
Stress, Technology, and Learning

Dr. Jared Cooney Horvath

PhD, Med, BAMF



LME GLOBAL

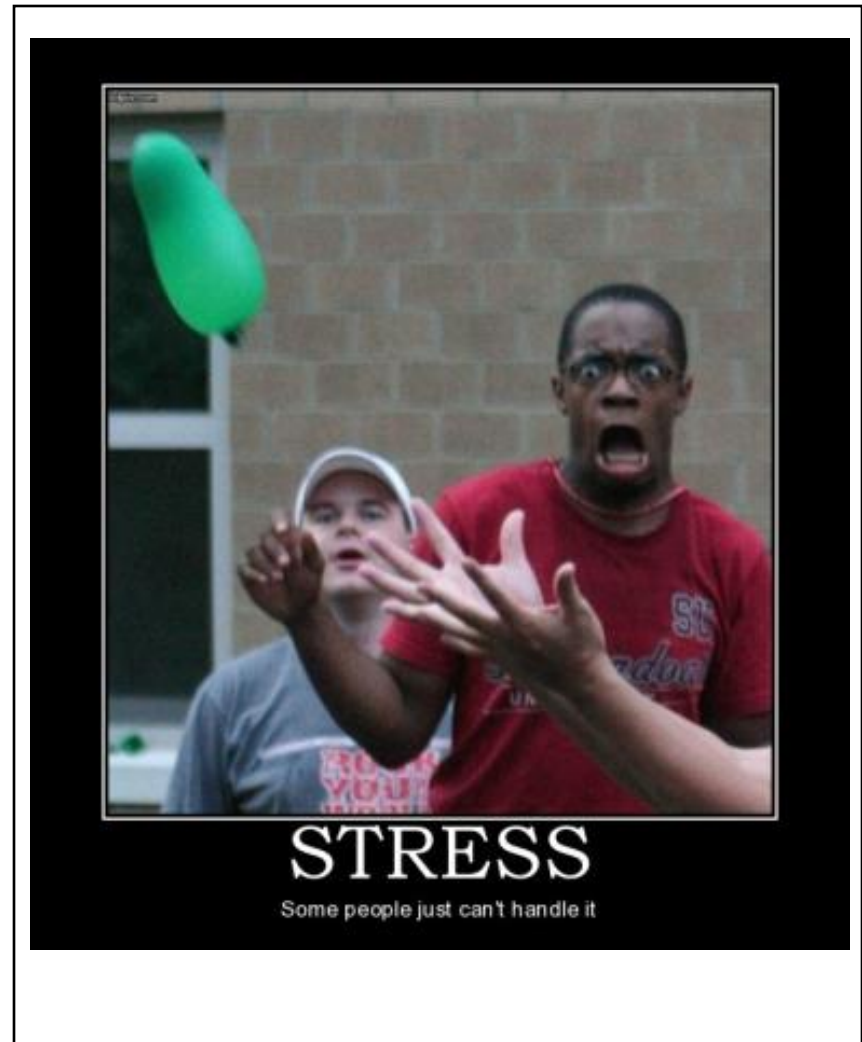
LEARNING MADE EASY

www.lmeglobal.net

Stress & Tech

80%

92%





EMOTION

Amygdala



Guess the Emotion



Guess the Emotion



But Wait...

Love

Jealousy

Confused

Helpless

Pride





EMOTION

FEELING



**PHYSICAL
SENSATION**



**MENTAL
EXPERIENCE**

Prefrontal Cortex



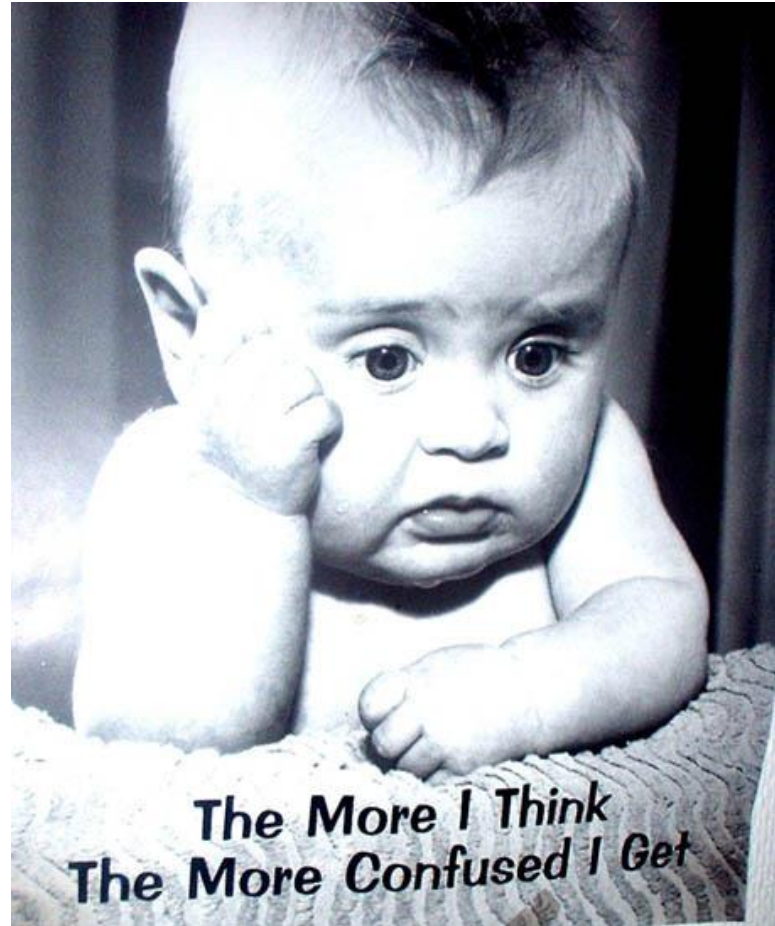


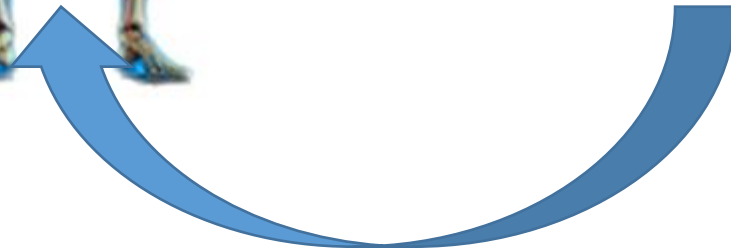
Body Language





Emotional Confusion







Why Does this Matter?



Stress

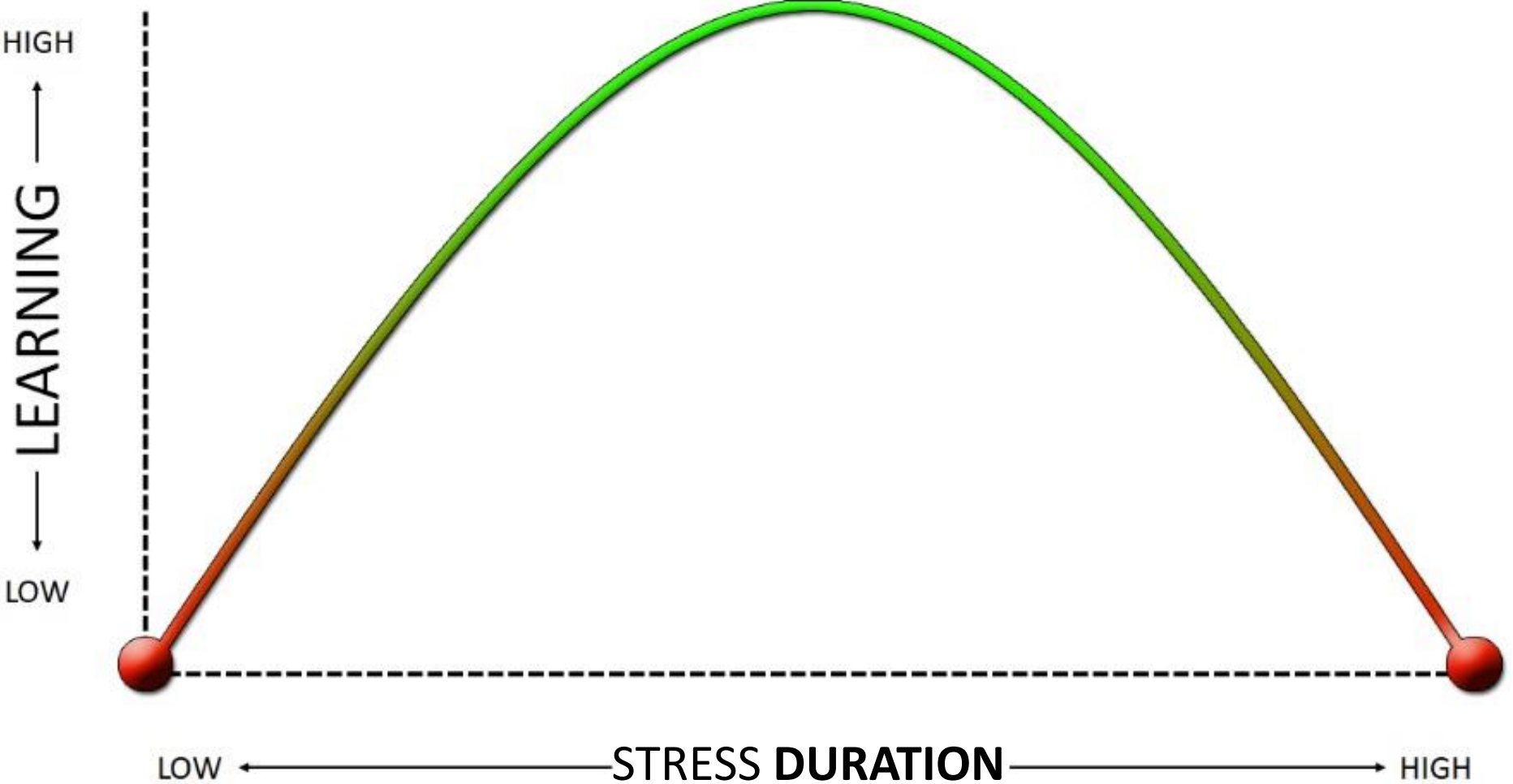
Feeling



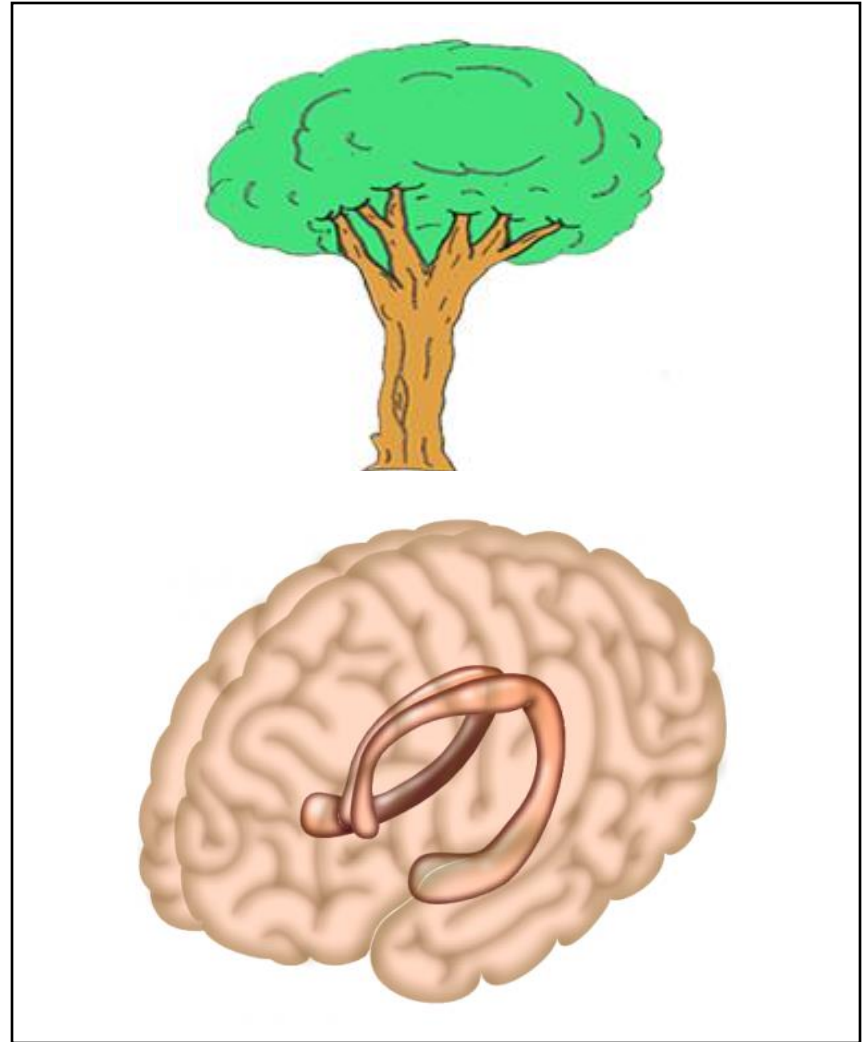
How Does it Work?

