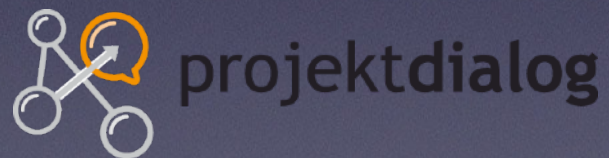


Referee - Workshop 2

Stress & Recovery

Jürgen Boss, projekt-dialog gmbh



2018 EHF Referee/Delegate Seminar in Vienna / Austria
(31 August - 01 September 2018)
Preliminary PROGRAMME
“Kick-off” 2018 EHF Women’s EURO in FRA





Dominik Klein,
Handball-Weltmeister



Laura Philipp, Profi-Triathletin, Heidelberg

Stress evolutionary



Stress - power



Stress today



stress & lost of control

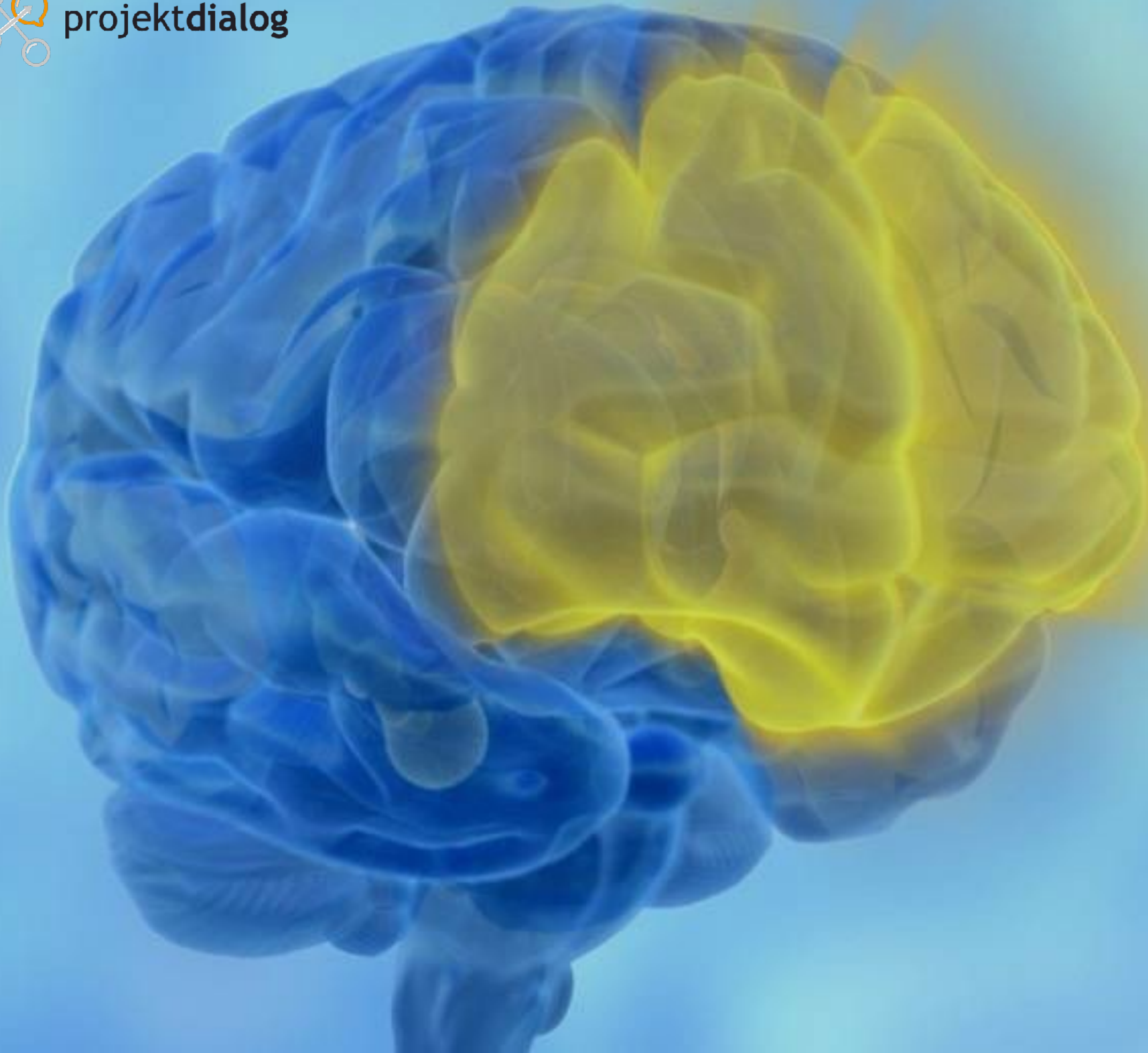


stress & lost of control

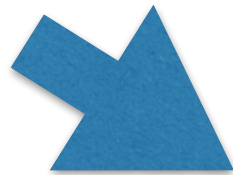


experiments



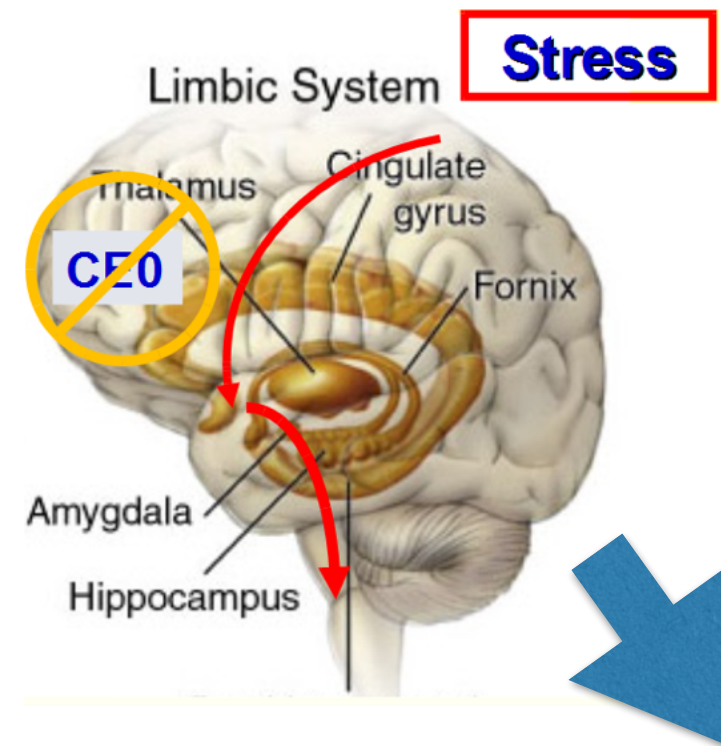


1. trigger



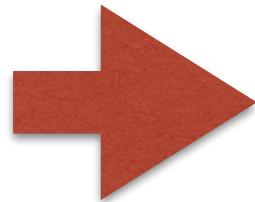
2. biochemical reaction (36 ms, adrenalins),

