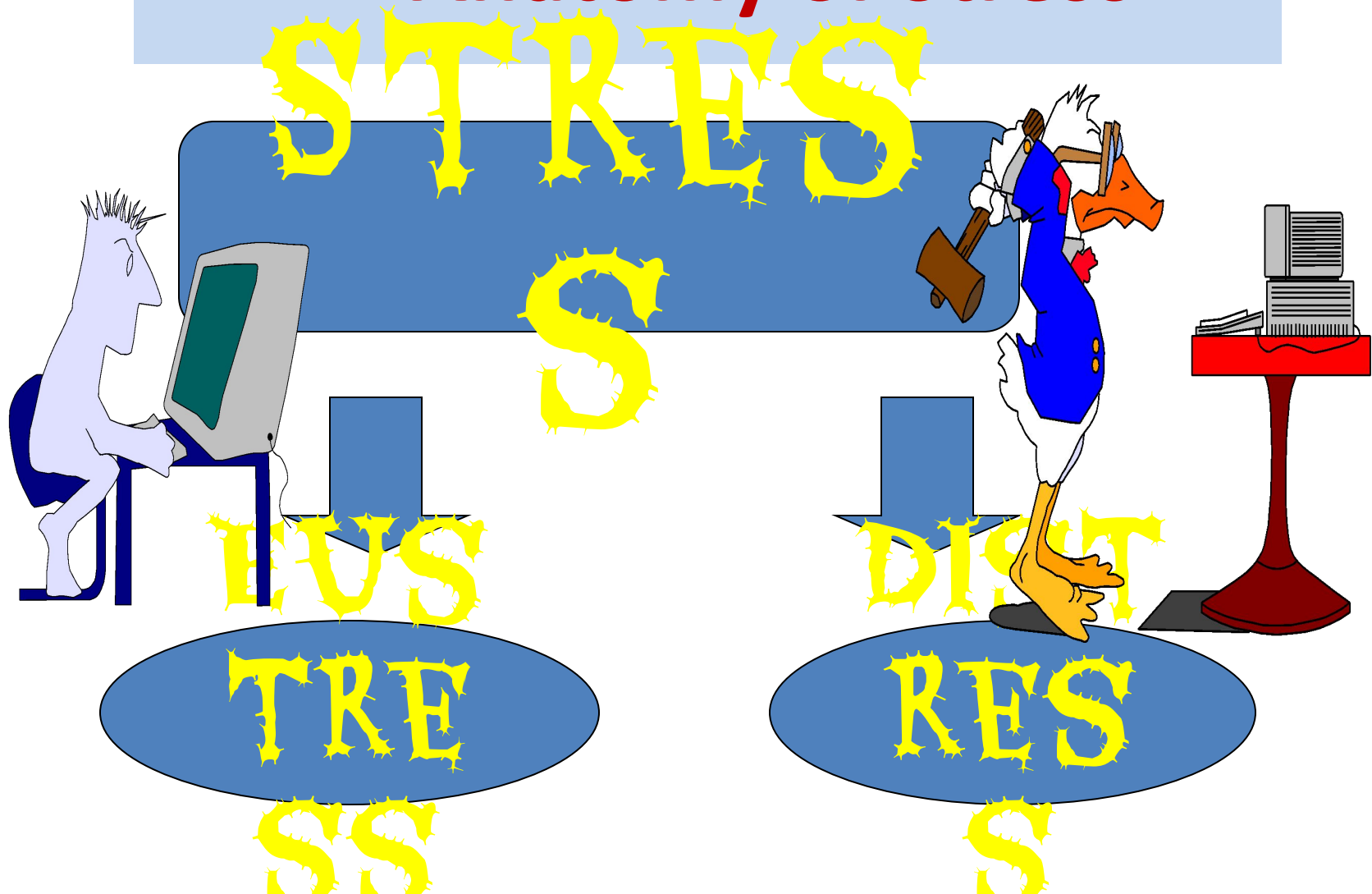




PHYSIOLOGICAL BENEFITS OF MEDITATION

DR.MADHUR RAI
Assistant Professor
Dept. of Physiology
MGMMC NM

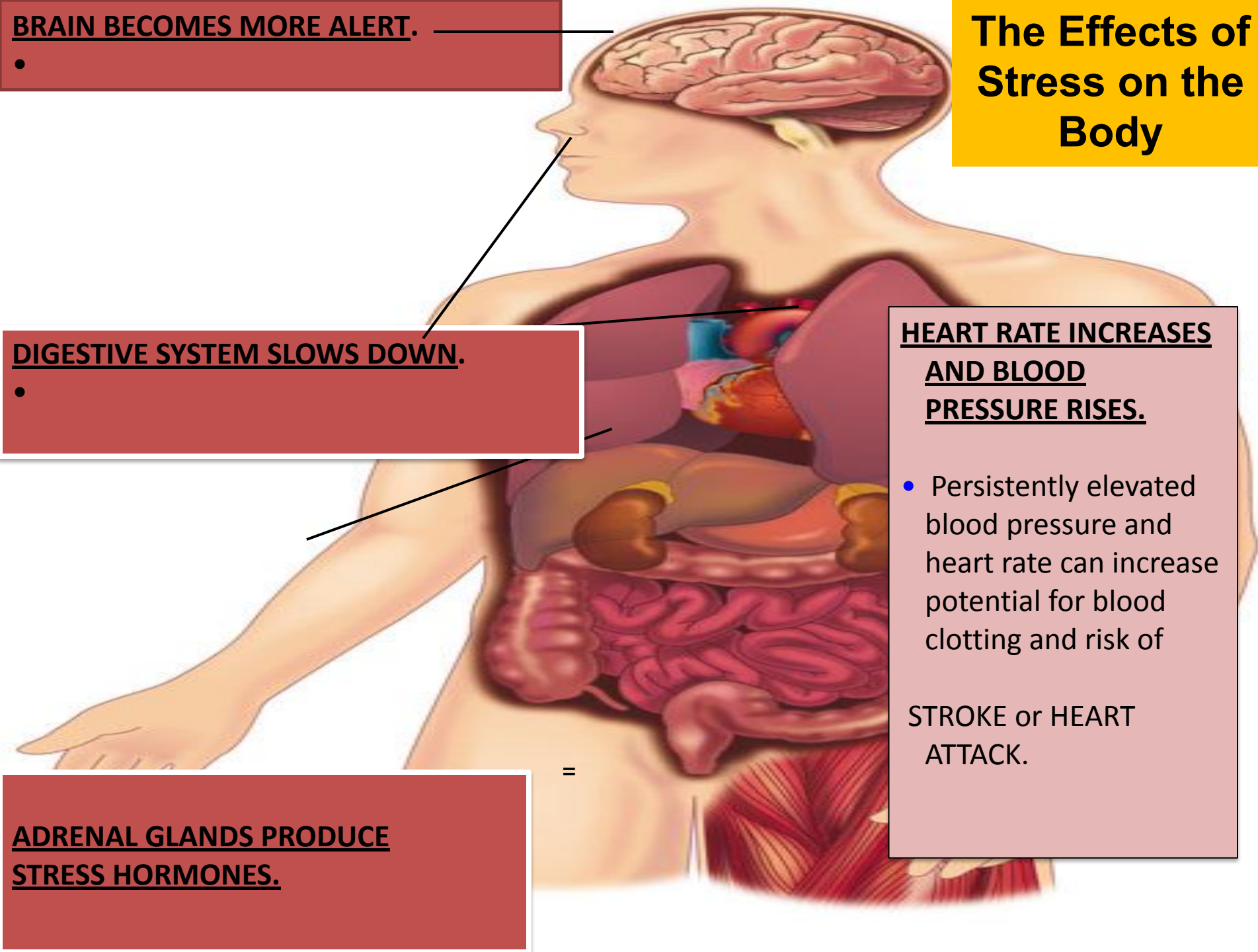
Anatomy of Stress



Good stress, could be a motivator.

Too much to bear becomes distress.

The Effects of Stress on the Body



BRAIN BECOMES MORE ALERT.

-

DIGESTIVE SYSTEM SLOWS DOWN.

-

ADRENAL GLANDS PRODUCE STRESS HORMONES.