Part 1

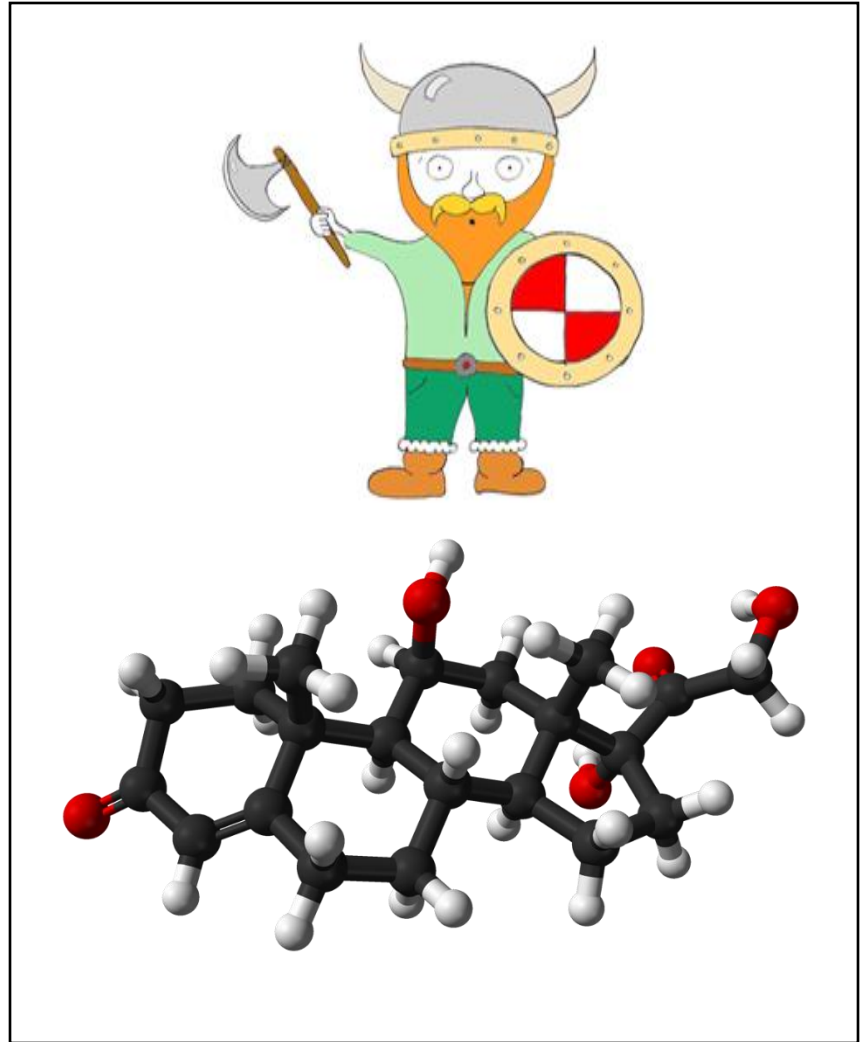




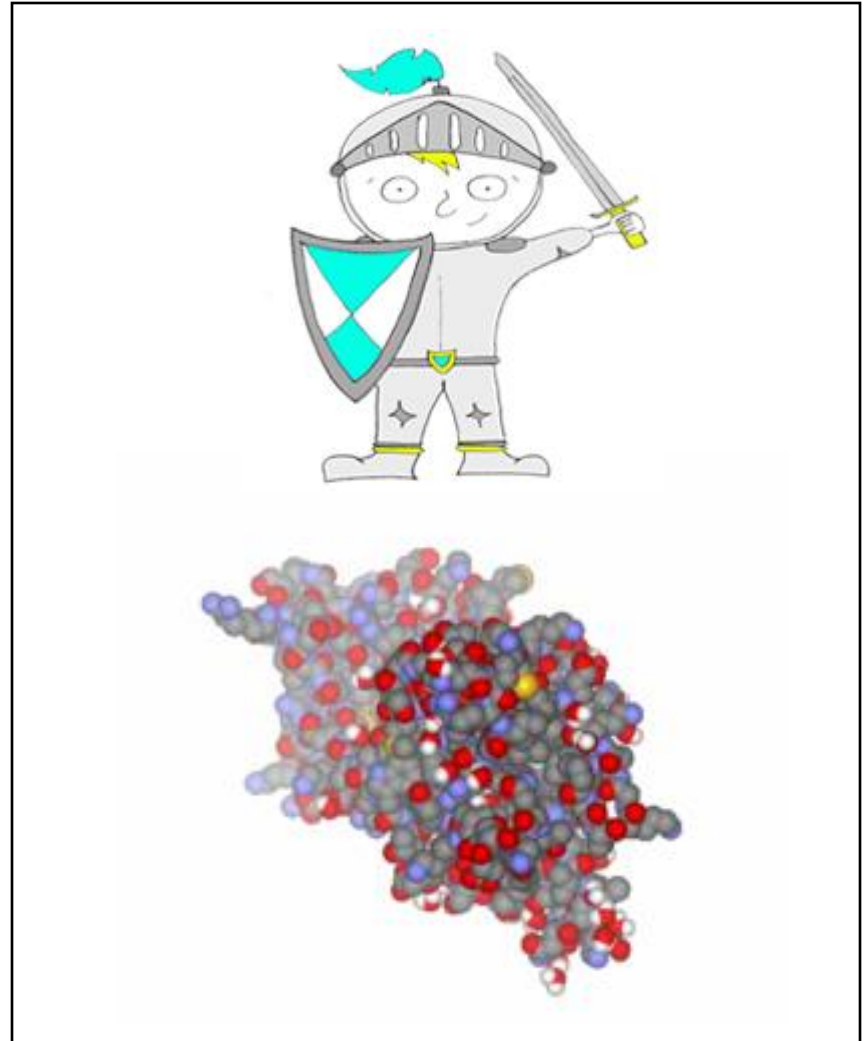
Hippocampus



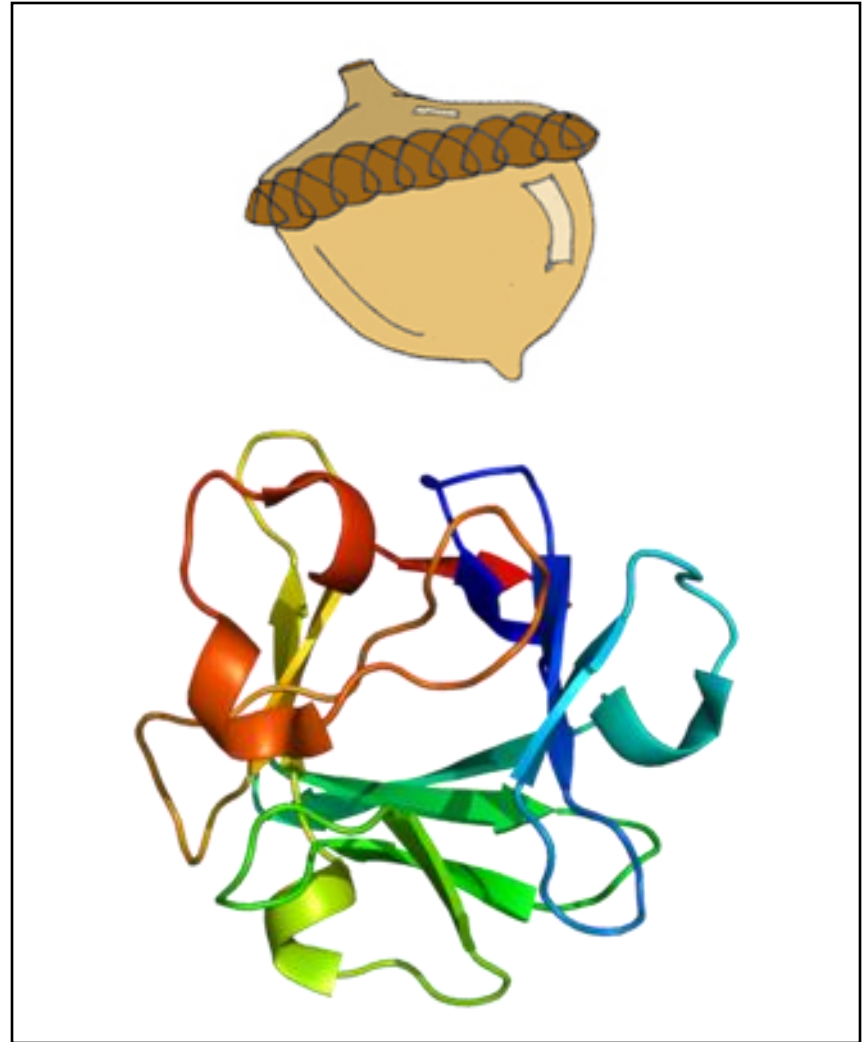
Cortisol



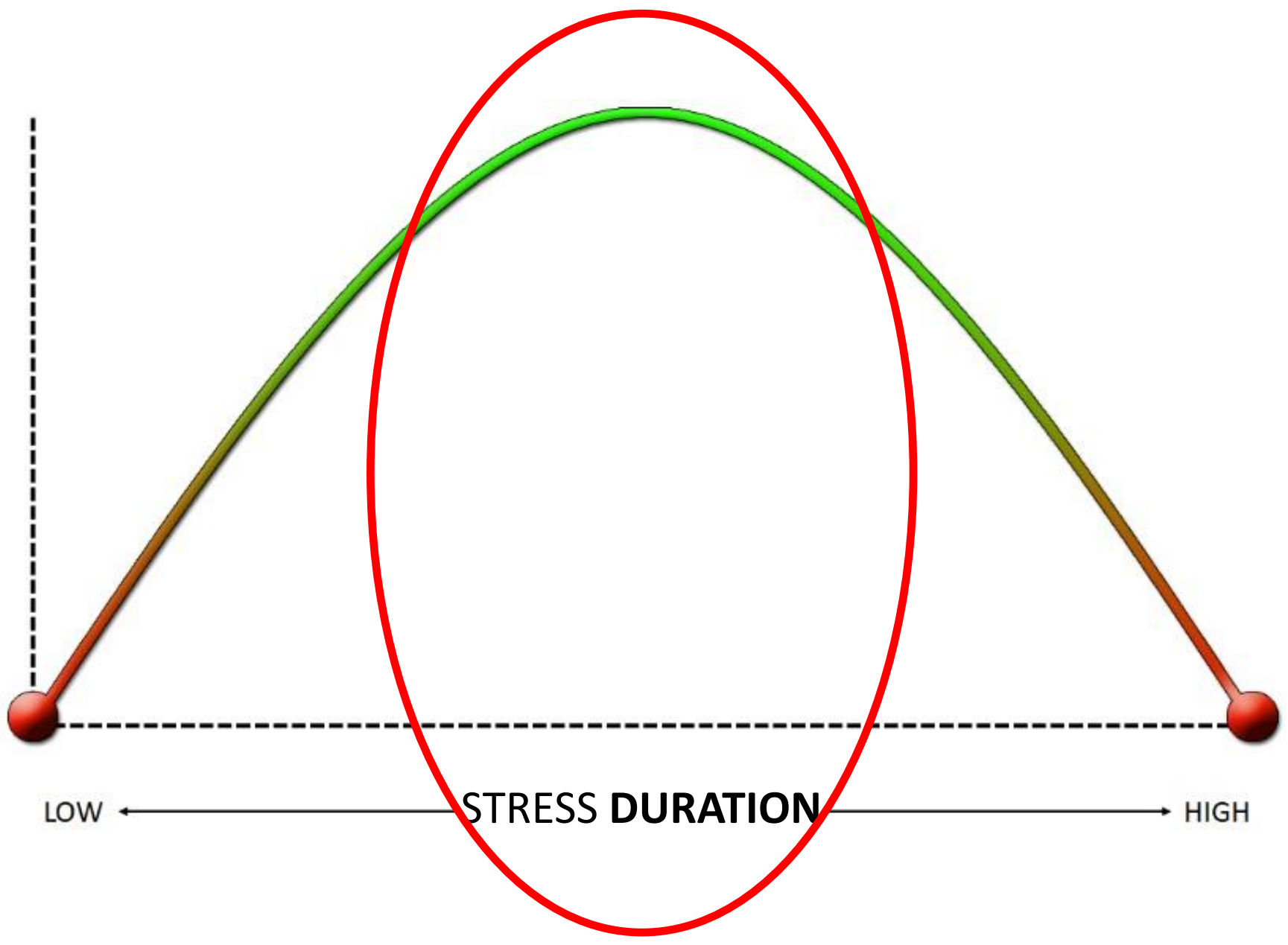
ARC-Proteins

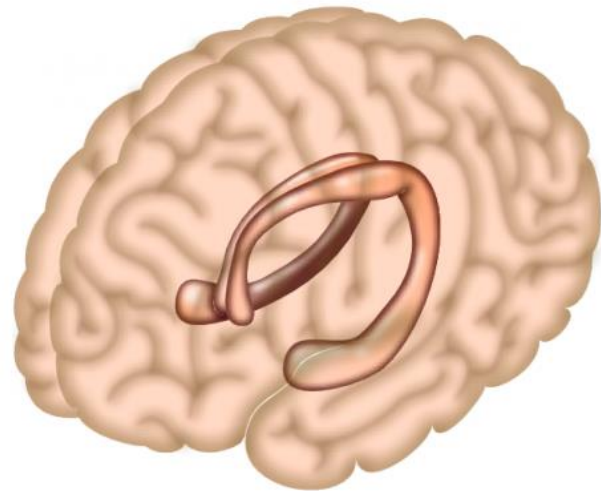
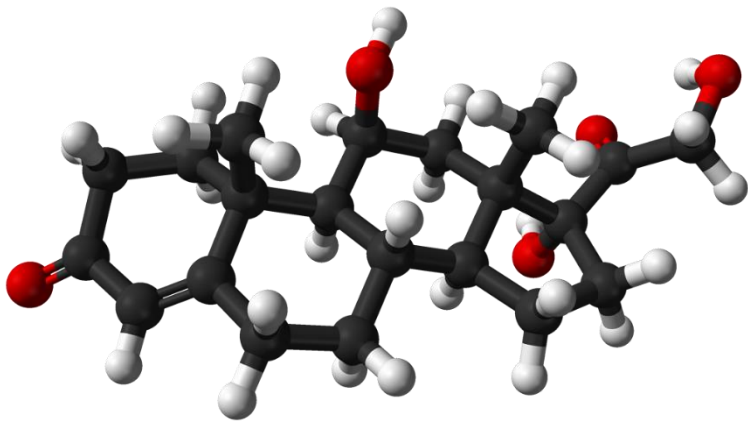