3. feeling (heart rate, pressure, breath)

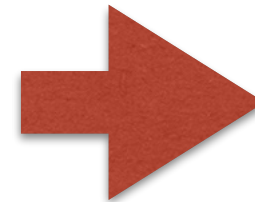


4. feeling (anxious)

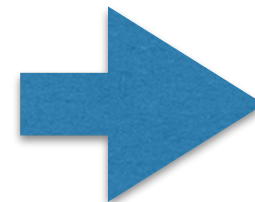
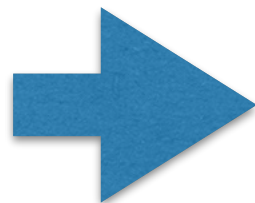
5. cognitive processing
(similar situations in past or in
subconsciousness,pictures)



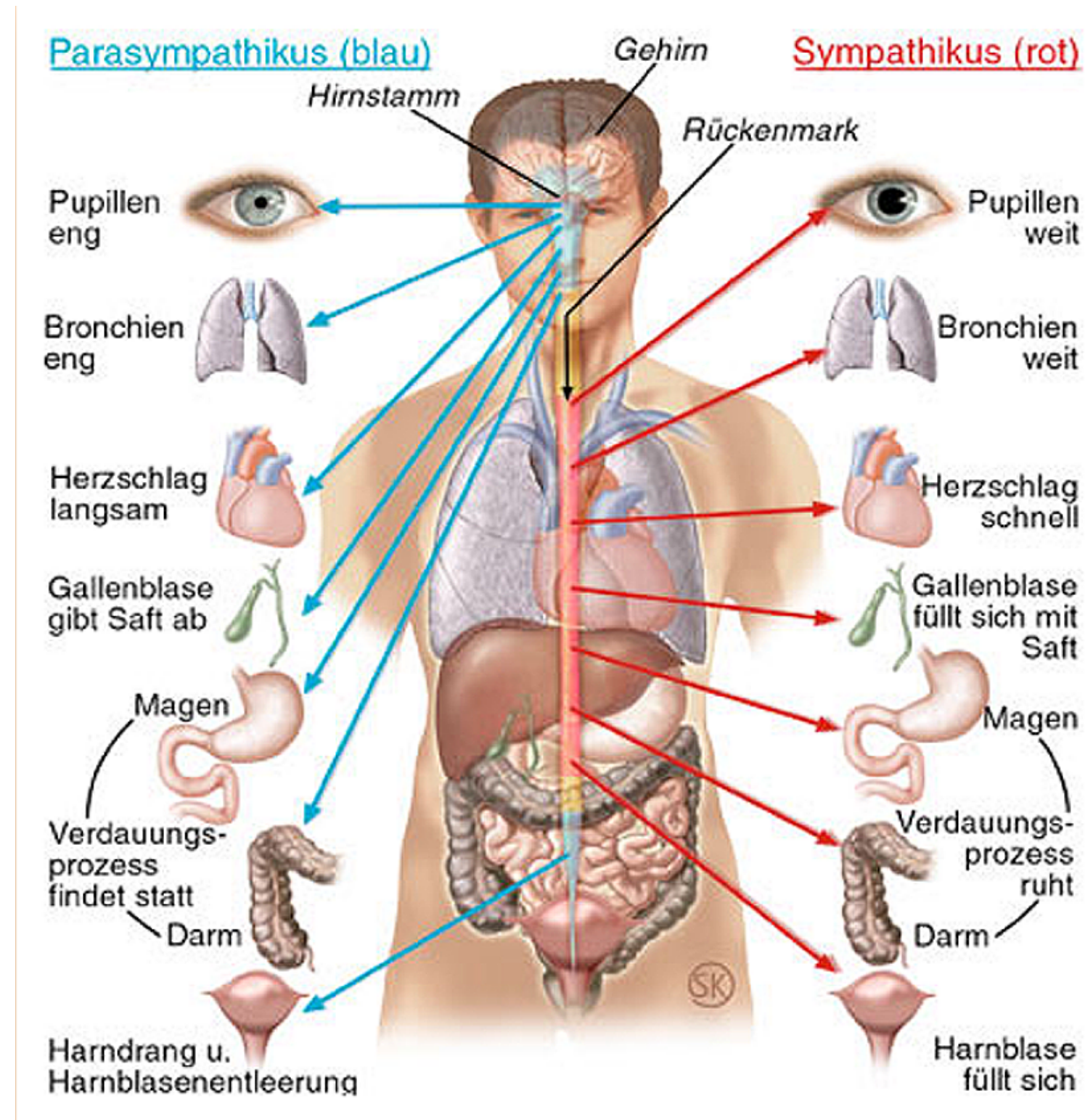
6. changing emotion
(caused by my pictures or thoughts)