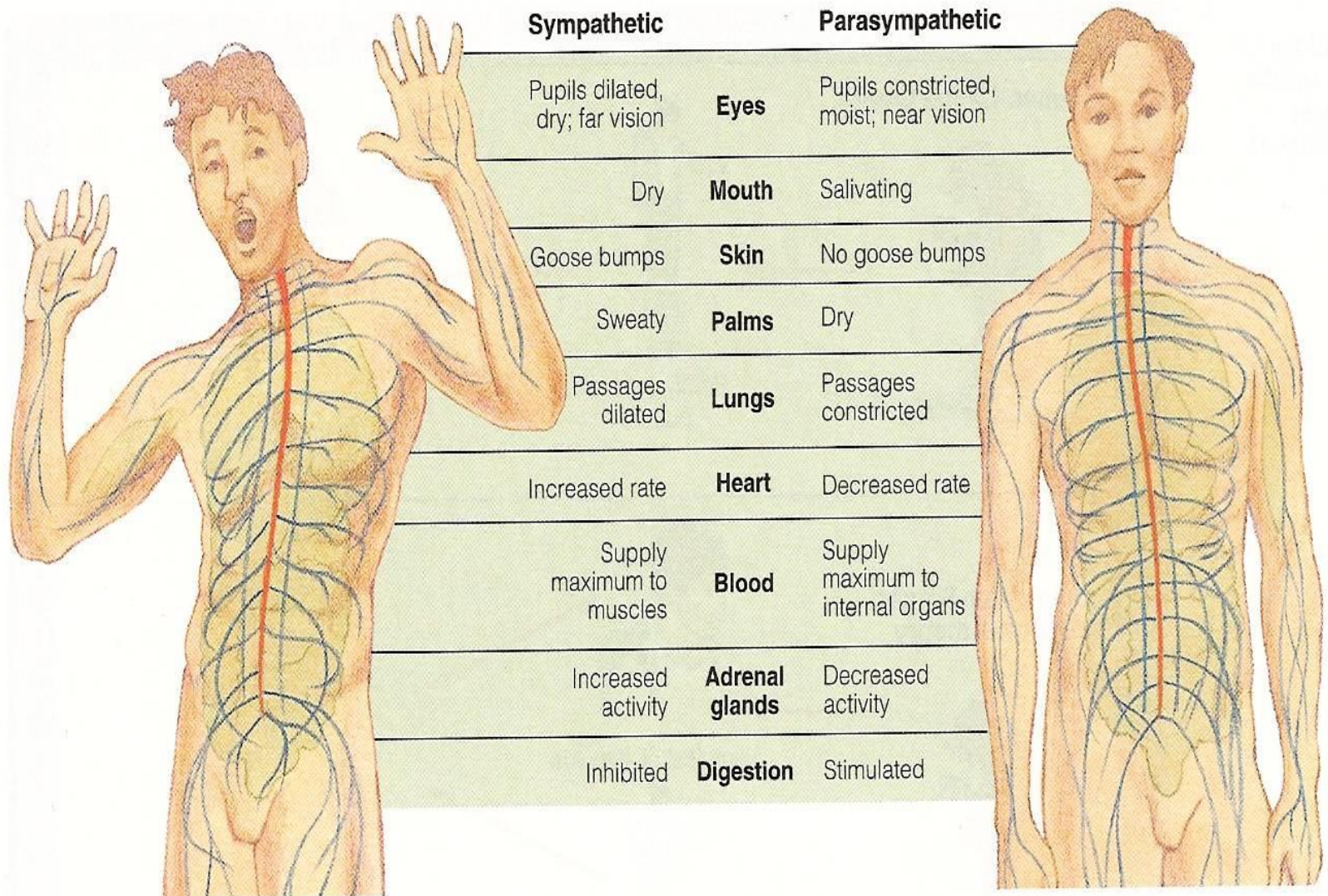
HEART RATE INCREASES AND BLOOD PRESSURE RISES.

- Persistently elevated blood pressure and heart rate can increase potential for blood clotting and risk of