FGF2

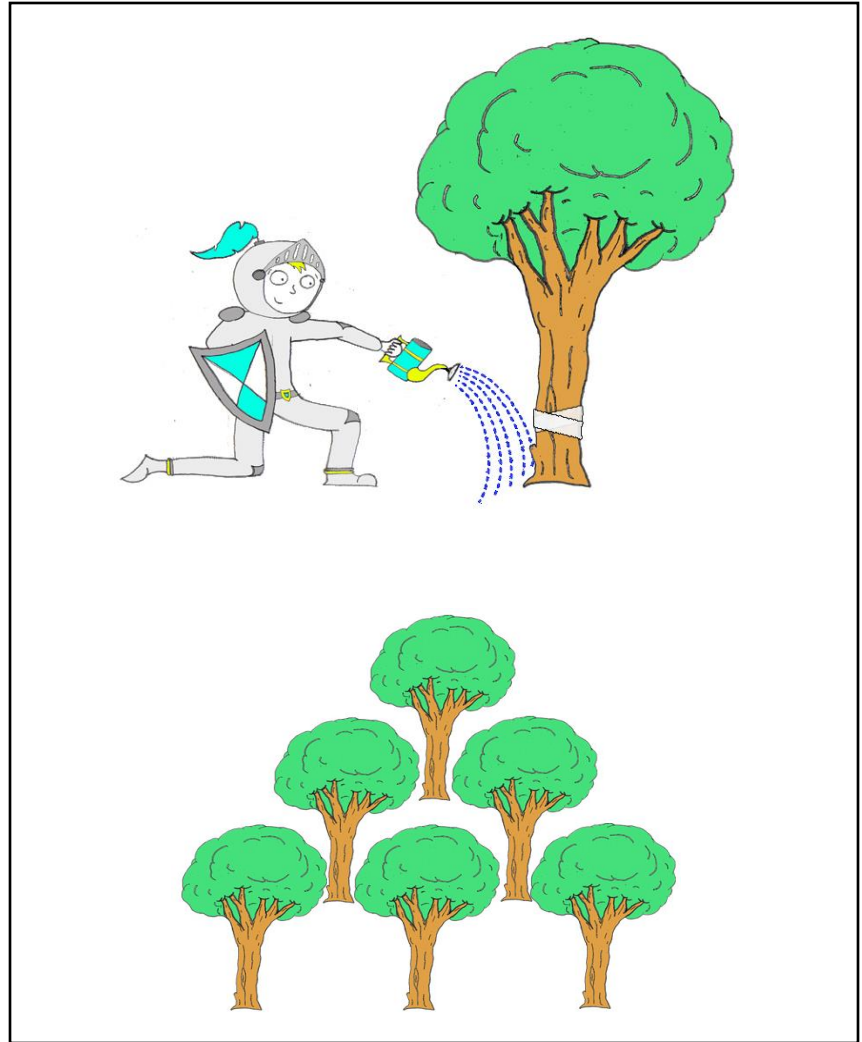


HIGH
↑
LEARNING
↓
LOW

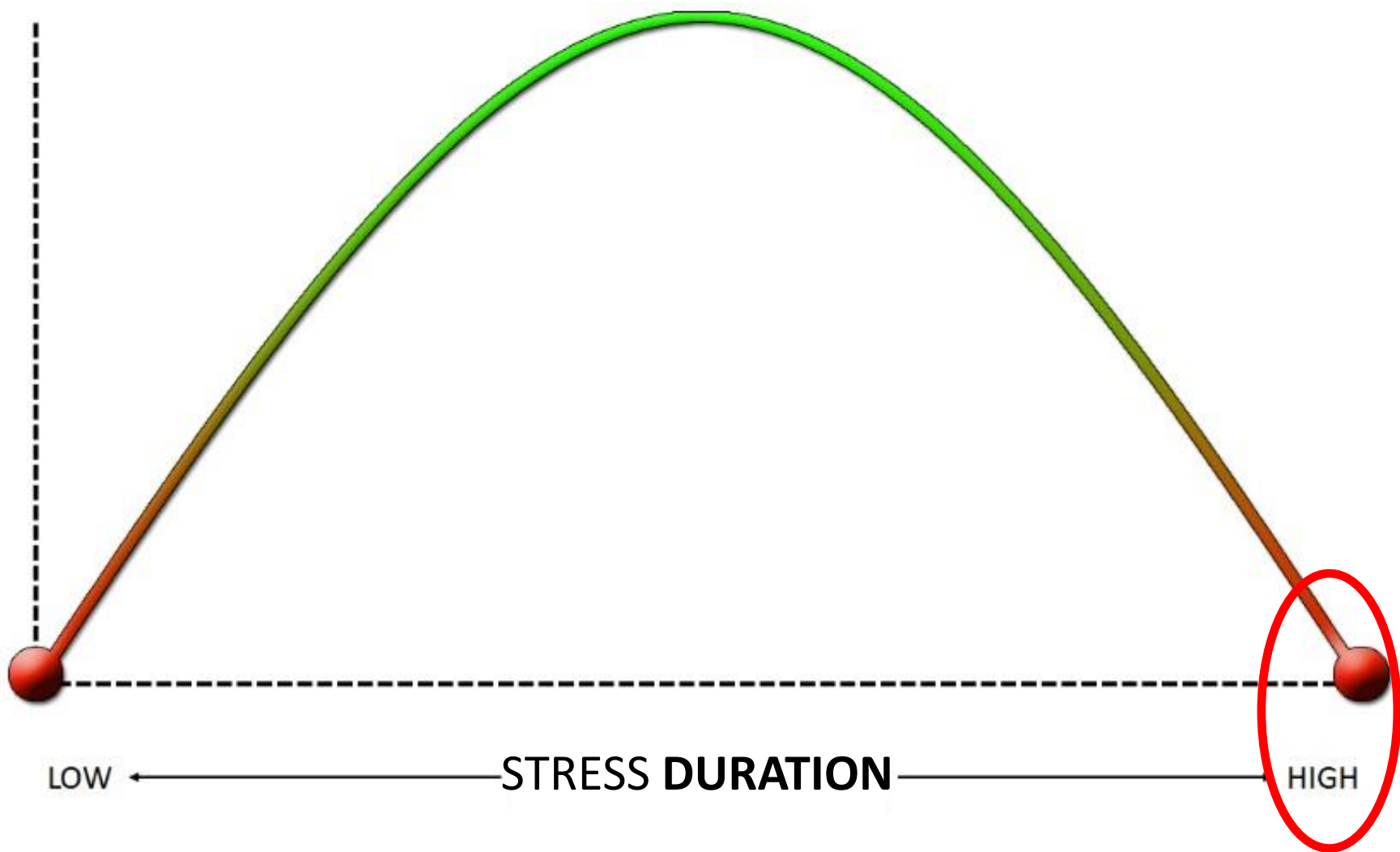




Agitation



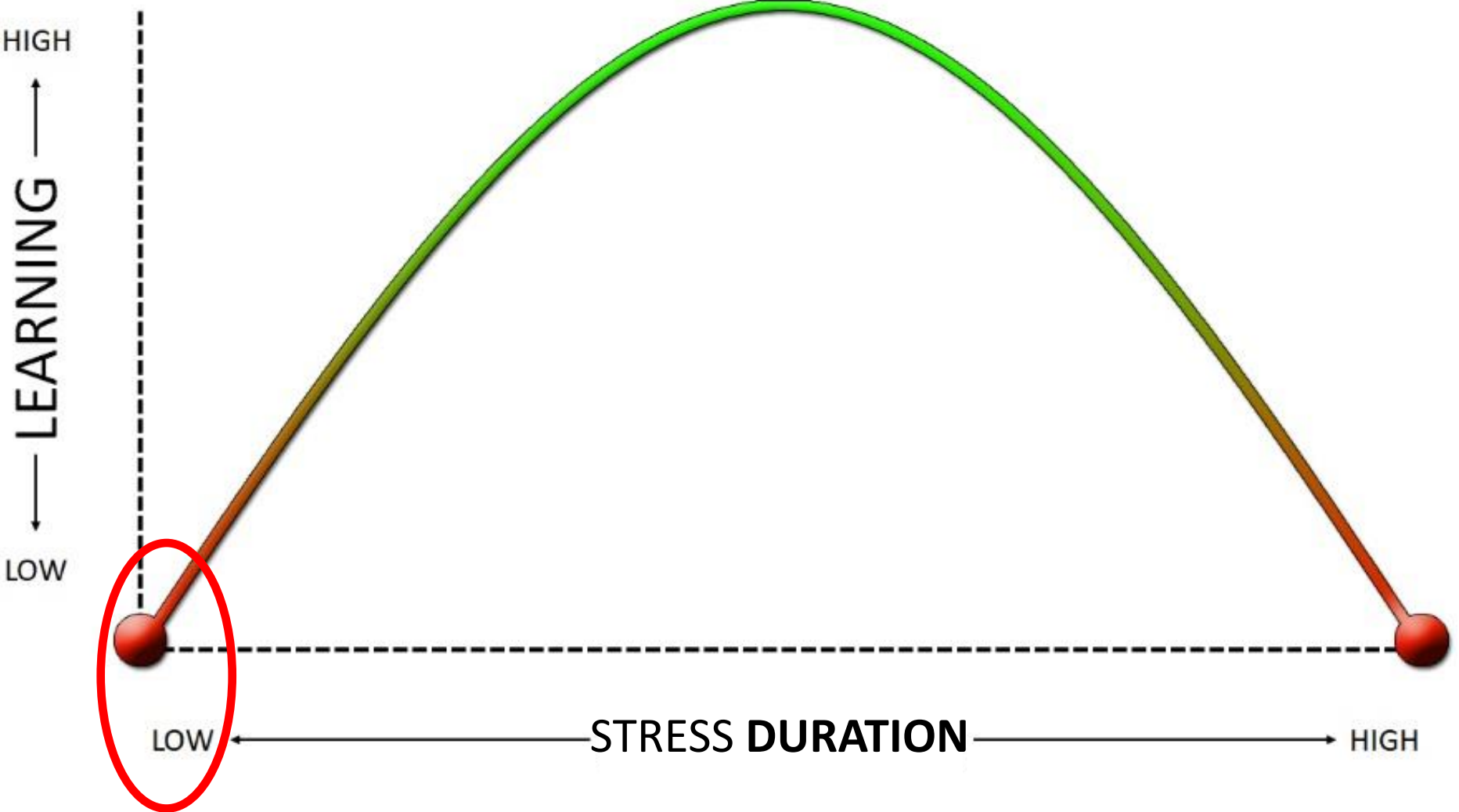
HIGH
↑
LEARNING
↓
LOW

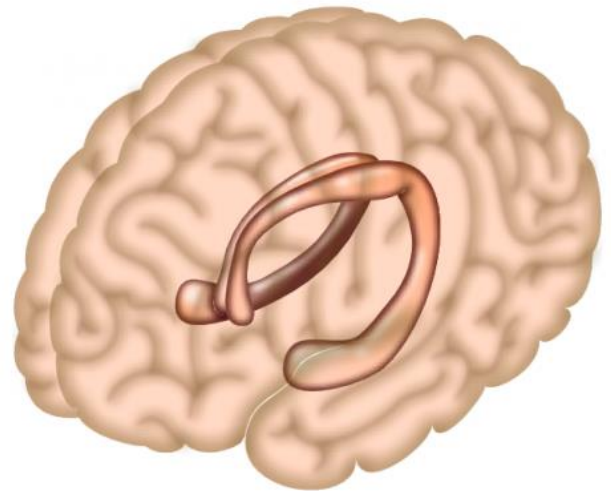
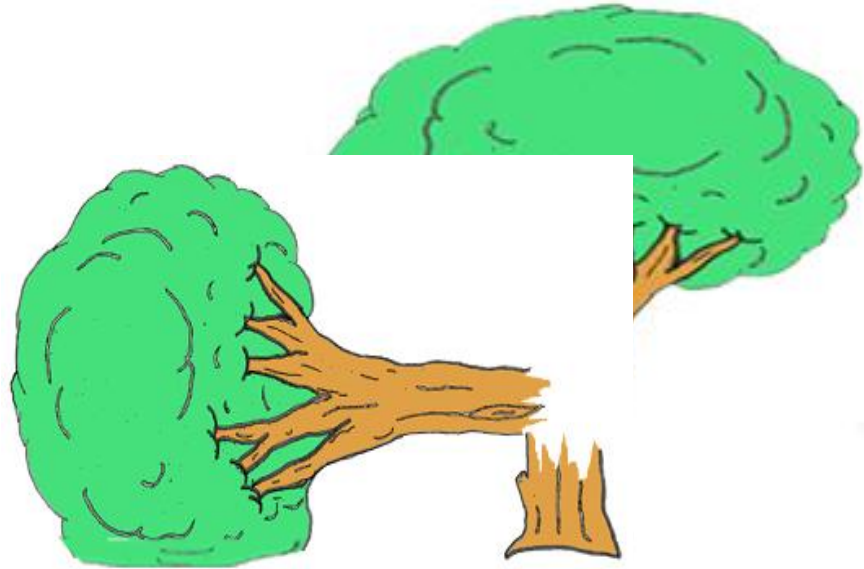


LOW

STRESS DURATION

HIGH





Moderate Stress



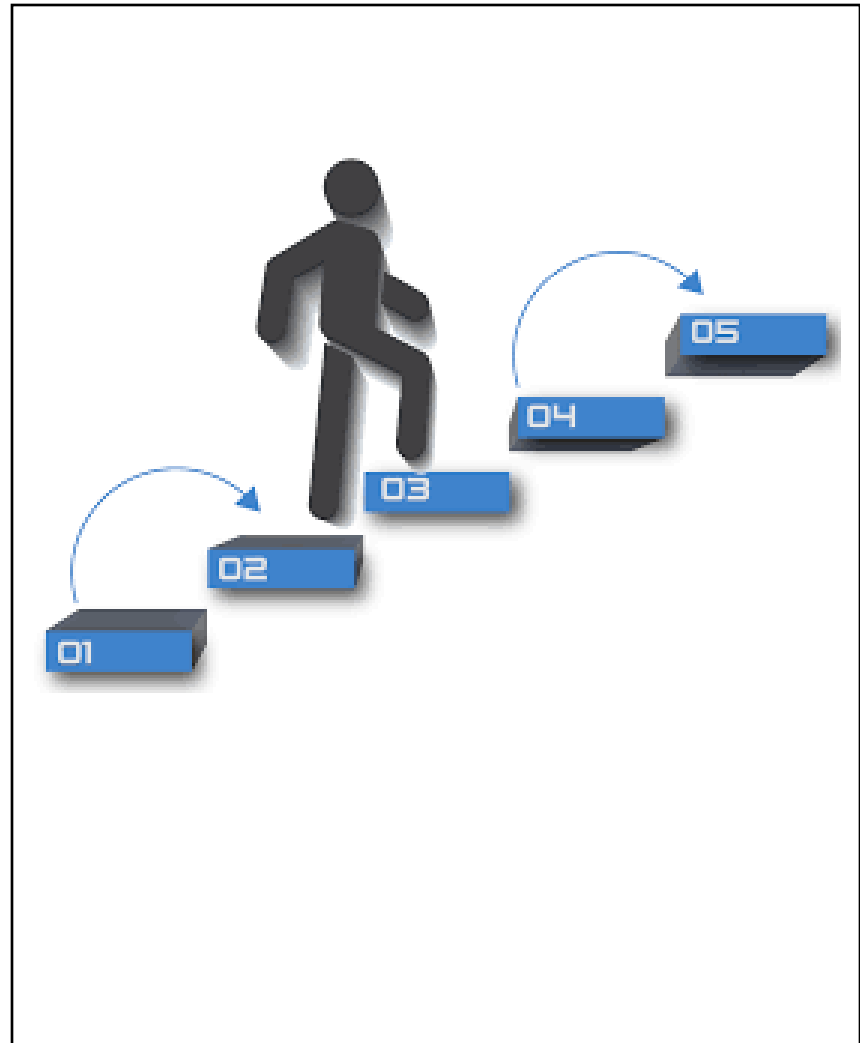
Moderate Stress
Challenge /
High Expectations