7. impact, behavior

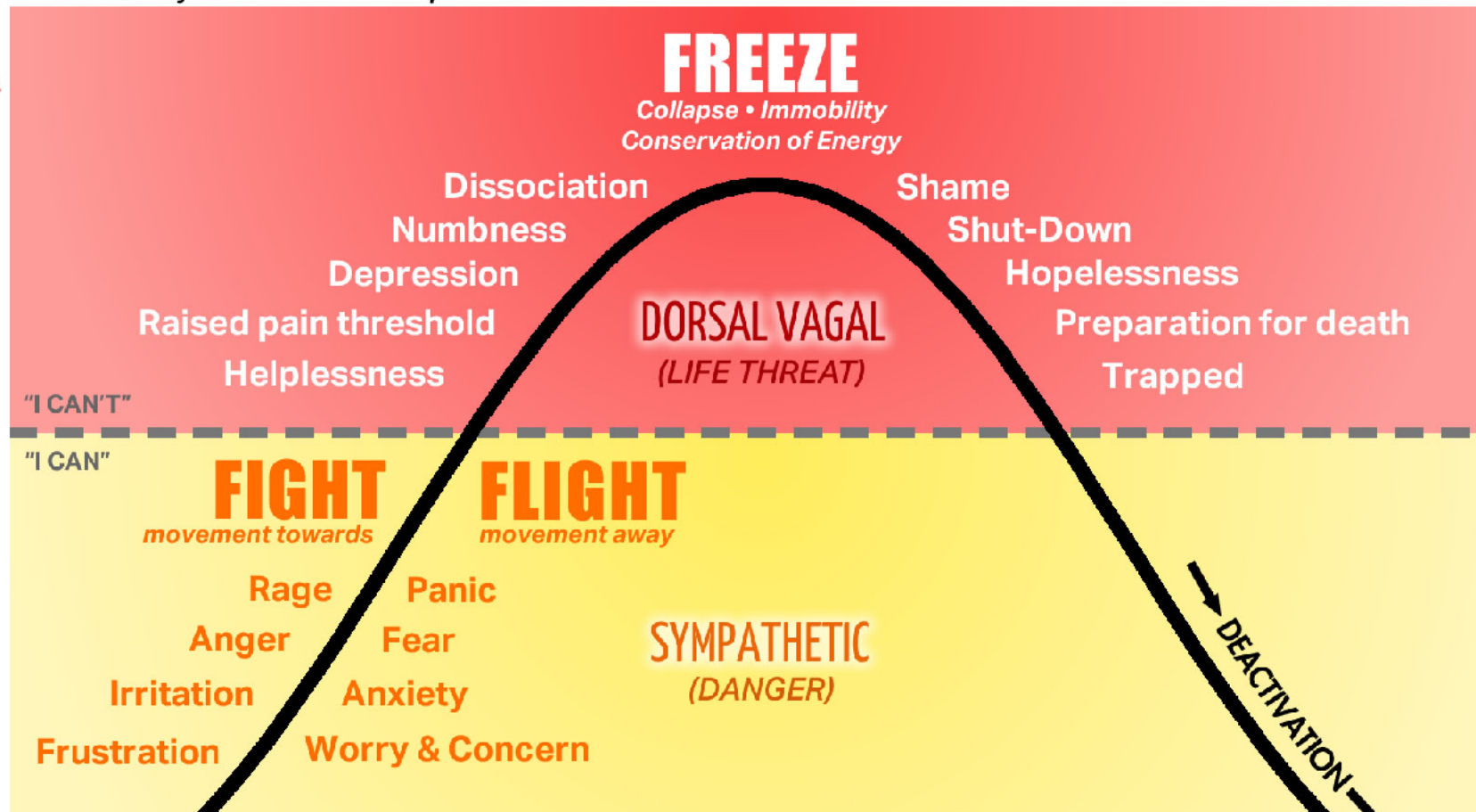


the nervous system



POLYVAGAL CHART

The nervous system with a neuroception of threat:



The nervous system with a neuroception of safety:



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

Decreases

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



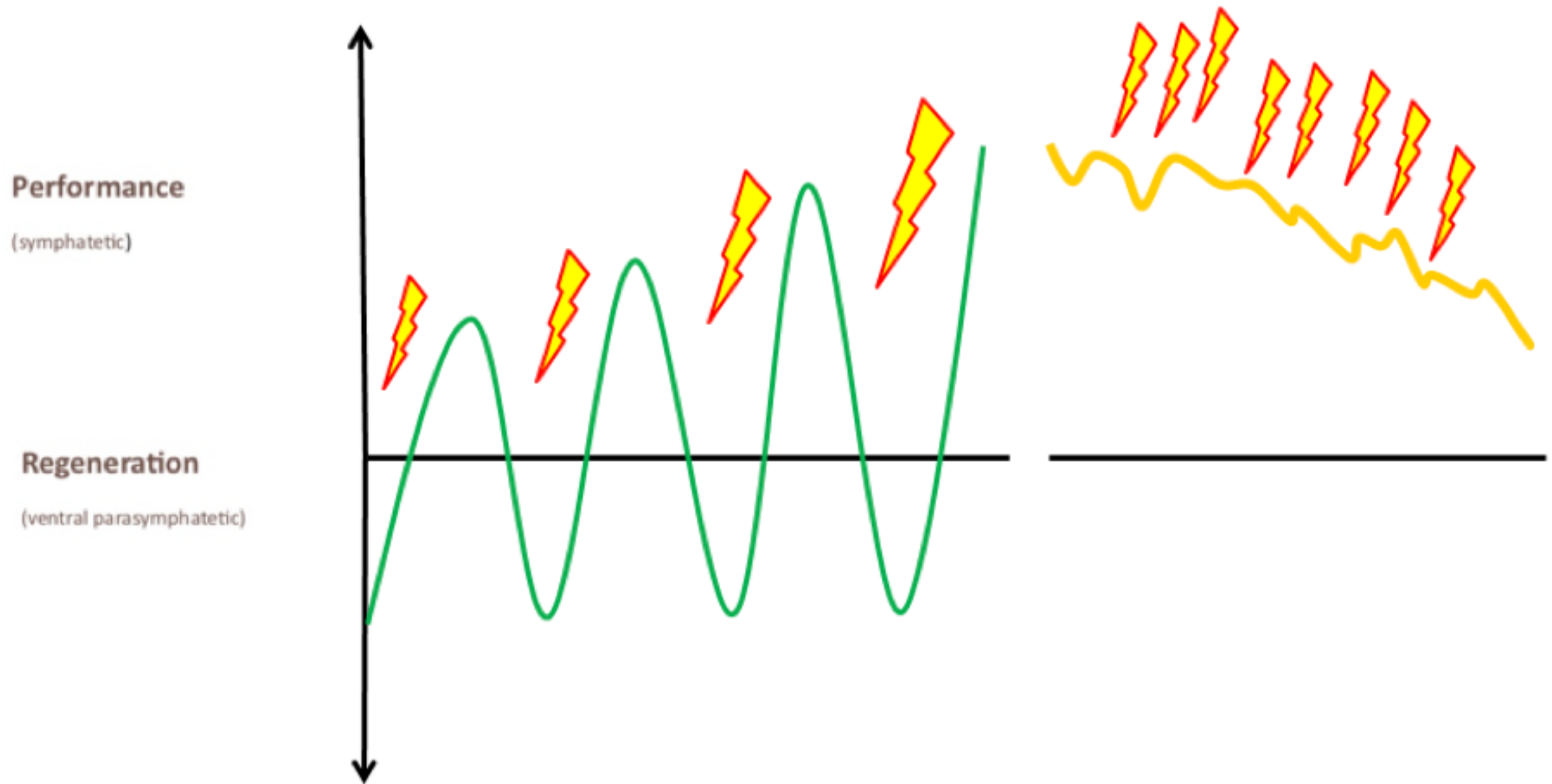


attitude & body language

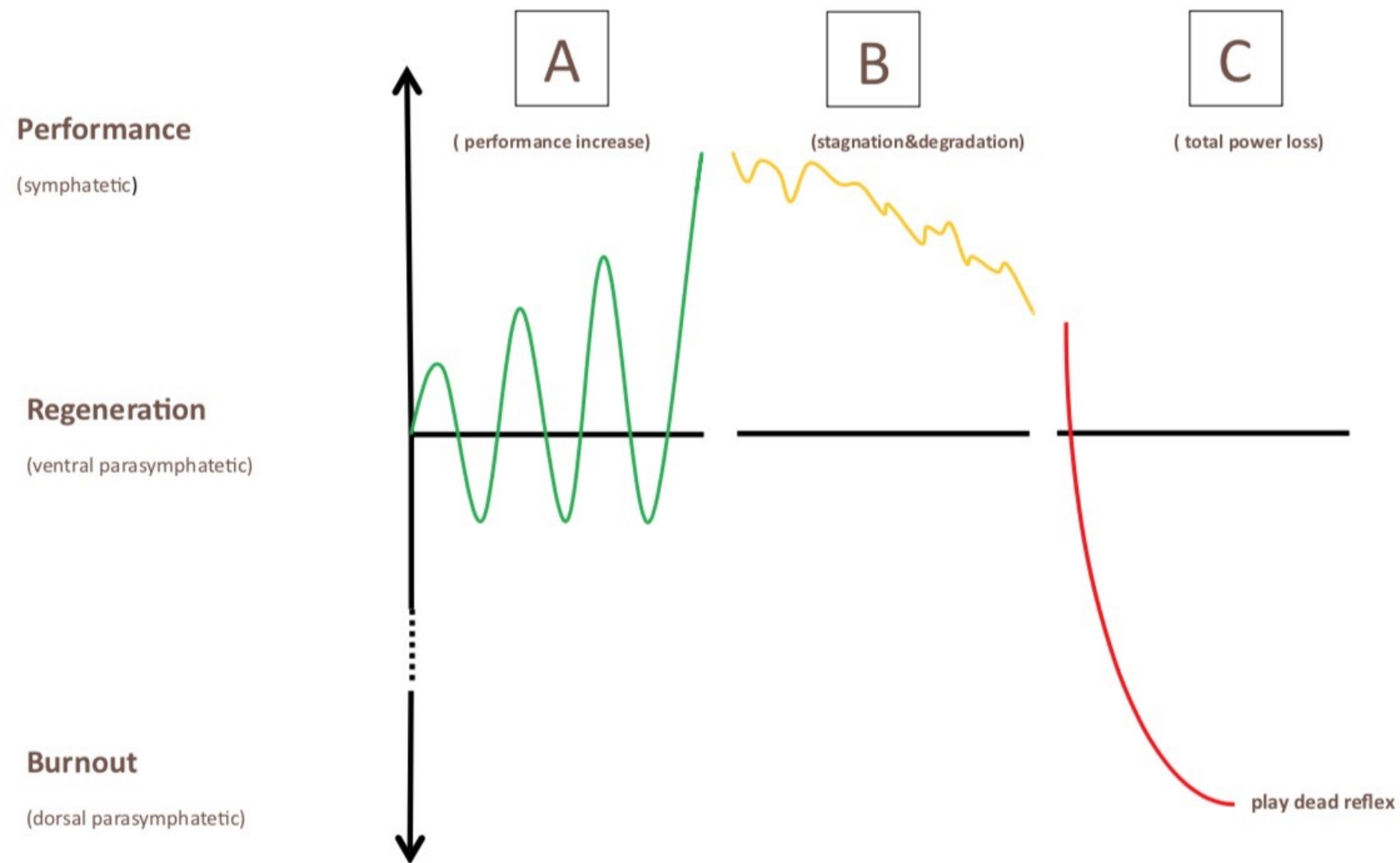


recovery - Regeneration

Dysregulation



the way back to performance





how to implement ?

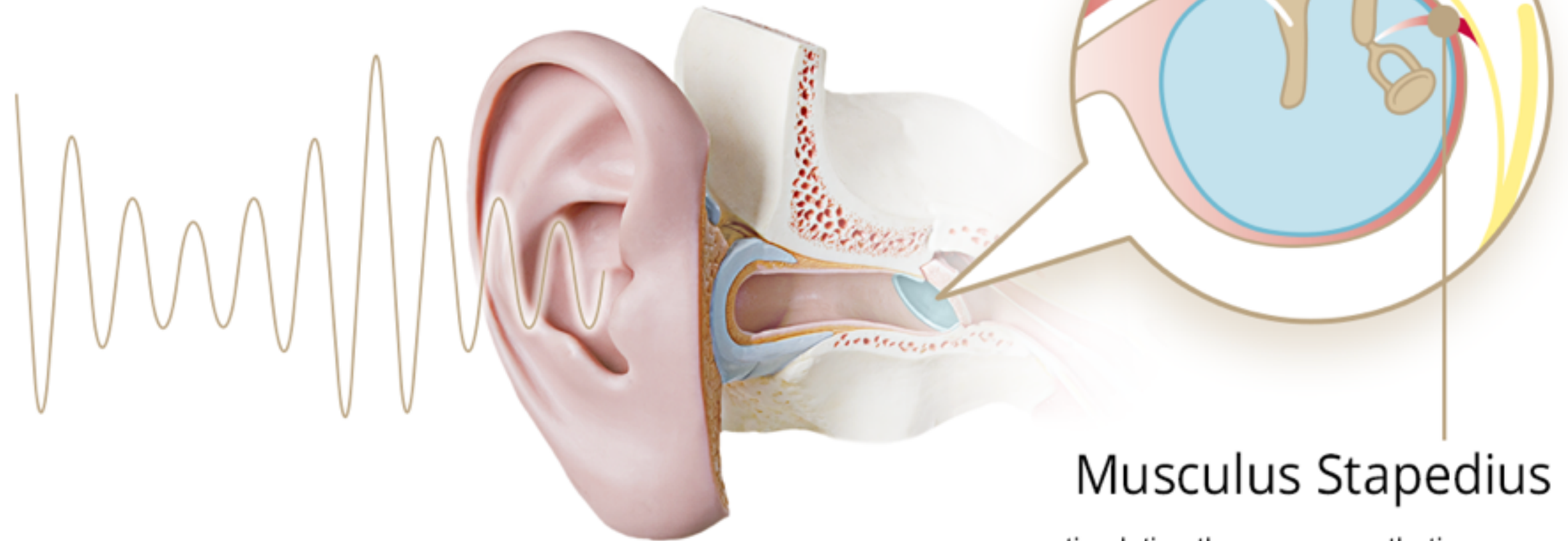
active stimulation of parasympathetic system