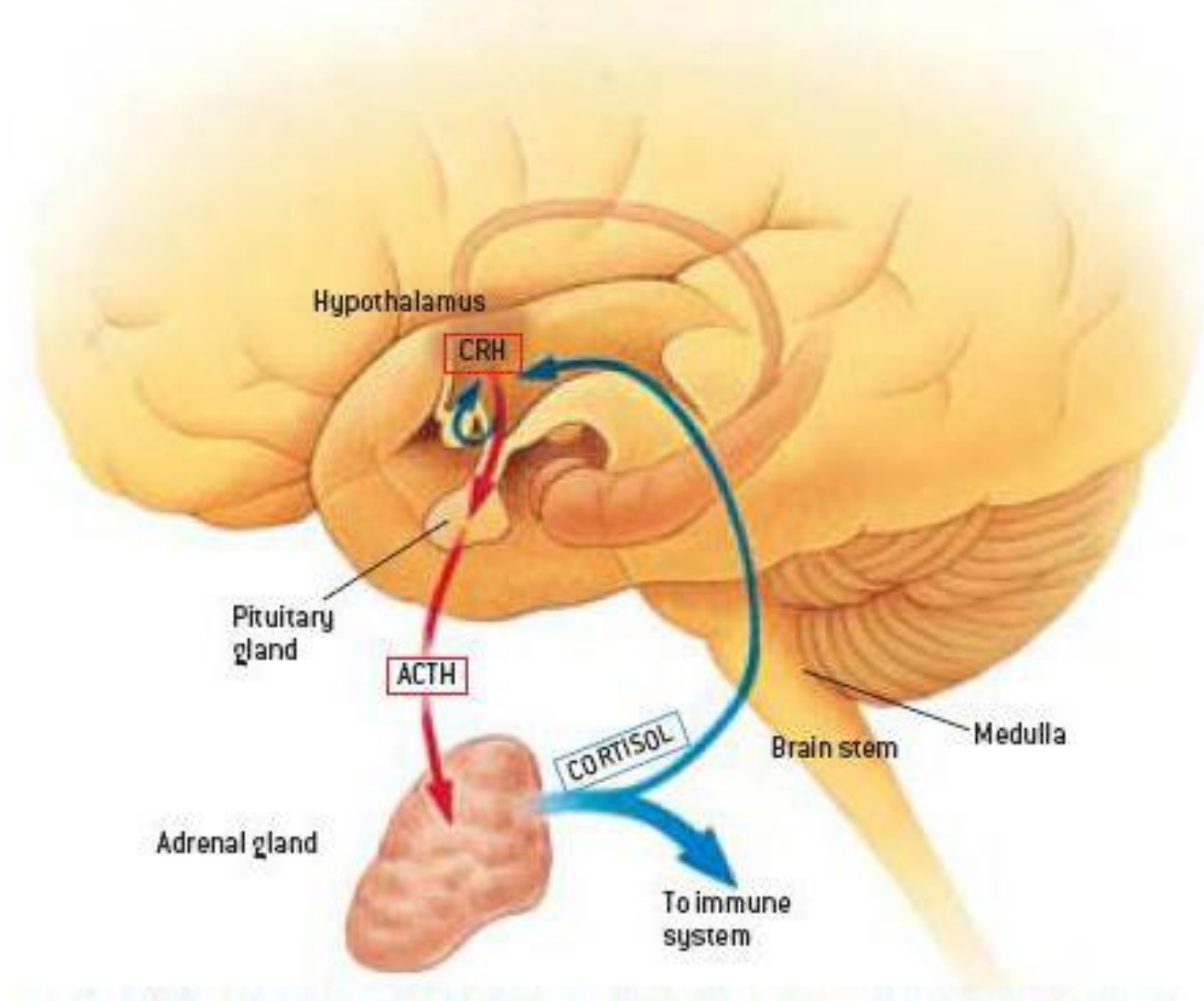
STROKE or HEART ATTACK.