Moderate Stress

*Challenge /
High Expectations*

*Continual Growth /
Progression*



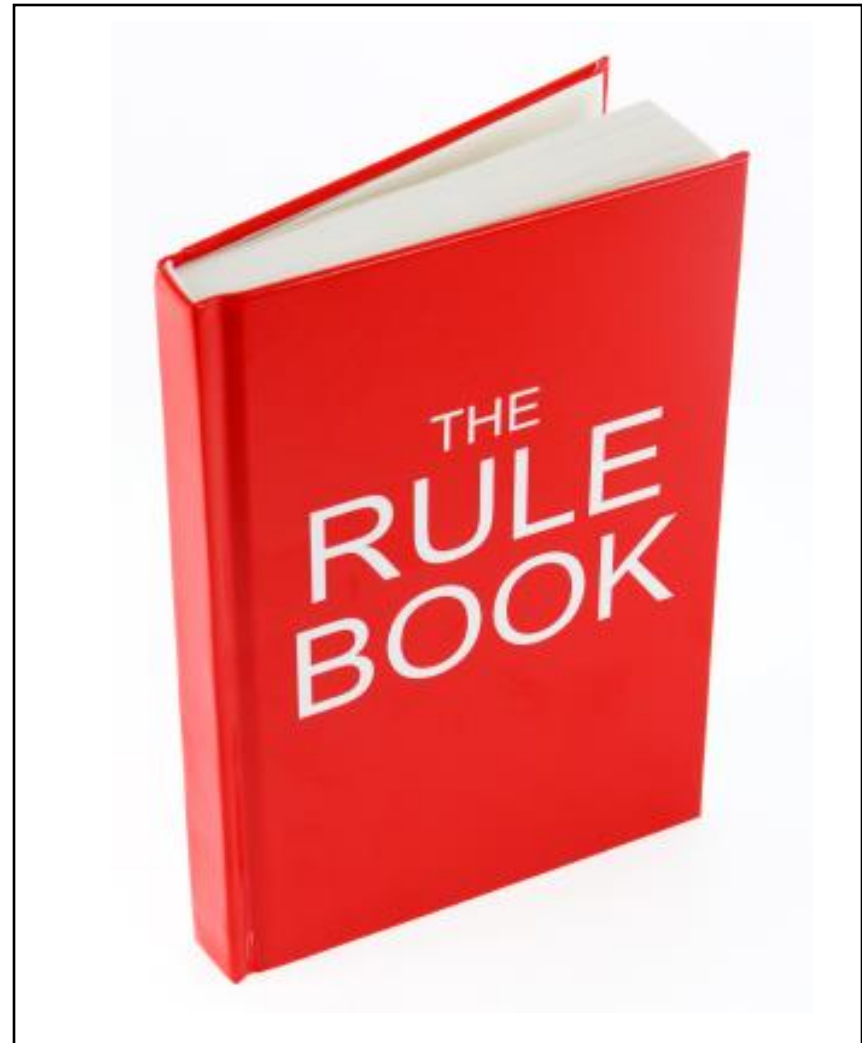
Moderate Stress

Challenge /

High Expectations

*Continual Growth /
Progression*

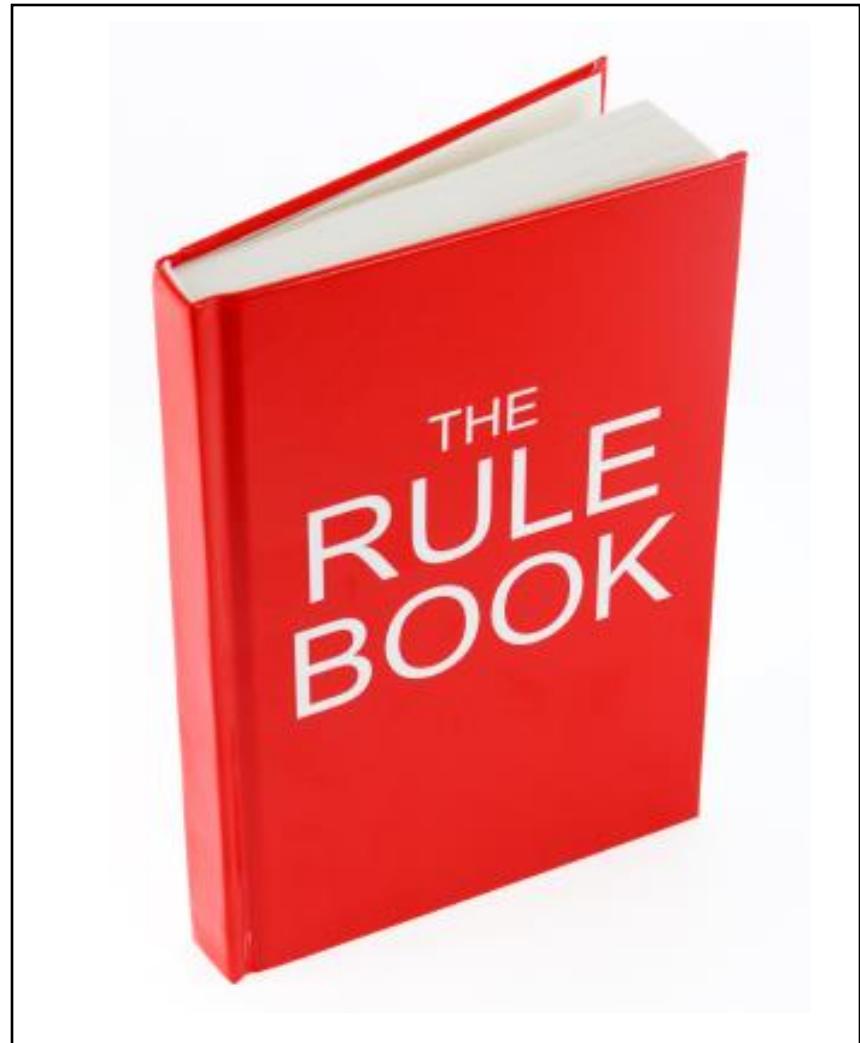
*Clear & Consistent
Repercussions*



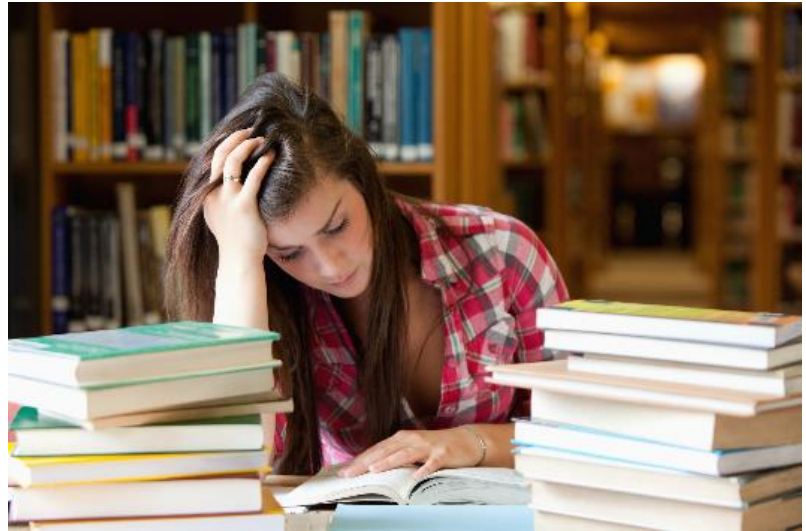
Moderate Stress

*Tension + Uncertainty =
Fear*

*Tension + Certainty =
Acute Stress*



Chronic Stress



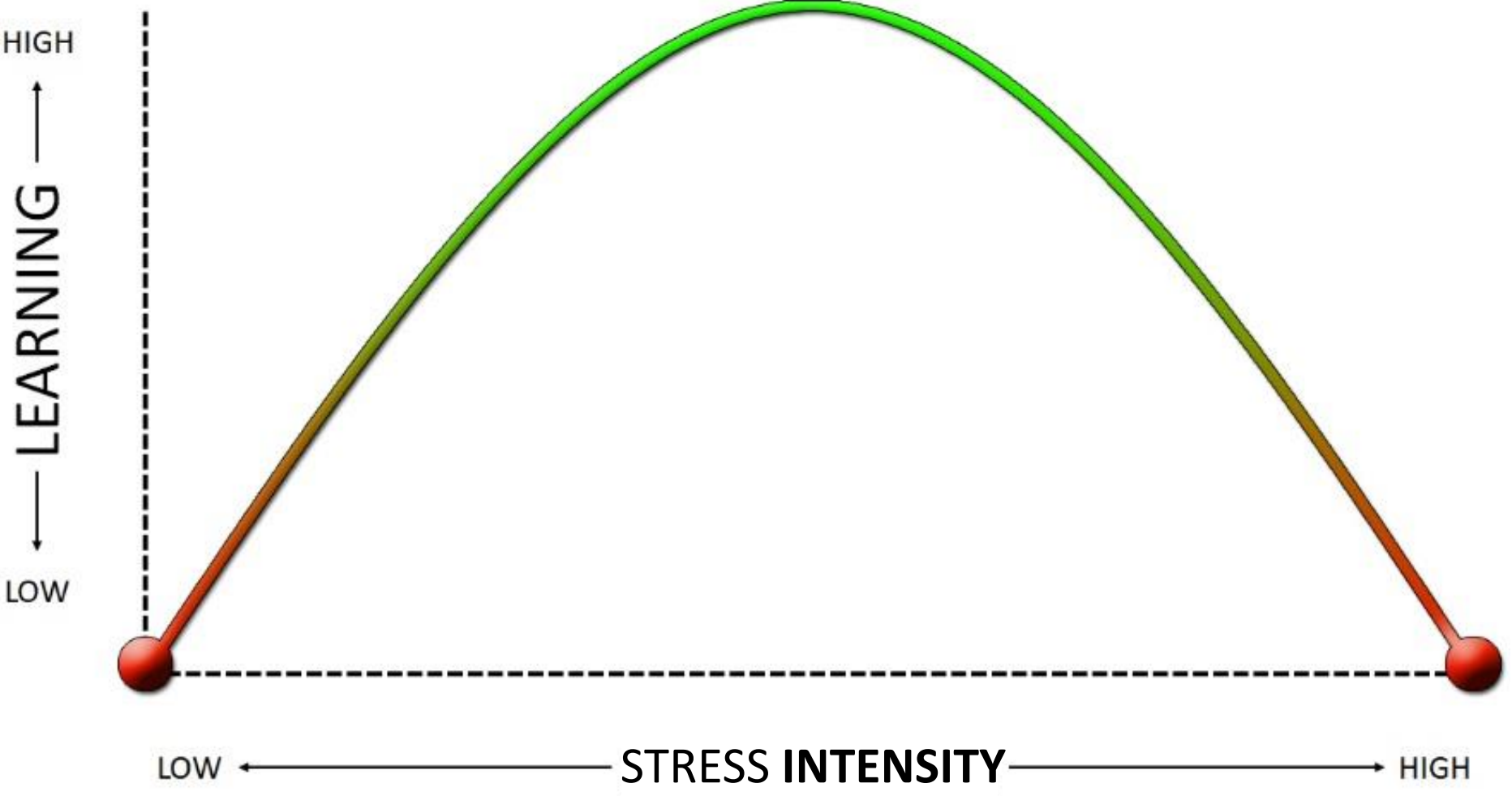
Chronic Stress
*Strong Relationships /
Safety*



How Does it Work?