frequency-modulated sound waves

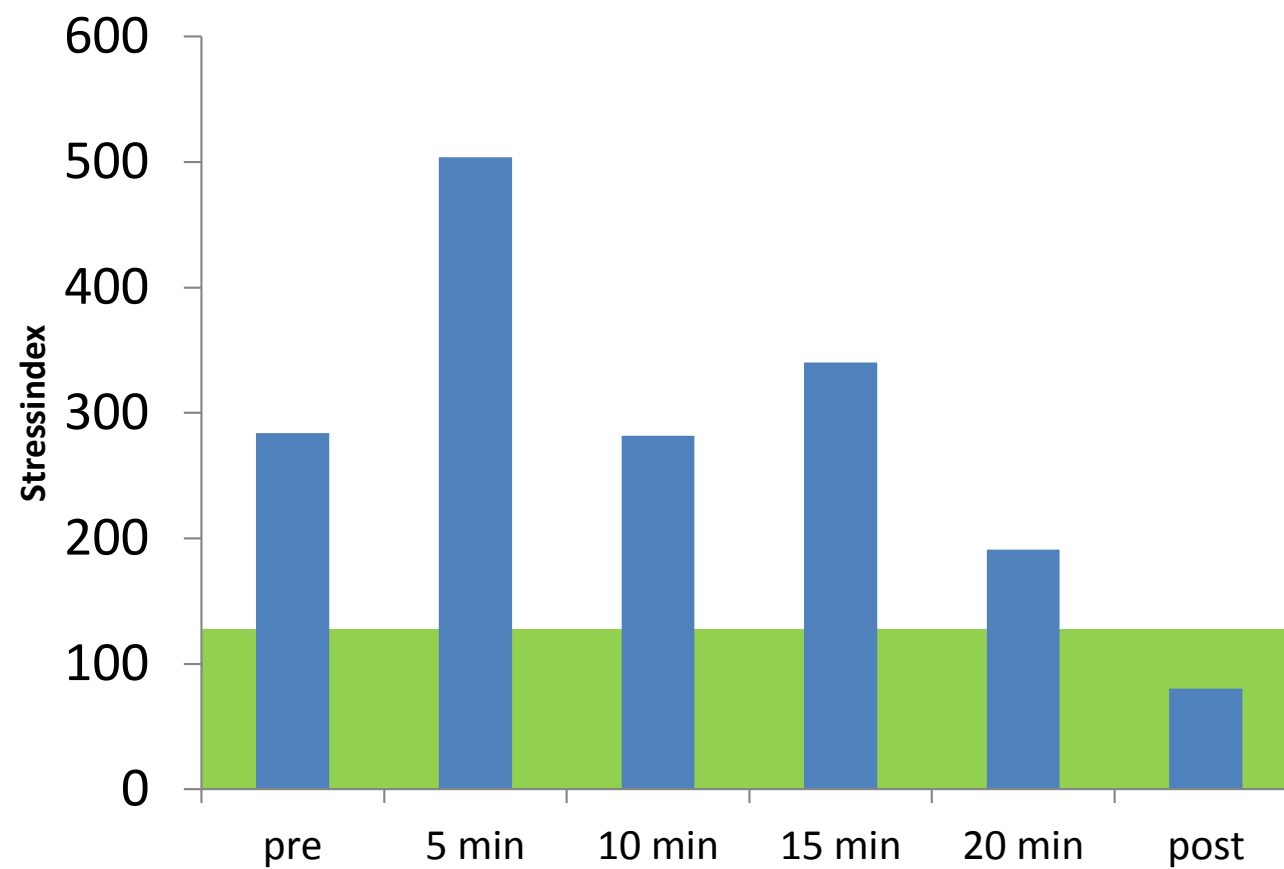


Musculus Stapedius
stimulating the parasympathetic nerve

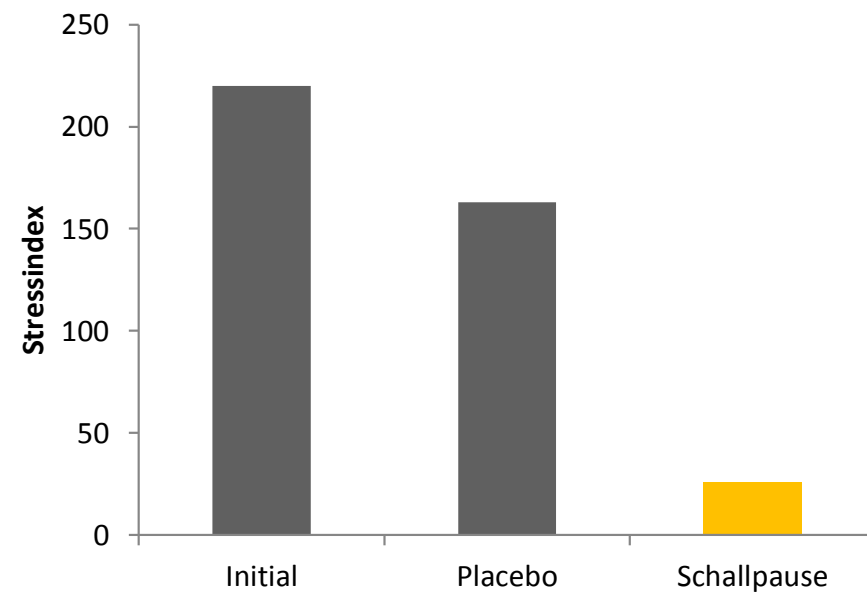
the factory



// PILOTSTUDIE INSIGHT //



Stressfaktor Overload (DM-Teilnahme)