BIOLOGY OF STRESS RESPONSE

Hypothalamus activates sympathetic nervous system



STRESS RESPONSE SYSTEM



STRESSOR

Brain

Anterior
pituitary

Adrenal
cortex

Glucocorticoids

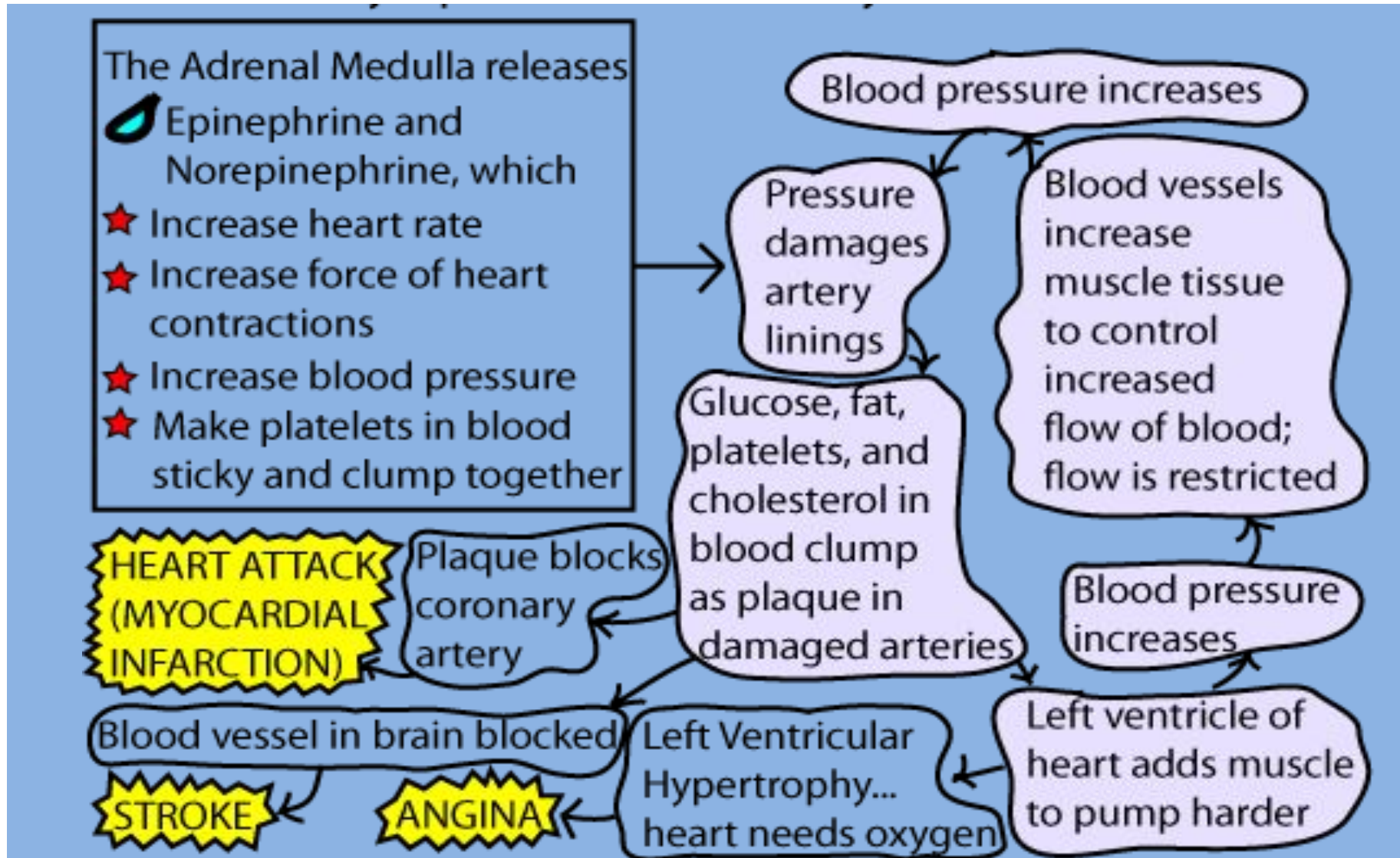
Sympathetic
nervous system

Adrenal
medulla

Norepinephrine
and
epinephrine



Mechanism for stress induced cardiovascular disease



Stress and Illness – Key point

IF YOU *REPEATEDLY* TURN ON THE STRESS-RESPONSE, OR IF YOU CANNOT APPROPRIATELY *TURN OFF* THE STRESS-RESPONSE, THE STRESS-RESPONSE CAN EVENTUALLY **BECOME DAMAGING**



STRESS

The Nation's #1 Killer

Medically Proven Stress Contributes to:

- * Heart Disease
- * Strokes
- * High Blood Pressure
- * Colitis
- * Irritability
- * Rheumatism
- * Depression
- * Migraines
- * Diabetes
- * Hardening of the Arteries
- * Insomnia
- * Fatigue
- * Sex Problems
- * Skin Diseases
- * Allergies
- * Overeating
- * Asthma
- * Kidney Disorders
- * Ulcers
- * Breathing Problems
- * Increased Smoking

A large percentage of stress-related diseases a

All Faith Self Help Center, Inc.
4440 E. Indian School Rd. Phoenix, AZ. 85018 (602) 957-4697

ers

A SHORT HISTORY

- The history of meditation goes back many thousands of years into antiquity itself. As part of the system of Yoga the principles were divinely received by the *Rishis*, (illuminated sages of India) as a means of self salvation, allowing man a path back to union again with his divine creator, God.
- According to Patanjali Yoga Sutra, MEDITATION is the seventh step towards spiritualism, and the eighth step being the samadhi—Union with the creator



BENEFITS OF MEDITATION

- 1. Meditation benefits people with or without acute medical illness or stress
- .2. People who meditate regularly have been shown to feel less **anxiety** and depression.
- 3. They also report that they experience more enjoyment and appreciation of life and that their relationships with others are improved.



BENEFITS OF MEDITATION

- .
- **PHYSIOLOGICAL BENEFITS**
- **PSYCHOLOGICAL BENEFITS**
- **SPIRITUAL BENEFITS**



PHYSIOLOGICAL BENEFITS

- 1- It lowers oxygen consumption.
- 2- It decreases respiratory rate.
- 3- It increases blood flow and slows the heart rate.
- 4- Increases exercise tolerance.
- 5- Leads to a deeper level of physical relaxation.
- 6- Reduces anxiety attacks by lowering the levels of blood lactate.
- 7- Decreases muscle tension
- 9- Helps in chronic diseases like allergies, arthritis etc.