Part 2

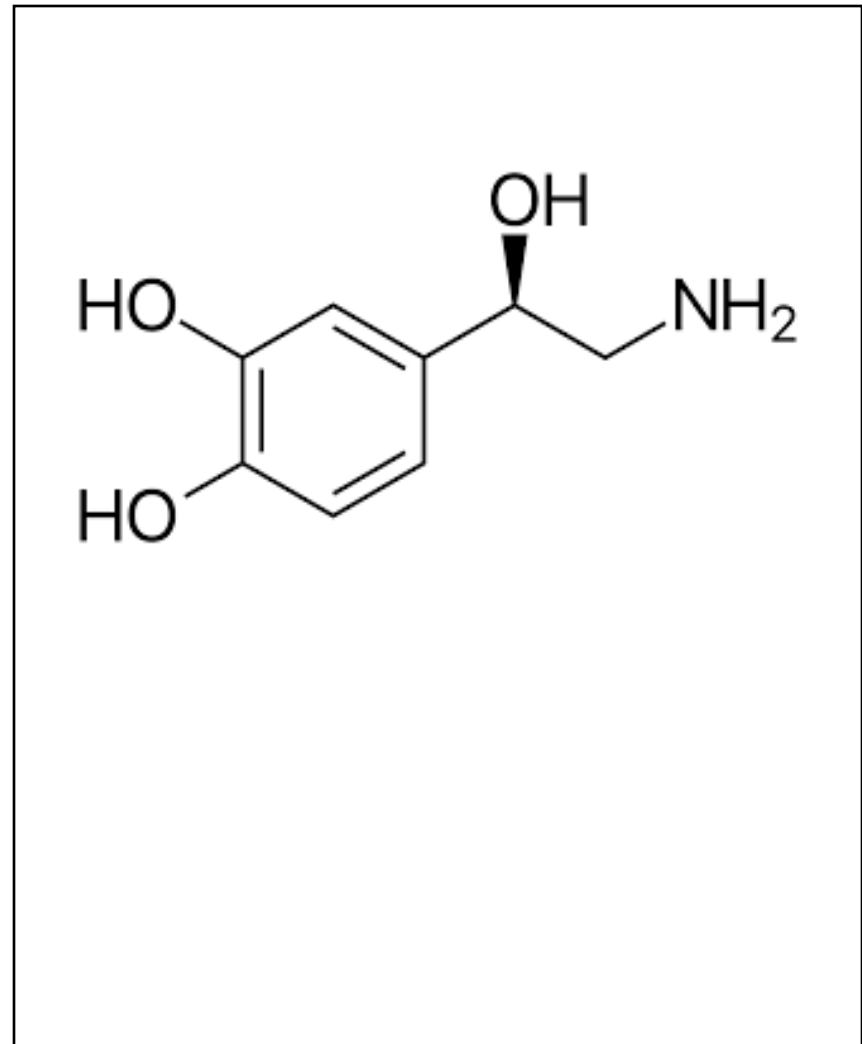




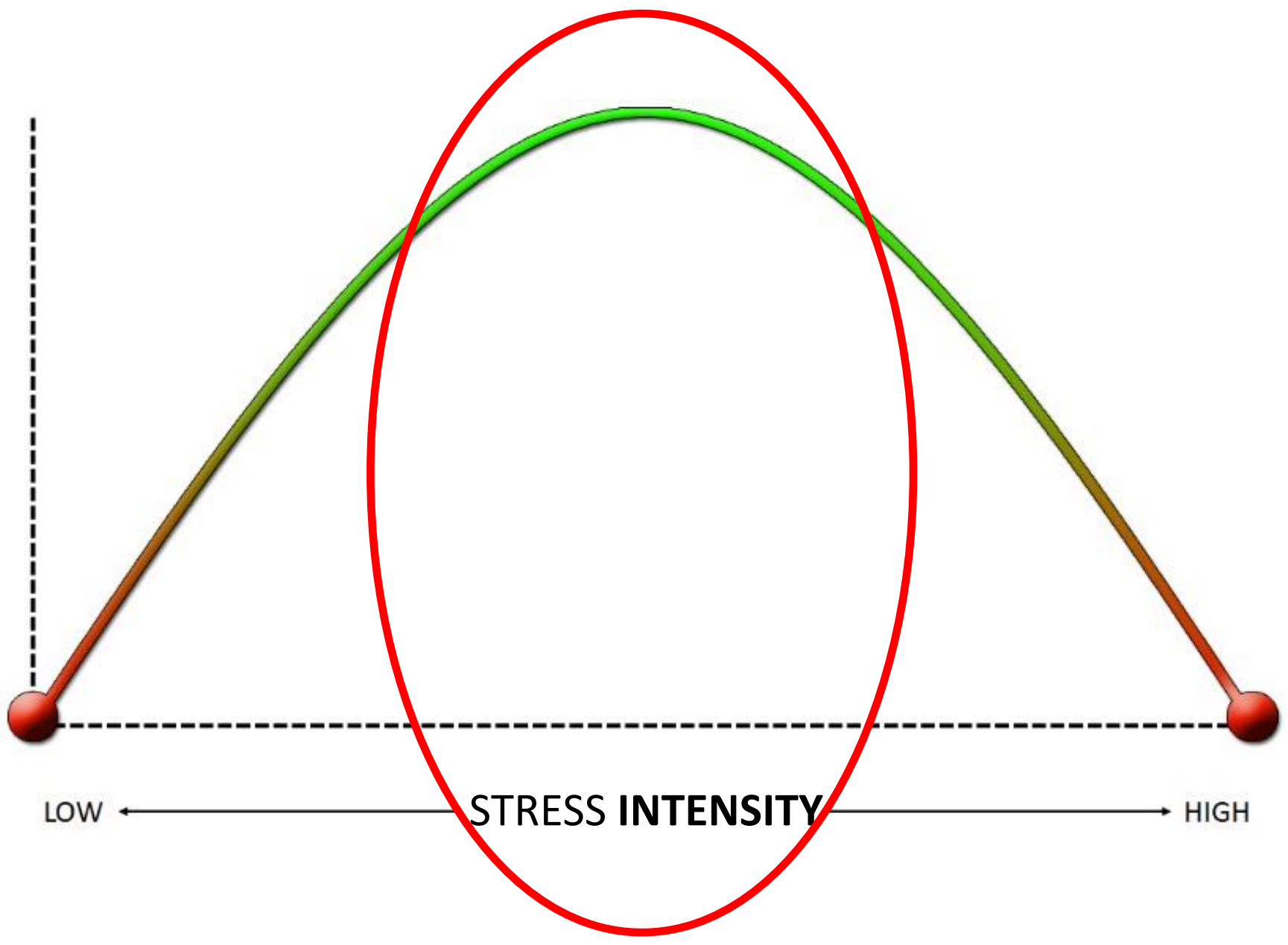
Prefrontal Cortex



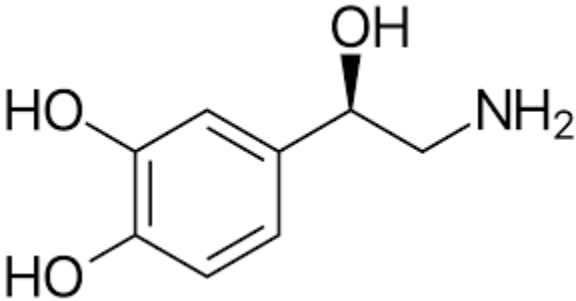
Norepinephrine



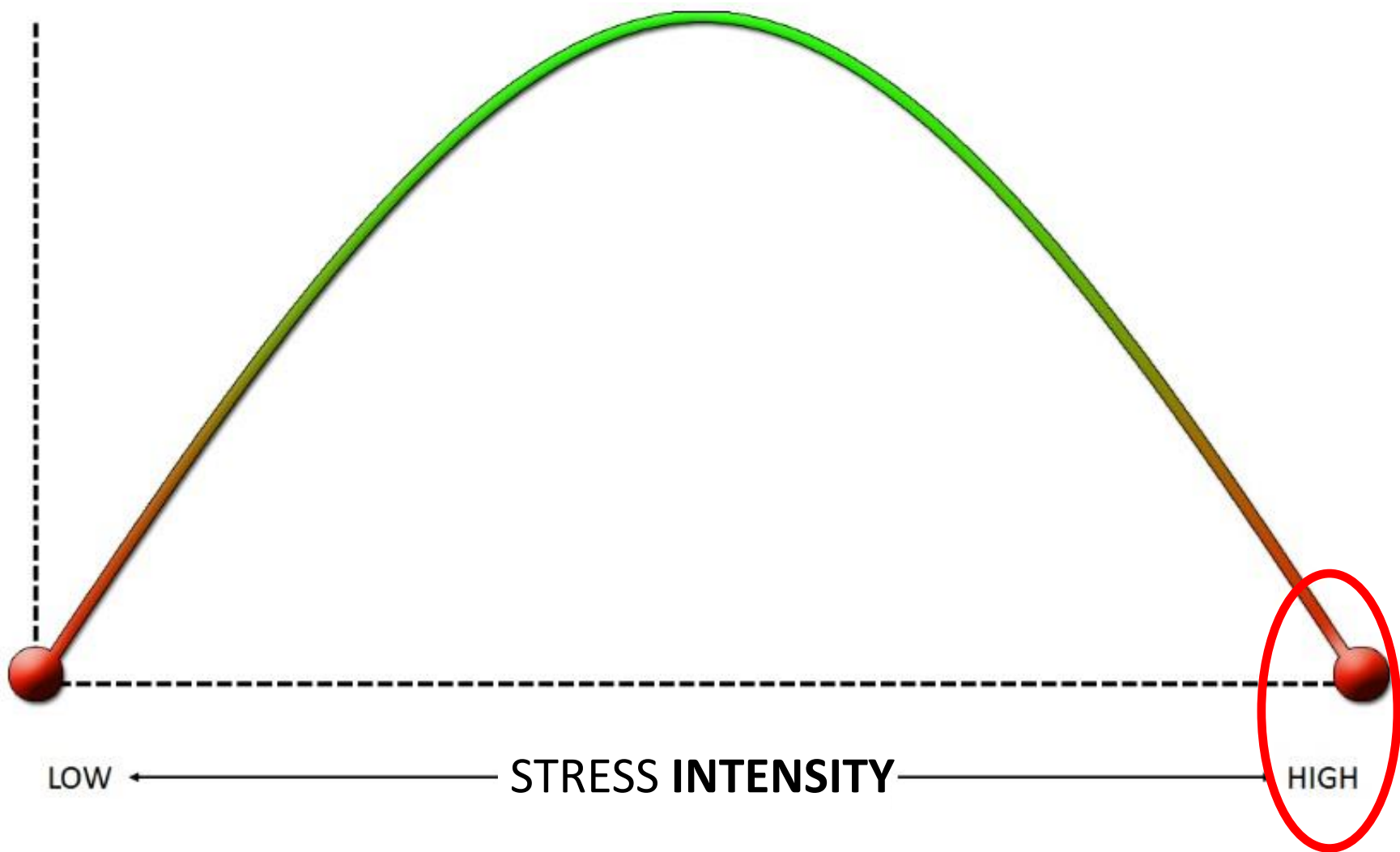
HIGH
↑
LEARNING
↓
LOW



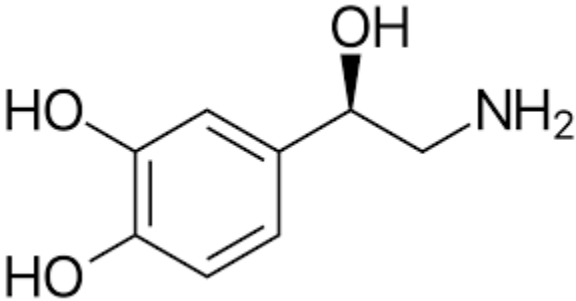
Norepinephrine



HIGH
↑
LEARNING
↓
LOW



Norepinephrine



Norepinephrine
Overwhelm

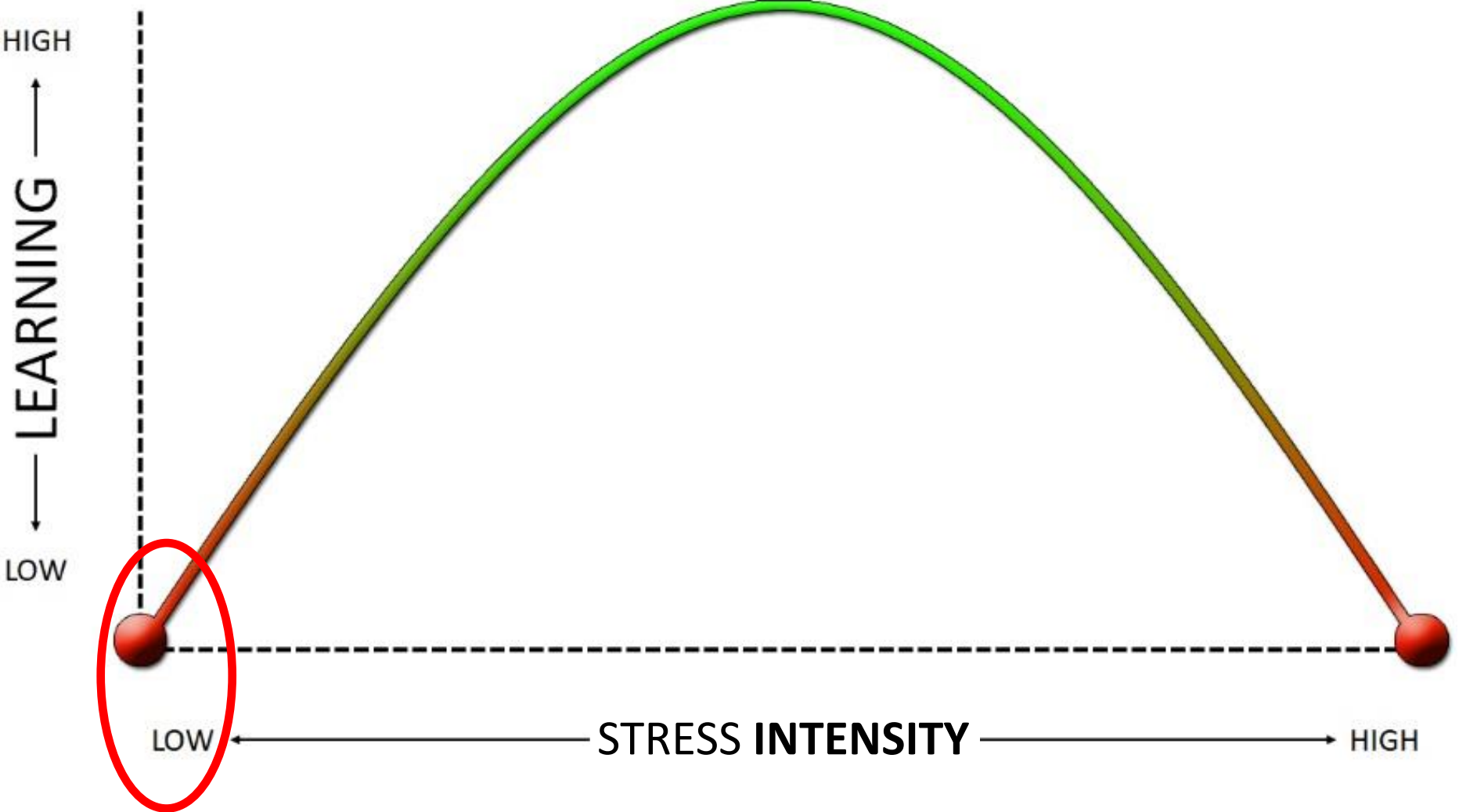


Norepinephrine

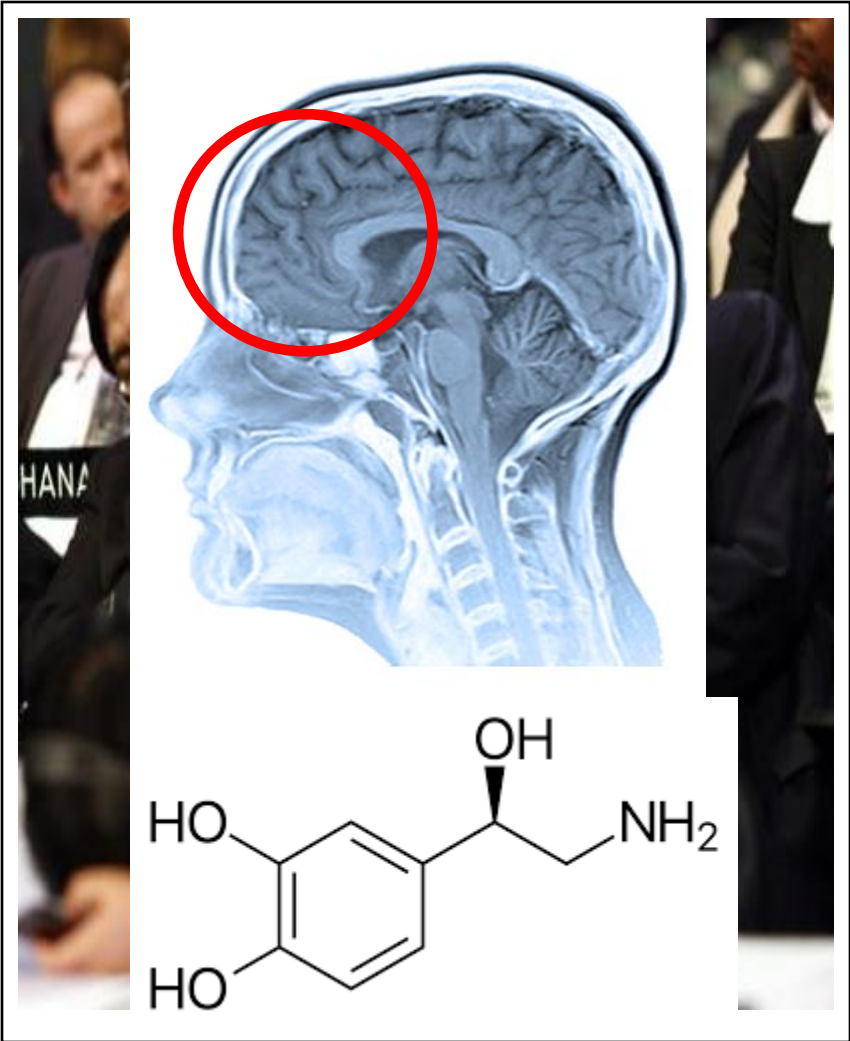
Overwhelm

Mind-Blank

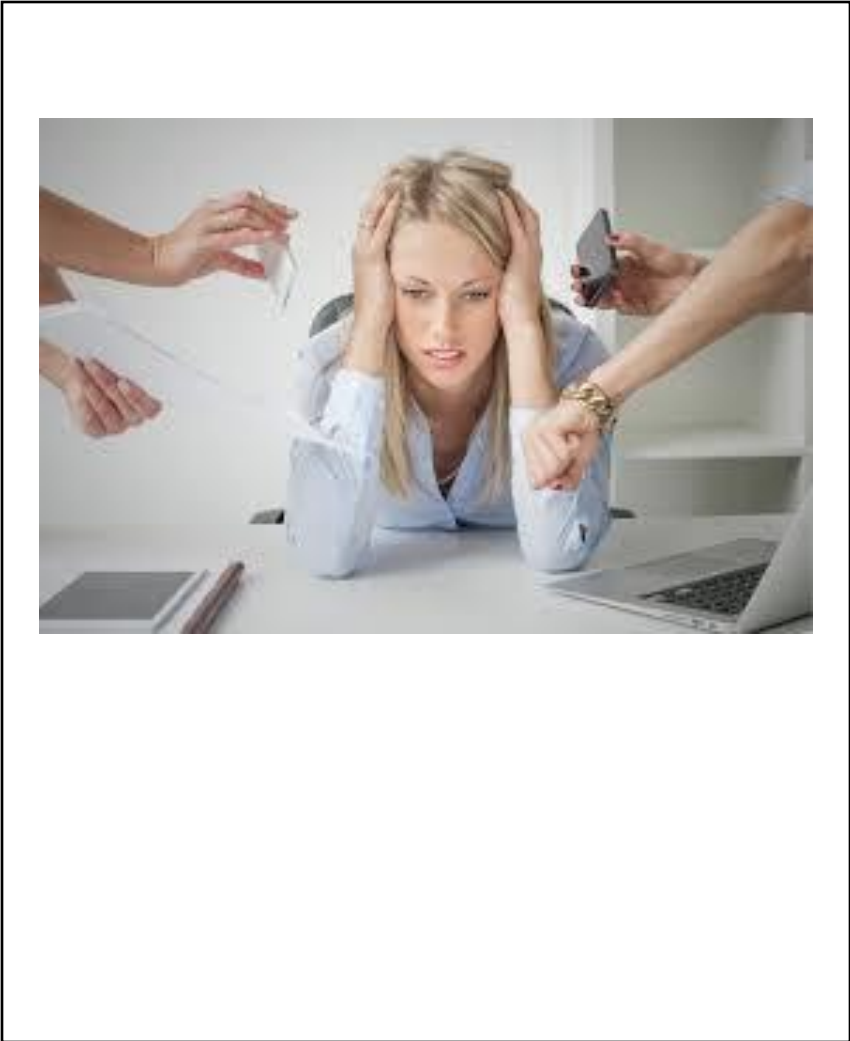




Norepinephrine



Stress Response



Stress Response
Physical Response
(Actions)



Physiological Sigh



Optic Flow



Panoramic Vision



Stress Response

Physical Response
(Actions)

Mental Response
(Re-Framing)



Re-Framing

Find the Good