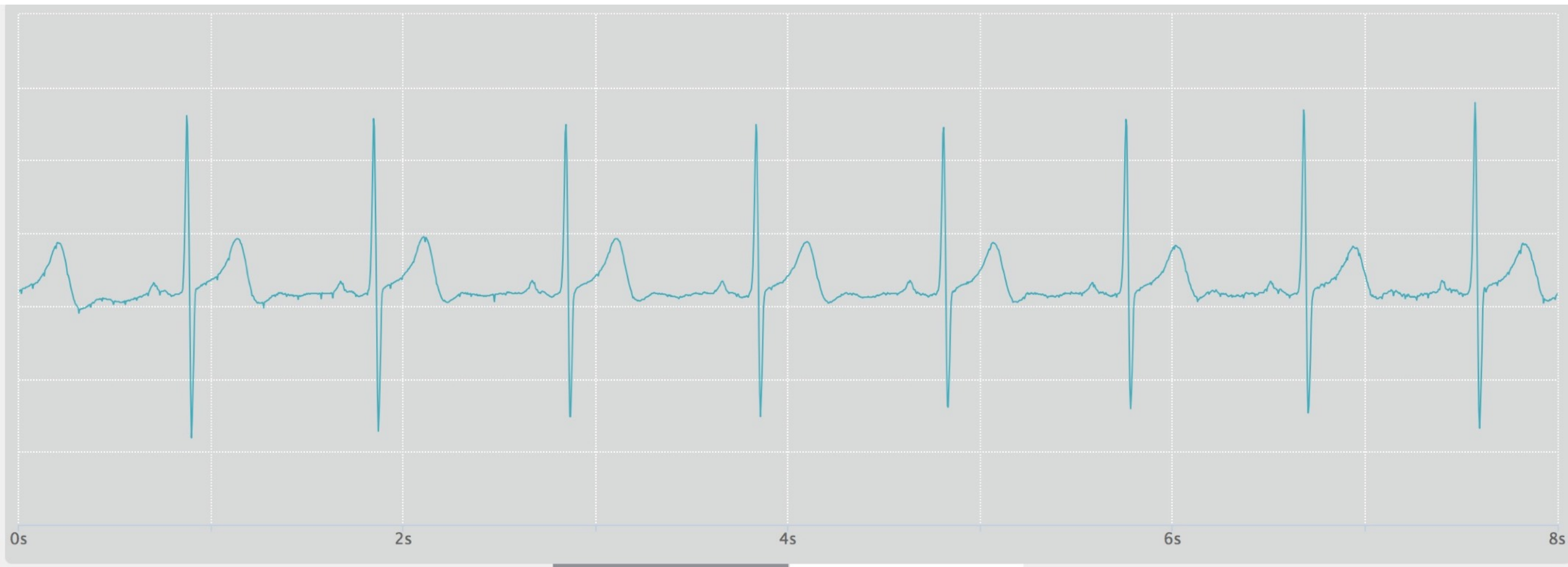




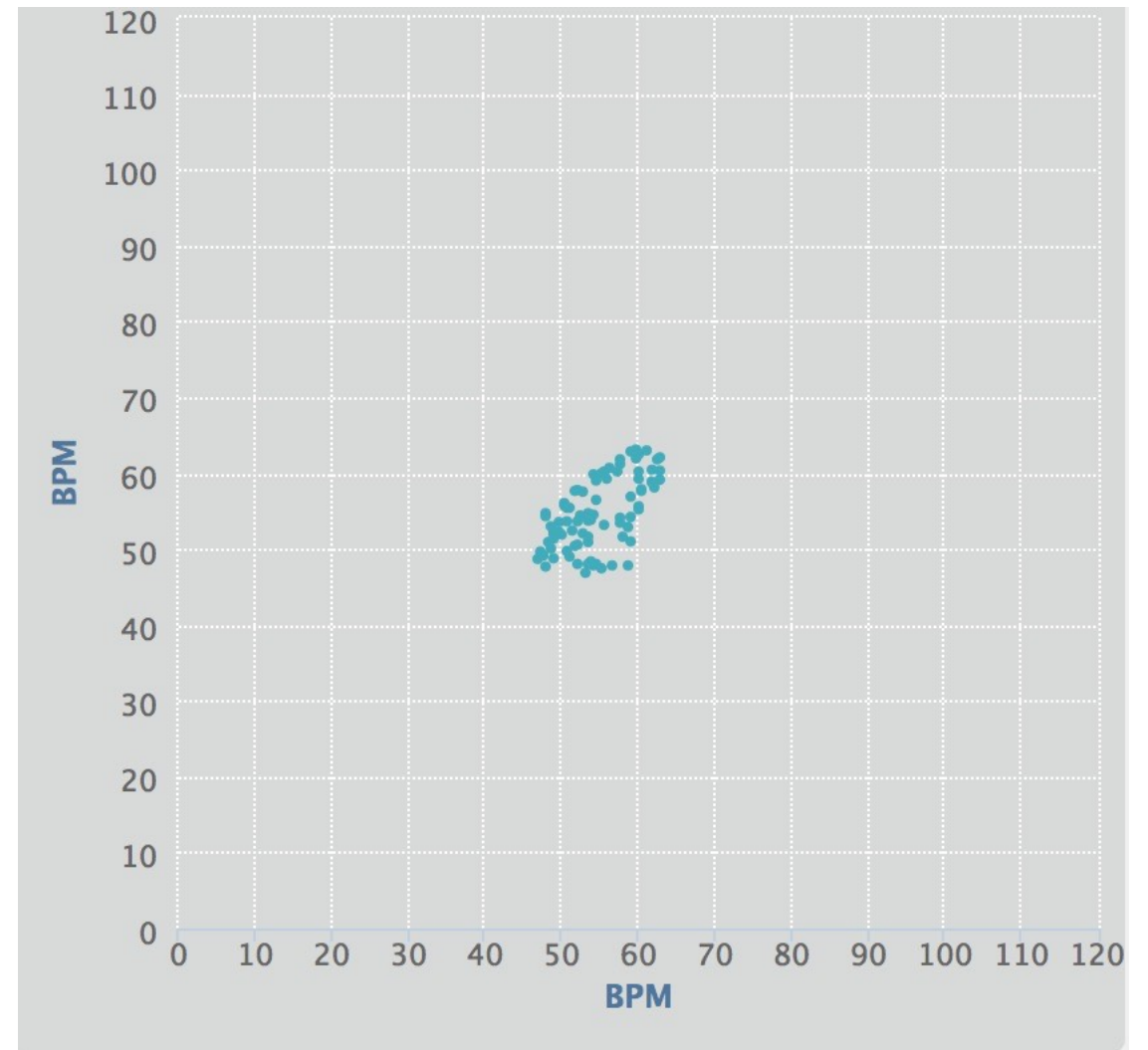
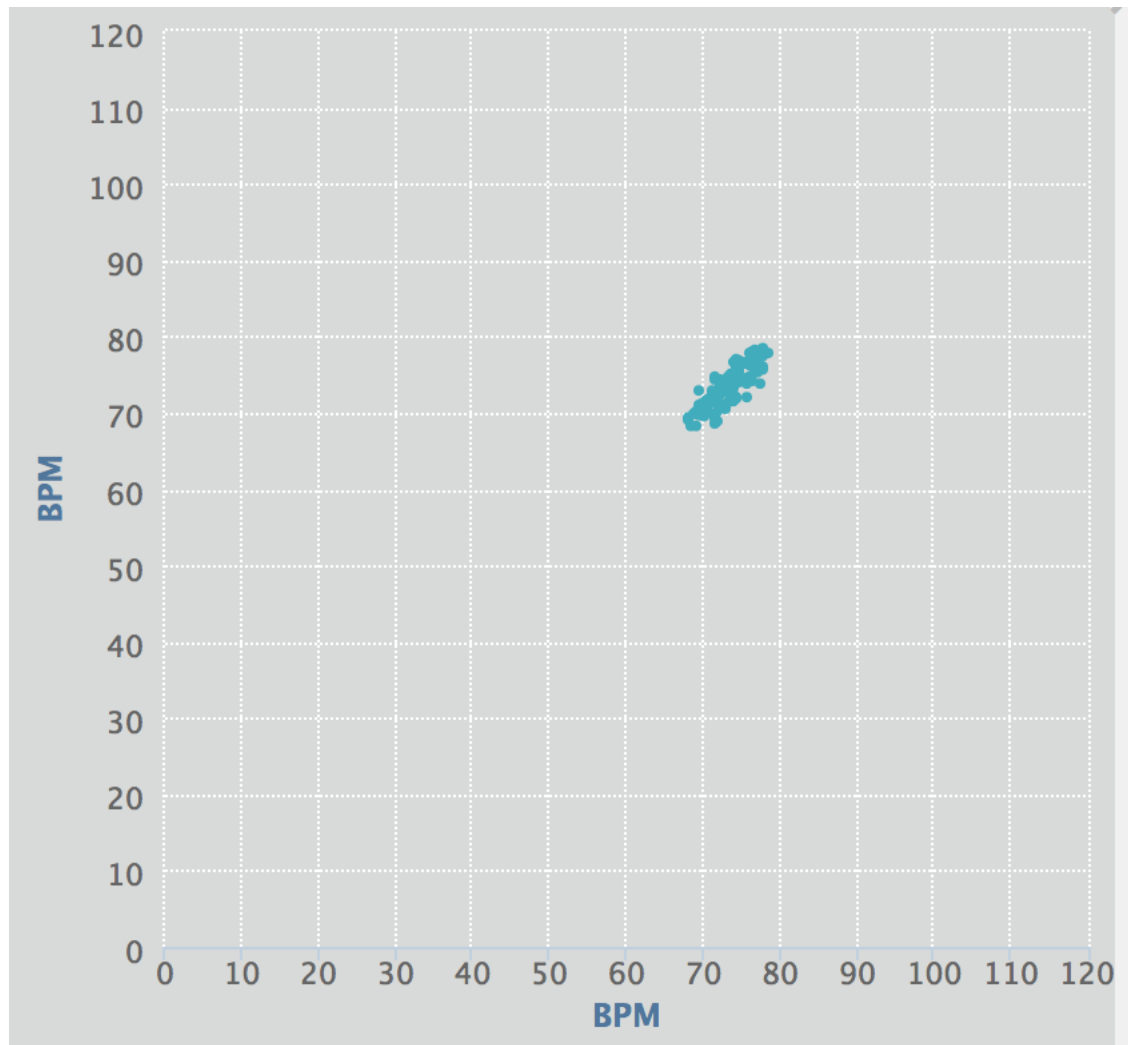
Many people think that our heart should beat as evenly as possible.
But the distance between each heartbeat is never completely the same.
Already 1700 years ago the Chinese knew about the importance of a variable heartbeat.
A variable heart rate indicates a positive state of health, whereas a rigid pulse indicates a very critical situation.