PHYSIOLOGICAL BENEFITS CON'T

- 10- Reduces Pre-menstrual Syndrome symptoms.
- 11- Helps in post-operative healing.
- 12- Enhances the immune system.
- 13- Reduces activity of viruses and emotional distress
- 14- Enhances energy, strength and vigour.
- 15- Helps with weight loss
- 16- Reduction of free radicals, less tissue damage
- 17- Higher skin resistance

PHYSIOLOGICAL.....

- 18- Drop in cholesterol levels, lowers risk of cardiovascular disease.
- 19- Improved flow of air to the lungs resulting in easier breathing.
- 20- Decreases the aging process.
- 21- Higher levels of DHEAS (Dehydroepiandrosterone)
- 22- prevented, slowed or controlled pain of chronic diseases
- 23- Makes you sweat less
- 24- Cure headaches & migraines
- 25- Greater Orderliness of Brain Functioning

PHYSIOLOGICAL.....

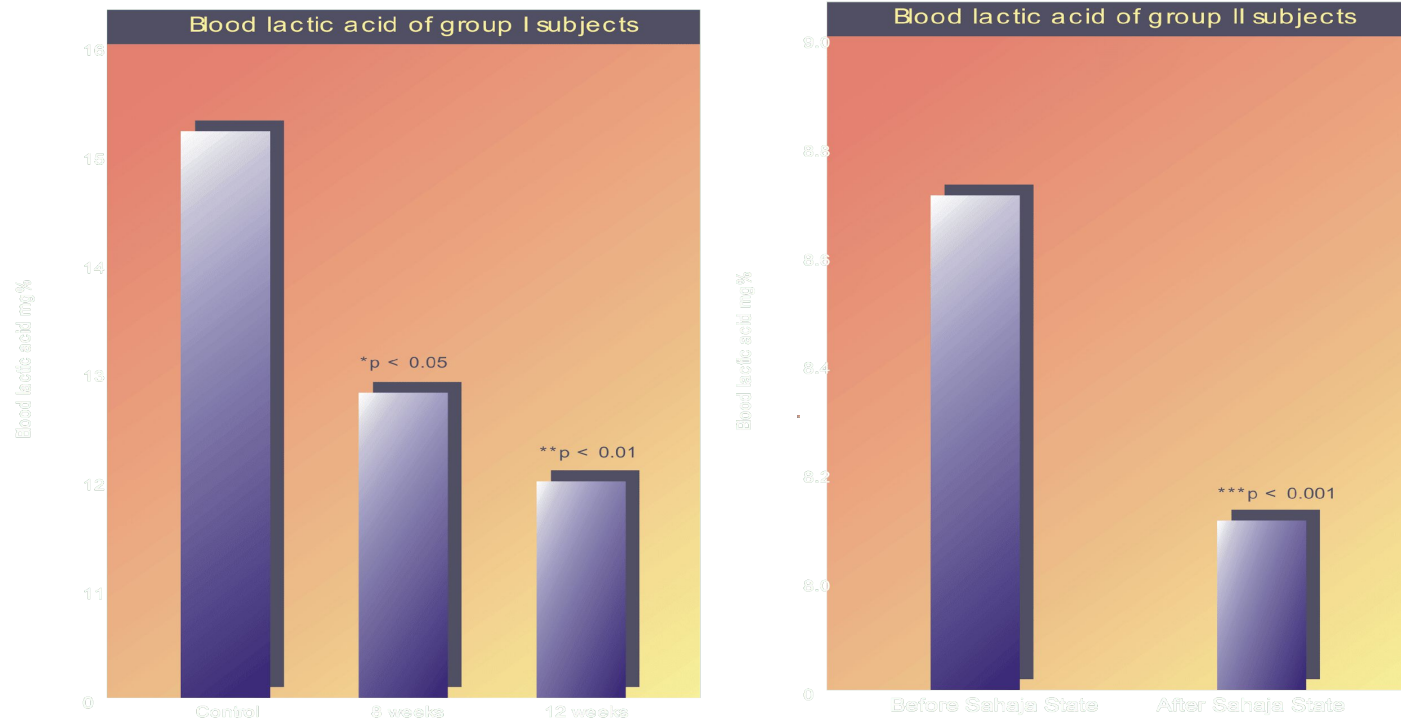
- 26- Normalizes to your ideal weight
- 27- harmonizes our endocrine system
- 28- relaxes our nervous system
- 29- produce lasting beneficial changes in brain electrical activity
- 30- Cure infertility (the stresses of infertility can interfere with the release of hormones that regulate ovulation).