*What's Positive/Beneficial
about this scenario (for me)?*



Re-Framing

Find the Good

Perspective

*What might be going on
(outside of myself) that could
be driving / causing this
issue?*

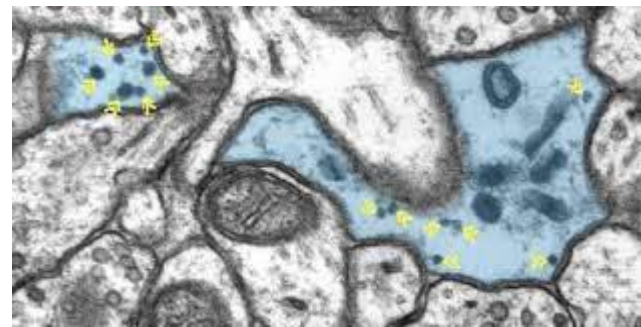


How Does it Work?

Part 3



Stress
Burn-Out



FLOW State

No Astrocytic Glycogen Needed!



Diminishing Returns
60min vs 30min Study?
9%



Chronic Stress
*Strong Relationships /
Safety*



Relationships

*Students are
welcoming & friendly* 72%

*I have a group of
friends I feel safe and
comfortable around* 89%

*I can fit in well at
school* 80%

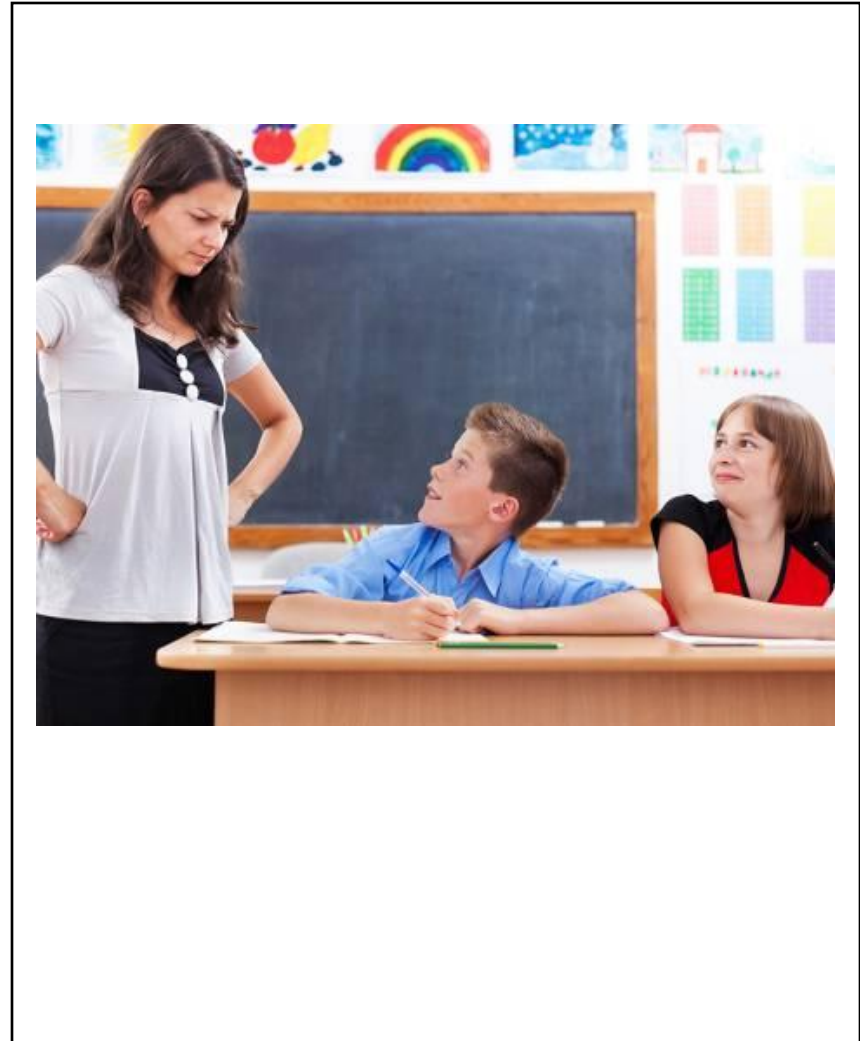


Relationships

Teachers care about me as an individual 51%

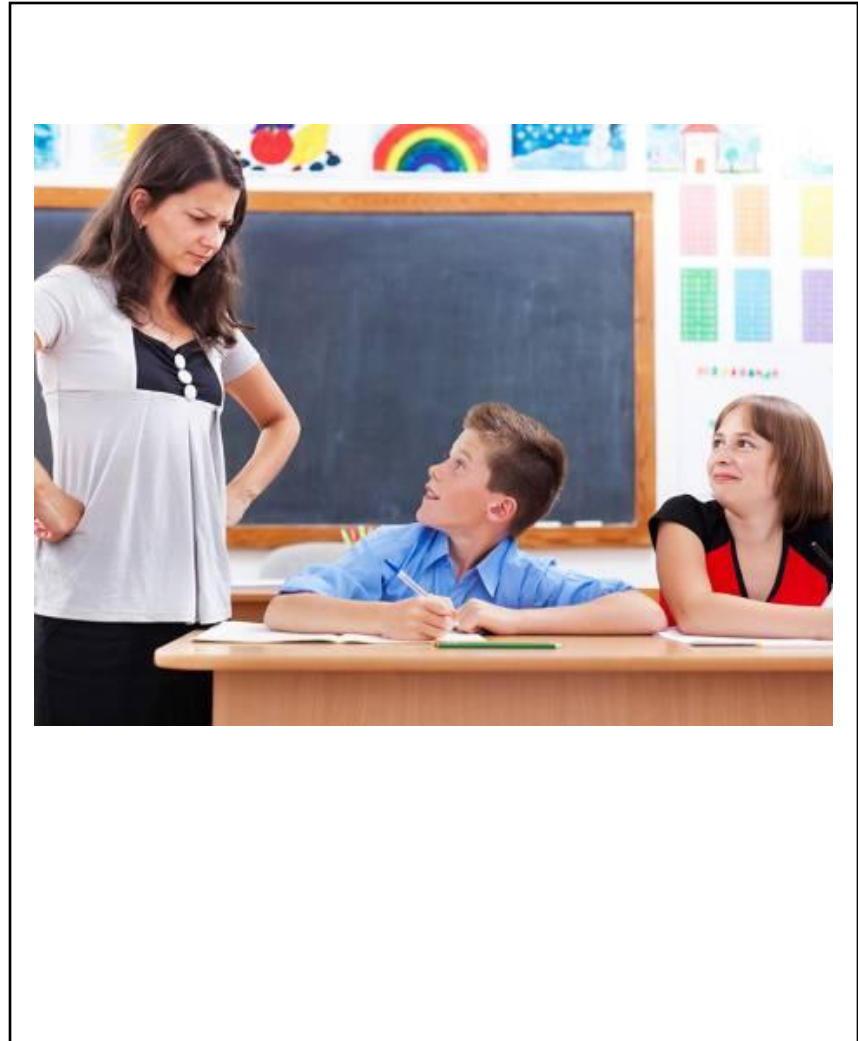
Teachers make an effort to get to know me & my aspirations 57%

