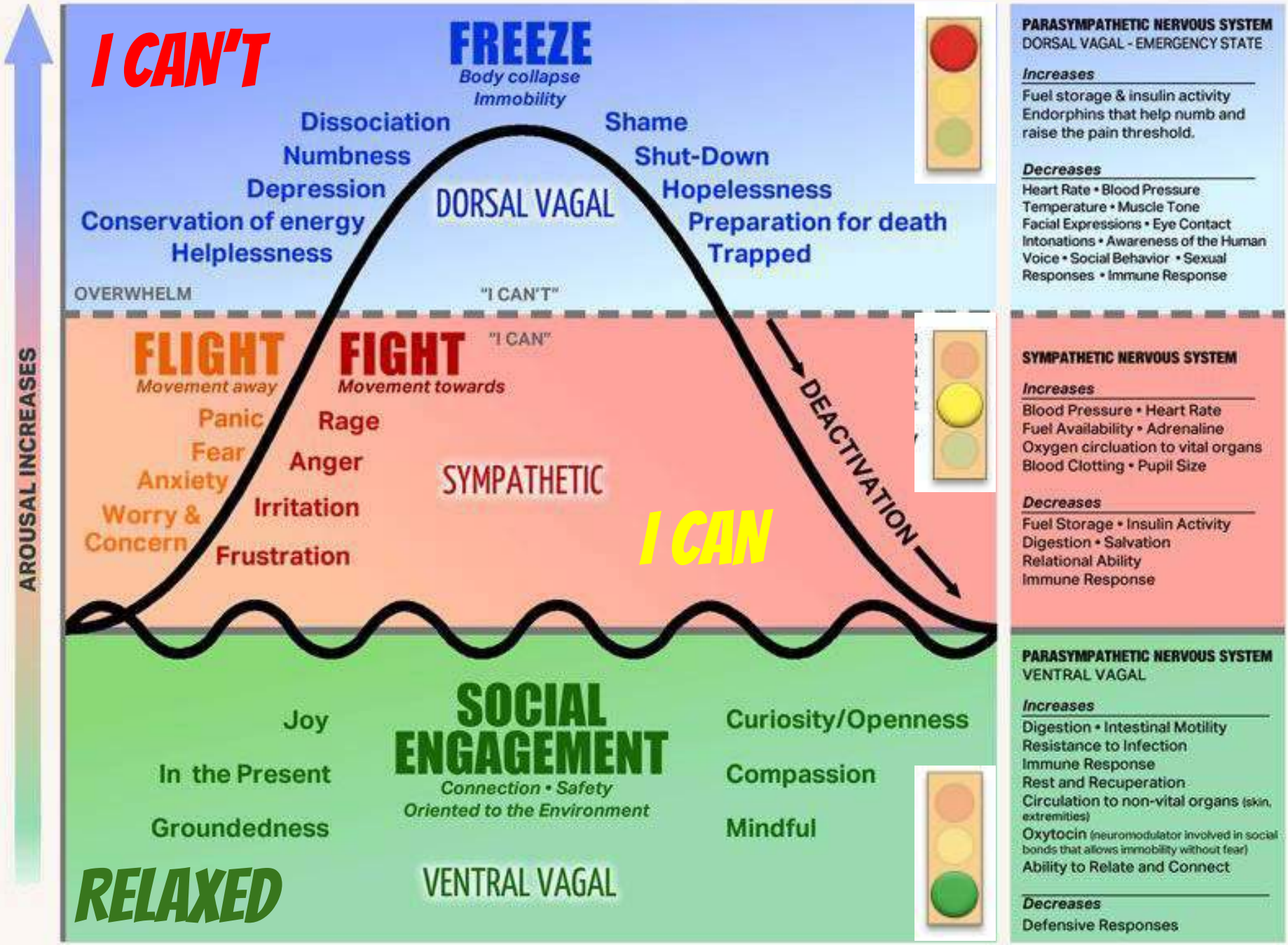
Abstract

The polyvagal theory describes an autonomic nervous system that is influenced by the central nervous system, sensitive to afferent influences, characterized by an adaptive reactivity dependent on the phylogeny of the neural circuits, and interactive with source nuclei in the brainstem regulating the striated muscles of the face and head. The theory is dependent on accumulated knowledge describing the phylogenetic transitions in the vertebrate autonomic nervous system. Its specific focus is on the phylogenetic shift between reptiles and mammals that resulted in specific changes to the vagal pathways regulating the heart. As the source nuclei of the primary vagal efferent pathways regulating the heart shifted from the dorsal motor nucleus of the vagus in reptiles to the nucleus ambiguus in mammals, a face–heart connection evolved with emergent properties of a social engagement system that would enable social interactions to regulate visceral state.

vagal nuclei of the brain stem




Ventral Vagal
I feel connected to the greater world.
RELAXED
Sympathetic
I'm in danger. I need to run or fight back.
DANGER
"I can"
Dorsal Vagal
I can't cope. I'm collapsed and shut down.
FEAR
"I can't"
nicabm


AROUSAL INCREASES
I CAN'T
FREEZE
Body collapse
Immobility
Dissociation
Numbness
Depression
Conservation of energy
Helplessness
Shame
Shut-Down
Hopelessness
Preparation for death
Trapped
DORSAL VAGAL
OVERWHELM
"I CAN'T"
PARASYMPATHETIC NERVOUS SYSTEM
DORSAL VAGAL - EMERGENCY STATE
Increases
Fuel storage & insulin activity
Endorphins that help numb and raise the pain threshold.
Decreases
Heart Rate • Blood Pressure
Temperature • Muscle Tone
Facial Expressions • Eye Contact
Intonations • Awareness of the Human Voice • Social Behavior • Sexual Responses • Immune Response
FLIGHT
Movement away
Panic
Fear
Anxiety
Worry & Concern
FIGHT
Movement towards
"I CAN"
Rage
Anger
Irritation
Frustration
SYMPATHETIC
I CAN
DEACTIVATION
SYMPATHETIC NERVOUS SYSTEM
Increases
Blood Pressure • Heart Rate
Fuel Availability • Adrenaline
Oxygen circluation to vital organs
Blood Clotting • Pupil Size
Decreases
Fuel Storage • Insulin Activity
Digestion • Salvation
Relational Ability
Immune Response
SOCIAL ENGAGEMENT
Connection • Safety
Oriented to the Environment
Joy
In the Present
Groundedness
Curiosity/Openness
Compassion
Mindful
RELAXED
VENTRAL VAGAL
PARASYMPATHETIC NERVOUS SYSTEM
VENTRAL VAGAL
Increases
Digestion • Intestinal Motility
Resistance to Infection
Immune Response
Rest and Recuperation
Circulation to non-vital organs (skin, extremities)
Oxytocin (neuromodulator involved in social bonds that allows immobility without fear)
Ability to Relate and Connect
Decreases
Defensive Responses

Arousal (eccitazione, risveglio)

In psicologia fisiologica indica l'intensità **dell'attivazione psicofisiologica** di un organismo.

La teoria dell'arousal presuppone che il livello di attivazione vari lungo un continuum che va **dal sonno all'eccitazione diffusa**.