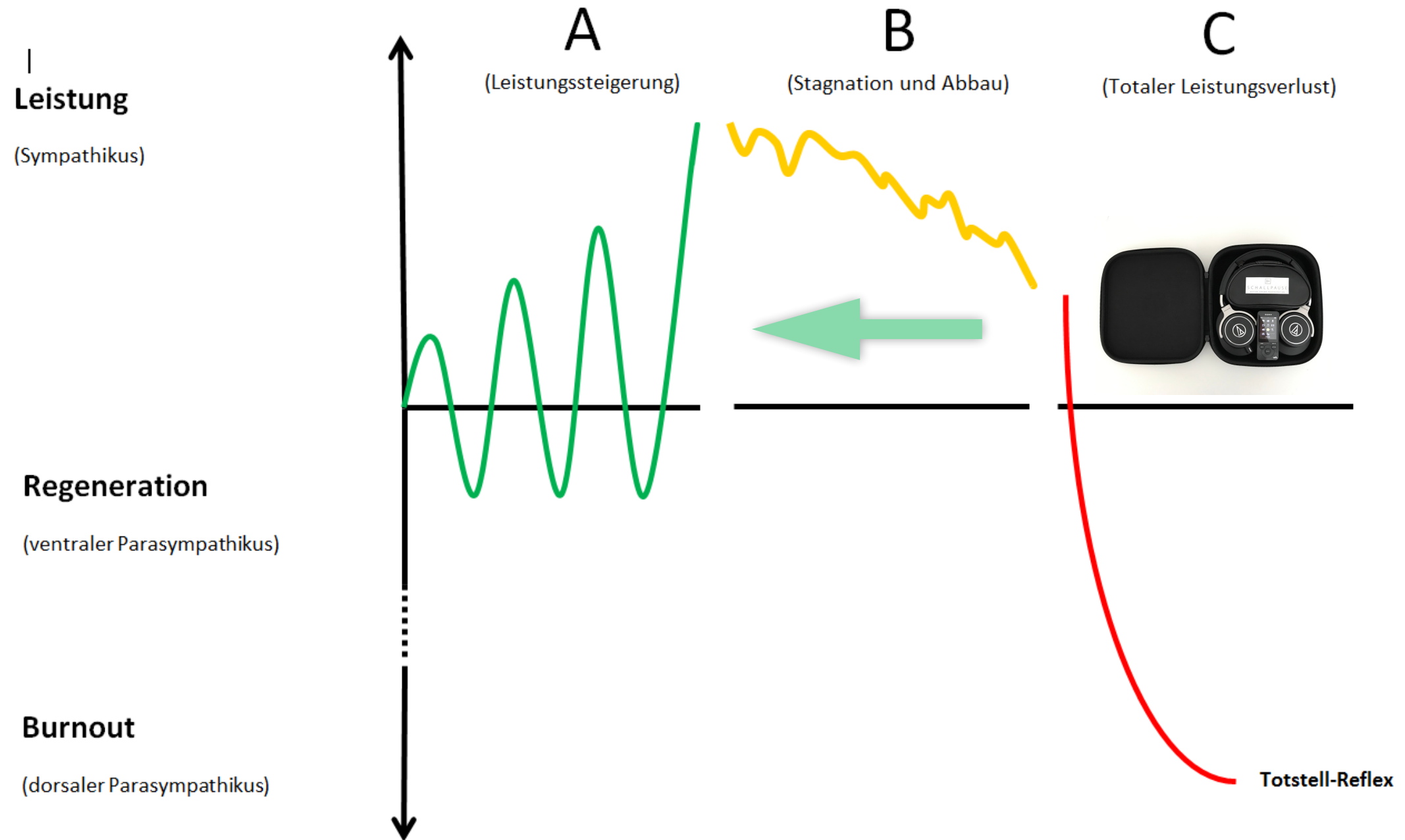
Measurement of Heart Rate Variability (HRV)