If I have a problem, there is a teacher I can turn to for help 56%



Relationships

*Students and
teachers respect
each other* 38%



Student/Teacher Relationships



John Gottman

*7 Principles to a
Successful Relationship*



1

*Enhance your Relationship
Map*

*Learn what makes them
tick!*



2

*Nurture Fondness &
Admiration*

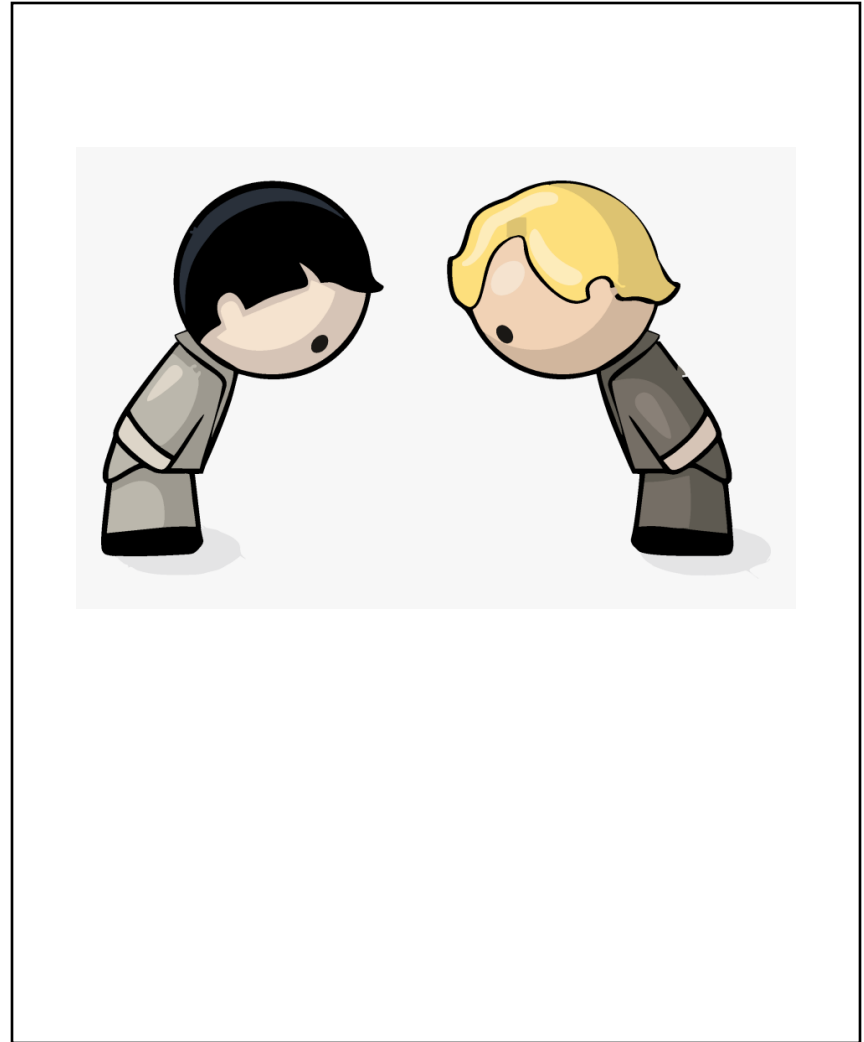
Honor & Respect



3

*Turn TOWARDS instead of
AWAY during times of
stress*

Safety



4

*Let your partner influence
you*

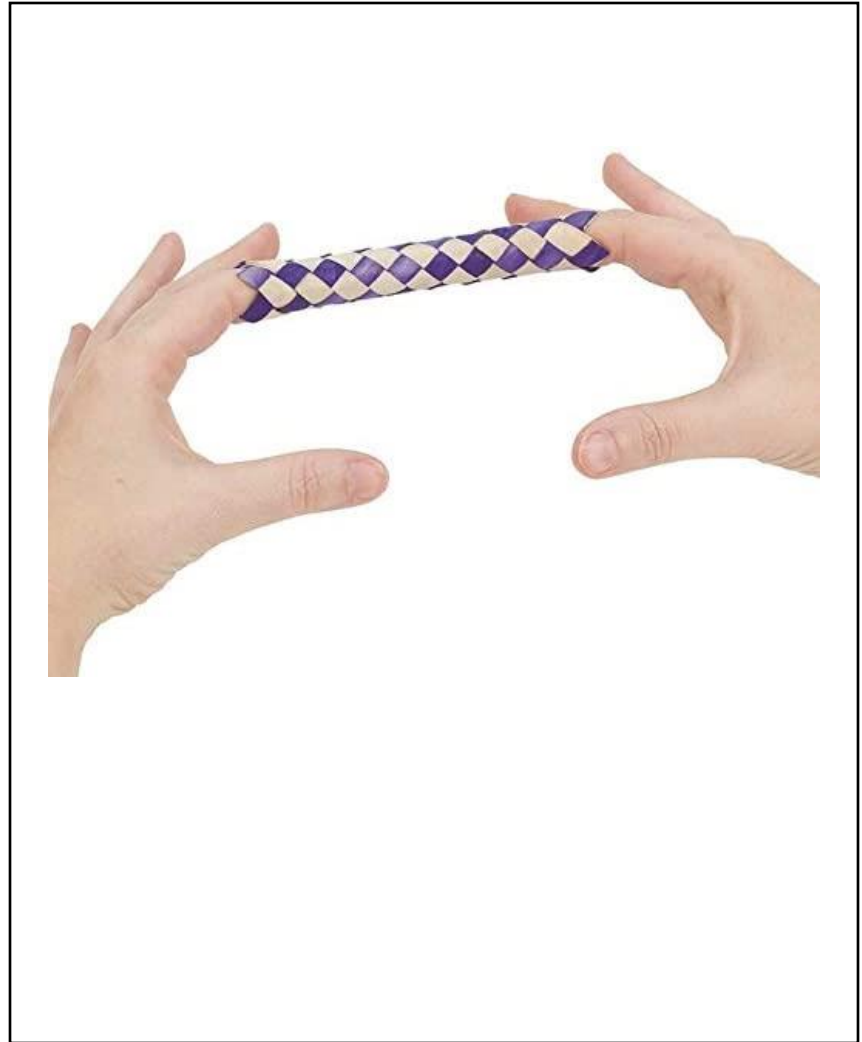
Shared Power



5

*Solve the Solvable
Problems*

*Strategic Goal Setting &
Problem Solving*



6

Overcome Gridlock

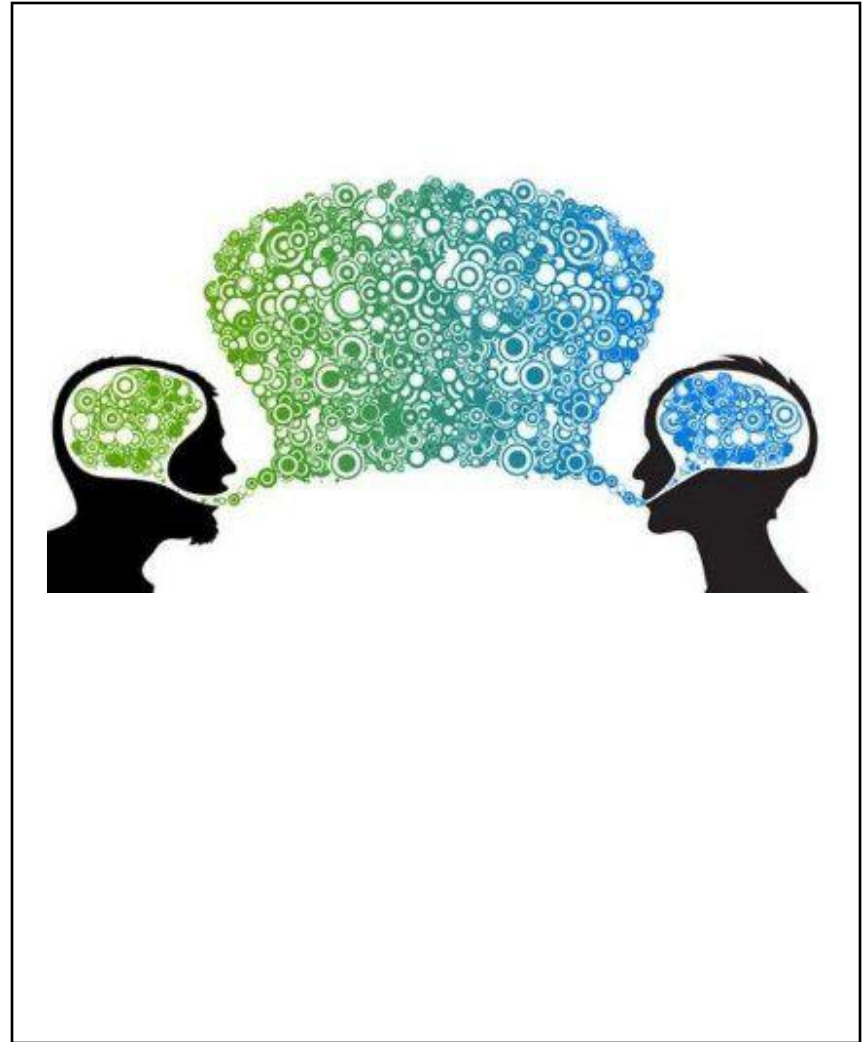
*Open Dialogue with Active
Listening*



7

Create Shared Meaning

Mini-Culture



Routines



What About...

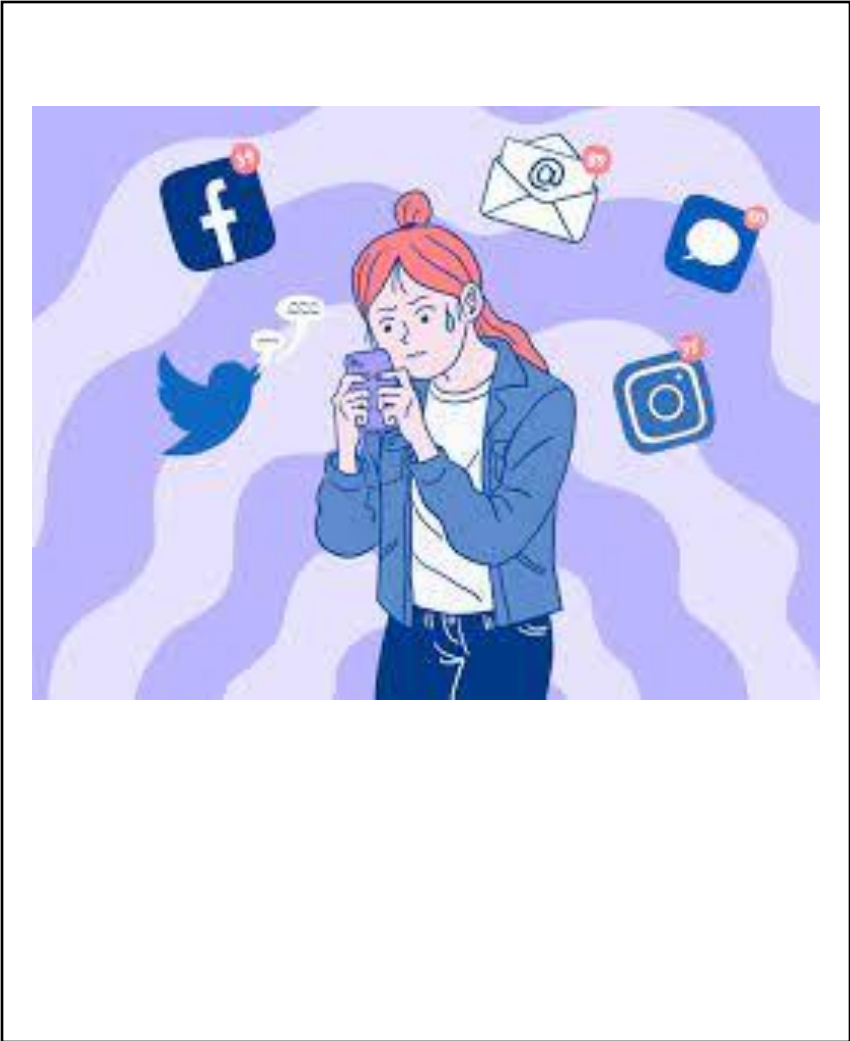


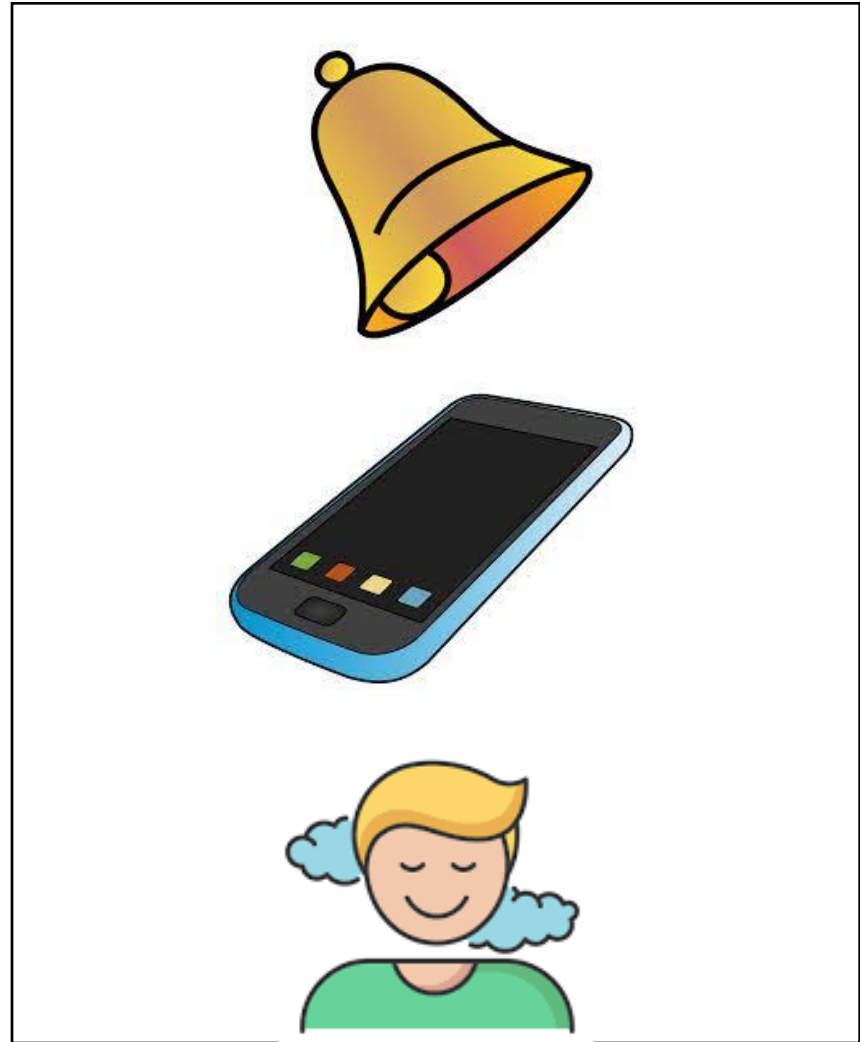
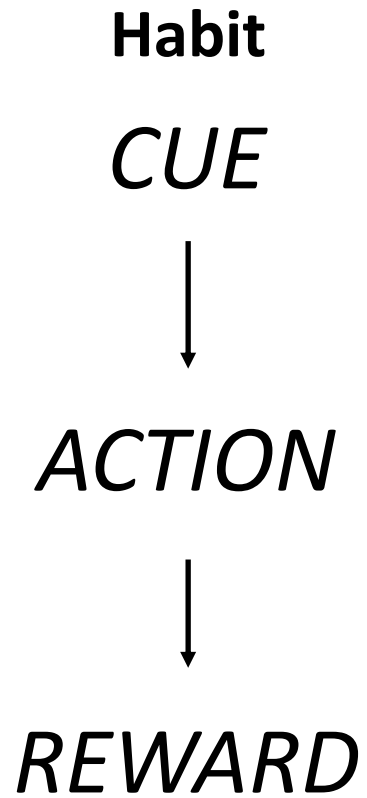
Decreased Relationships