PSYCHOLOGICAL BENEFITS

- 31- Builds self-confidence.
- 32- Increases serotonin level, influences mood and behaviour.
- 33- Resolve phobias & fears
- 34- Helps control own thoughts
- 35- Helps with focus & concentration
- 36- Increase creativity
- 37- Increased brain wave coherence.
- 38- Improved learning ability and memory.
- 39- Increased feelings of vitality and rejuvenation.
- 40- Increased emotional stability.
- 41- improved relationships

STRESS : BAD MOLECULES !!!

LACTIC ACID

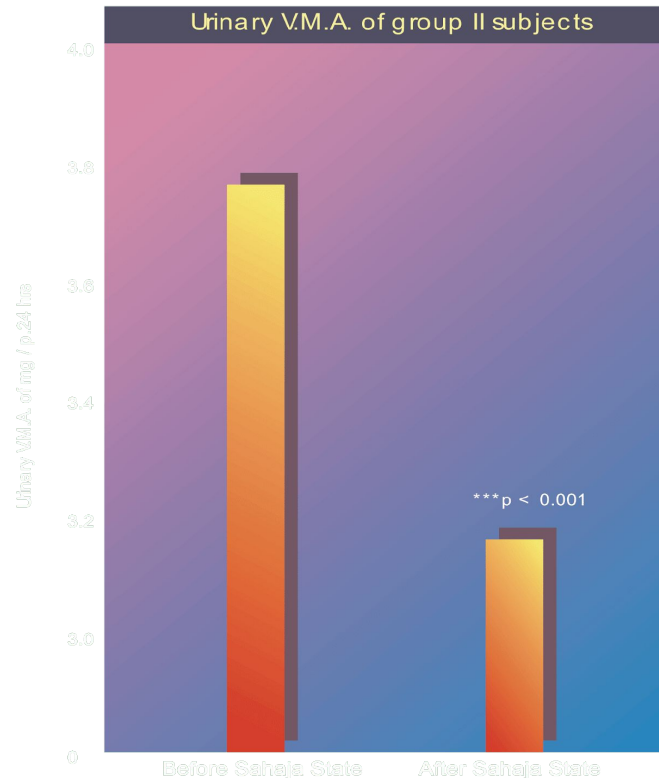
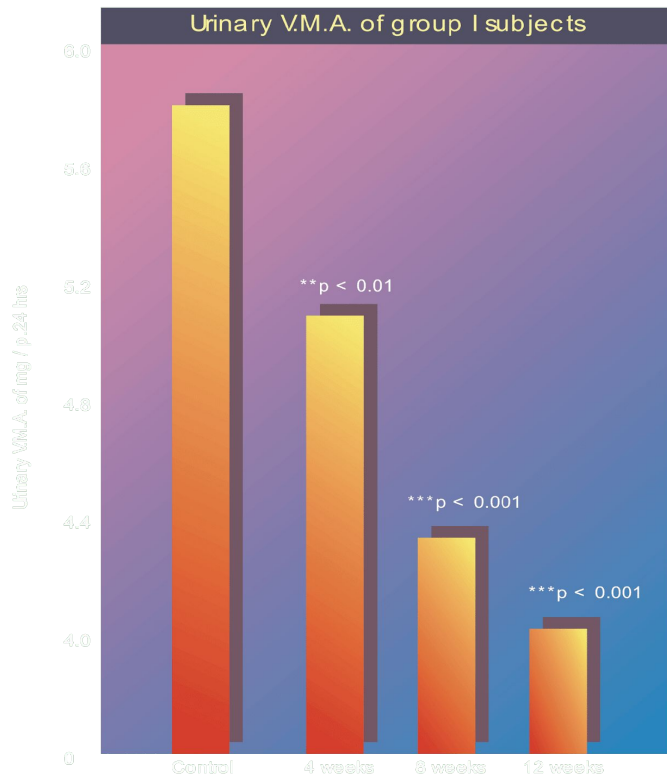


Blood Lactic acid levels drop significantly

- Blood lactate levels have been shown to increase in anxiety neurosis patients and indeed Pitts (1967) has shown that infusion of lactate ions can produce anxiety symptoms in predisposed individuals

STRESS : BAD MOLECULES !!!

URINARY VMA



Subjects
already
practicing
'Sahaja State'

•Gr I –5.72/24 hrs ----- dropped to 4.15 mg/24 hrs.

GOOD MOLECULES HAPPINESS -ENDORPHINS



PSYCHOLOGICAL.....

- 42- Improved relations at home & at work
- 43- Able to see the larger picture in a given situation
- 44- Helps ignore petty issues
- 45- Increased ability to solve complex problems
- 46- Purifies your character
- 47- Develop will power
- 48- greater communication between the two brain hemispheres
- 49- react more quickly and more effectively to a stressful event.
- 50- increases one's perceptual ability and motor performance
- 51- higher intelligence growth rate
- 52- Increased job satisfaction

PSYCHOLOGICAL.....