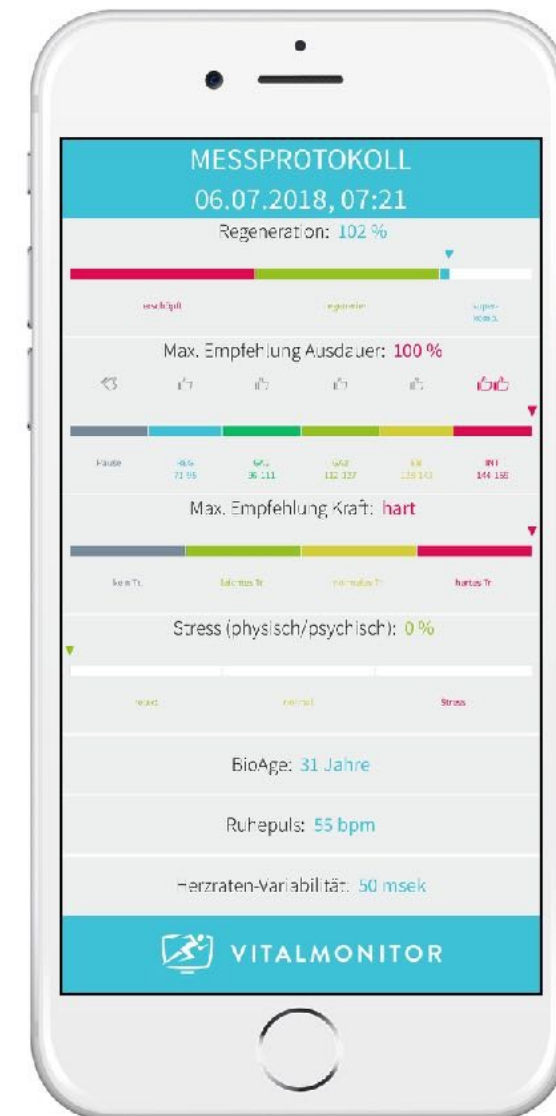
Measurement of Heart Rate Variability (HRV)



Der Weg zurück zur Leistung

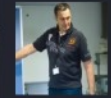


Measurement heart rate variability





ICH



Boss Jürgen
61J. 95.1kg 193cm
korrigierter BMI: 23.2

REG
STR
BEF

76 %

12.07.2018

MEINE COACHES



Schimpl Bernhard
0

CHAT mit Schimpl Bernhard

08.07.2018 | 12:01

Wäre nicht nötig nach den
Kraftübungen zu messen!
09.07.2018 | 07:04



ok. habe auch nach Aufstehen
gemessen
09.07.2018 | 07:07



ohne Training
09.07.2018 | 07:07

Passt!

09.07.2018 | 07:46

Heute sehr gut!!

10.07.2018 | 07:33

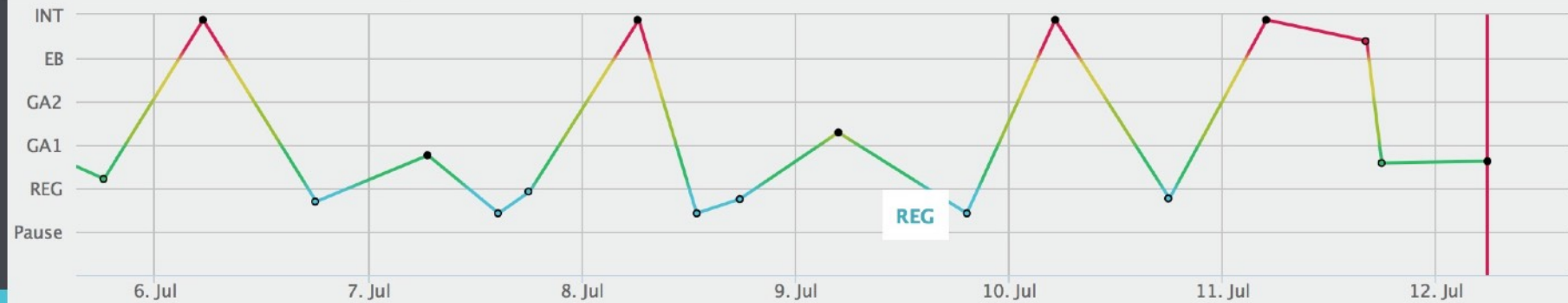
OVERLAY

- ☐ Regeneration ☐ Max. Empfehl... ☐ Max. Empfehl... ☐ Stress (physis... ☐ Ruhepuls ☐ BioAge
☐ Gewicht ☐ Schlafdauer ☐ Schlafqualität ☐ Befinden ☐ Arbeitsbelast... ☐ Trainingsinte... ☐ Herzratenvari...

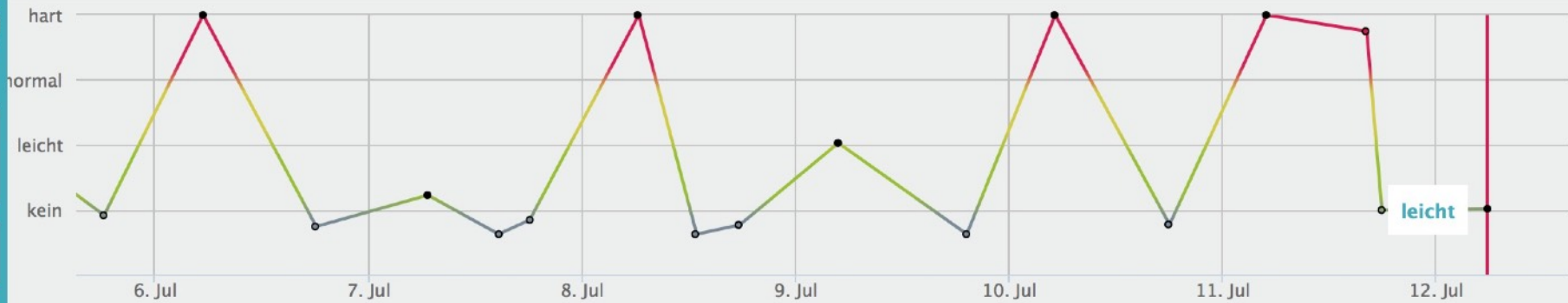
REGENERATION



MAX. EMPFEHLUNG AUSDAUER



MAX. EMPFEHLUNG KRAFT



STRESS

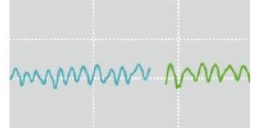


12.07.2018

07:43

NOTIZ

VERLAUF



EKG



HRV-PLOT