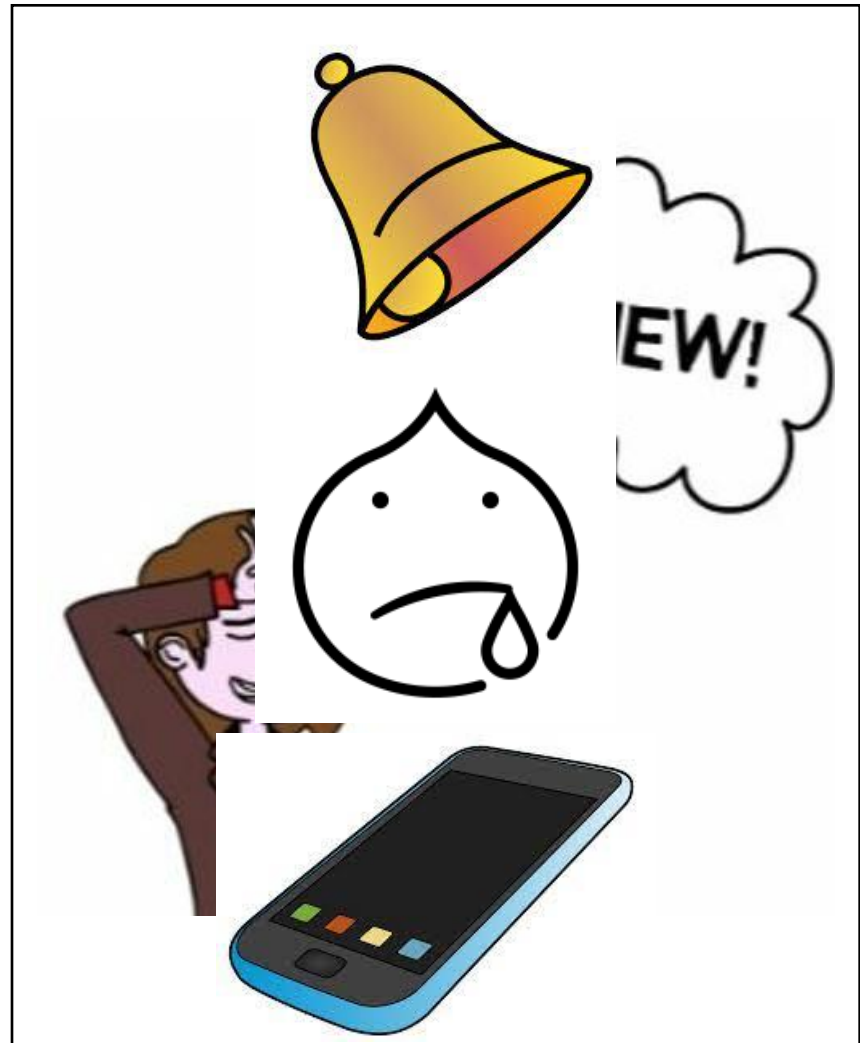
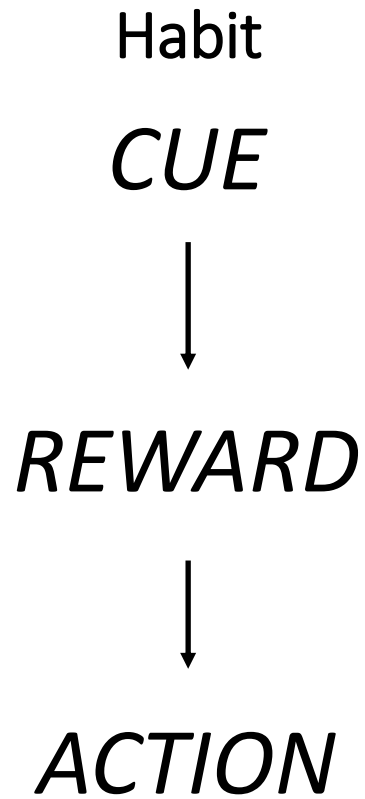
Tachykinins



Increased Stress







Cue Avoidance

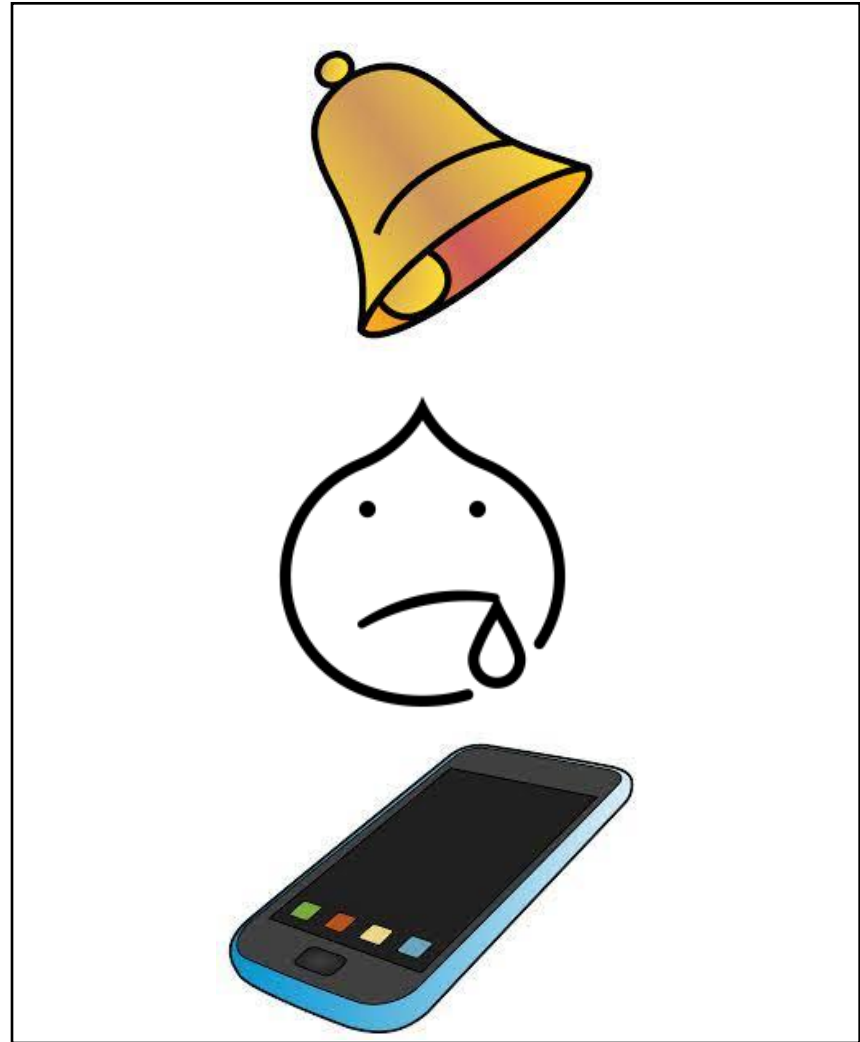
CUE



REWARD



ACTION

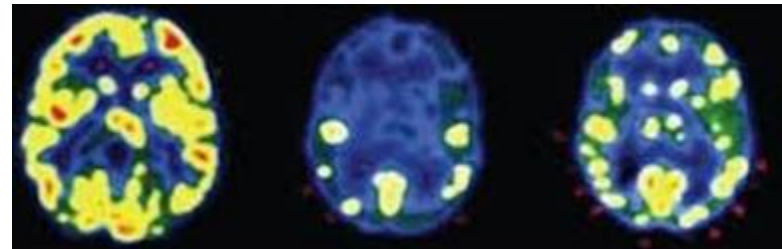


Vietnam

400,000

88%

(352,000)



Can Be Tricky...



Action Substitution

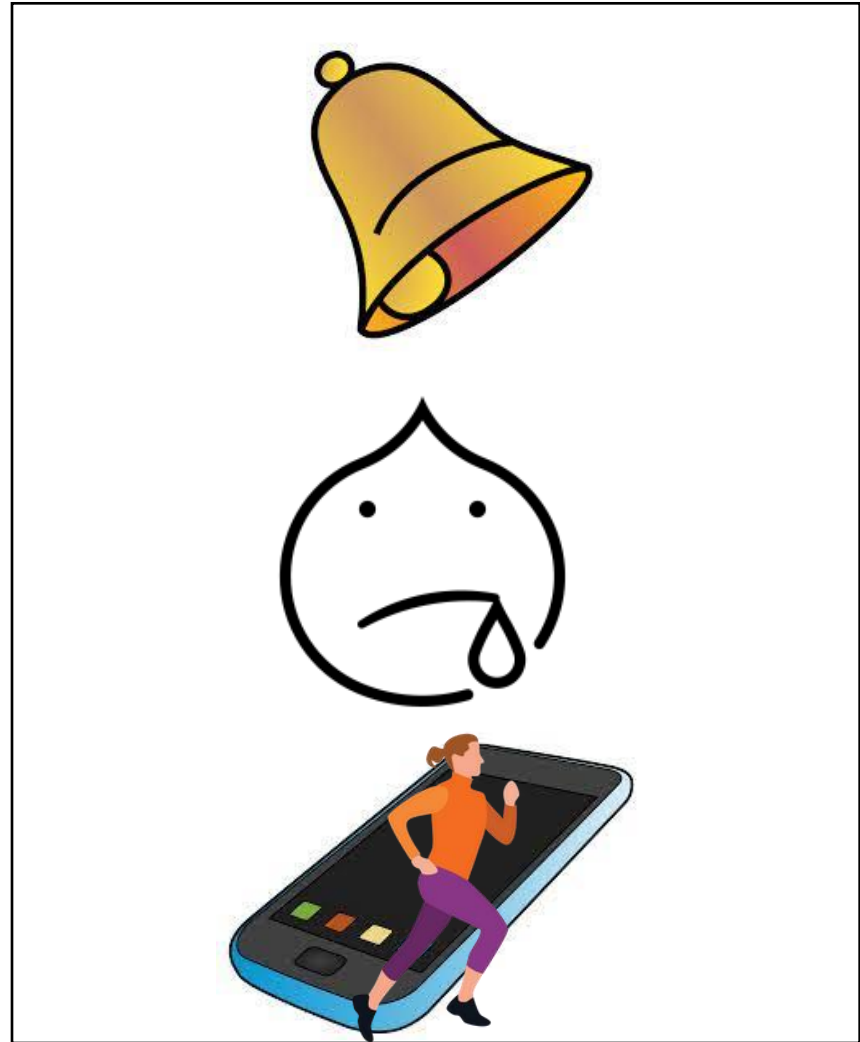
CUE



REWARD

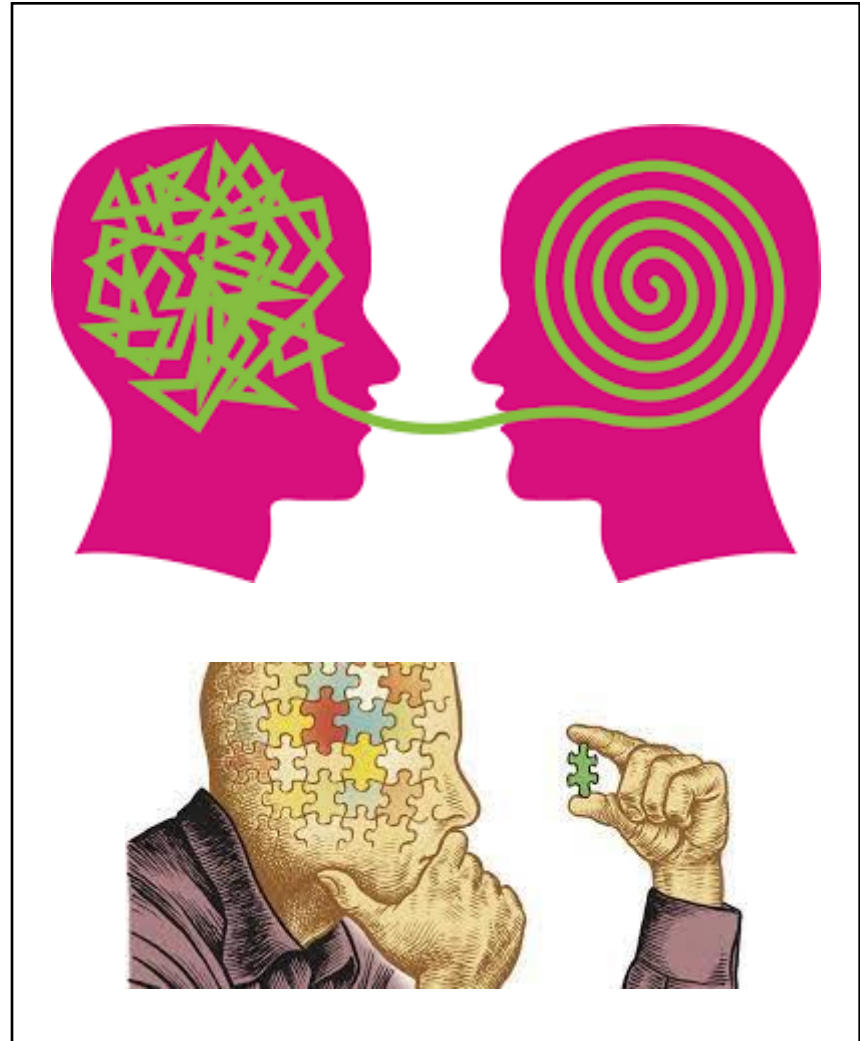


ACTION



Think Through

CBT

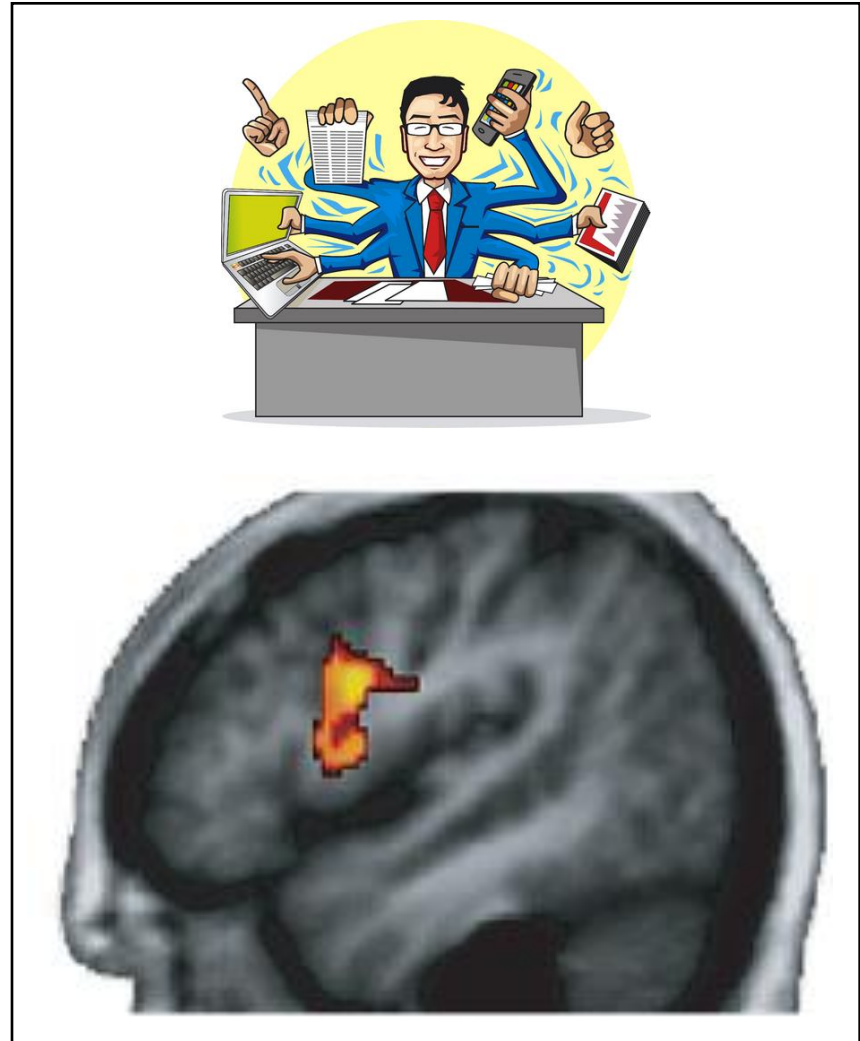


Decreased Learning



Multitasking

We Can't Do It!



So Now Then

Thanks

*Jared.Cooney.Horvath@
gmail.com*

www.lmeglobal.net