- 53- increase in the capacity for intimate contact with loved ones
- 54-decrease in potential mental illness
- 55- Better, more sociable behaviour
- 56- Less aggressiveness
- *57- Helps in quitting smoking, alcohol addiction*
- *58- Reduces need and dependency on drugs, pills & pharmaceuticals*
- *59- Need less sleep to recover from sleep deprivation*
- *60- Require less time to fall asleep, helps cure insomnia*

SPIRITUAL BENEFITS

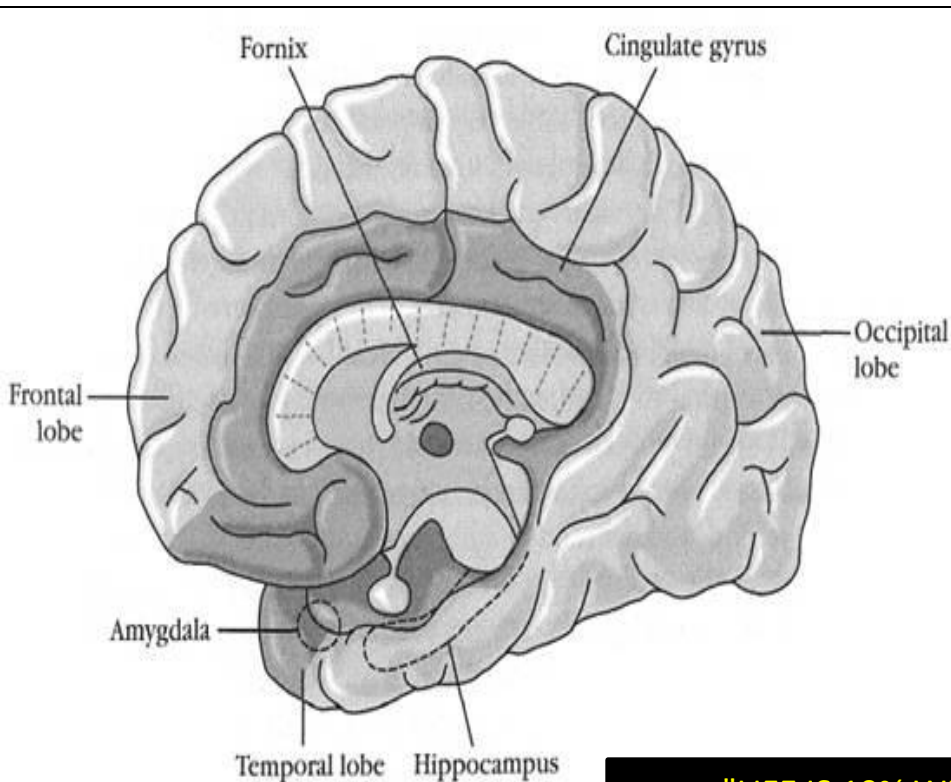
- 61- Helps keep things in perspective
- 62- Provides peace of mind, happiness
- 63- Helps you discover your purpose
- 64- Increased self-actualization.
- 65- Increased compassion
- 66- Growing wisdom
- 67- Deeper understanding of yourself and others
- 68- Brings body, mind, spirit in harmony
- 69- Deeper Level of spiritual relaxation
- 70- Increased acceptance of oneself
- 71- helps learn forgiveness

SPIRITUAL.....

- 72- Changes attitude toward life
- 73- Creates a deeper relationship with your God
- 74- Attain enlightenment
- 75- greater inner-directedness
- 76- Helps living in the present moment
- 77- Creates a widening, deepening capacity for love
- 78- Discovery of the power and consciousness beyond the ego

The brain determines how the body will respond

The integration of Cognitive, Emotional, & Autonomic functions occurs in the limbic system

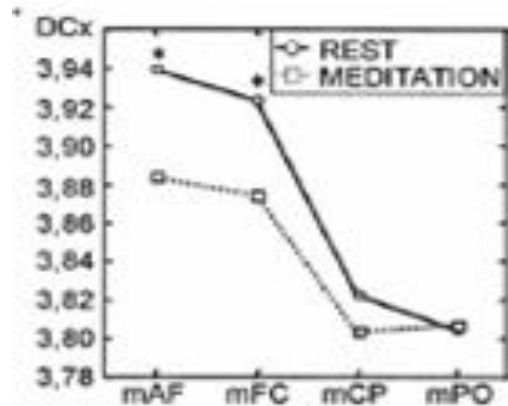
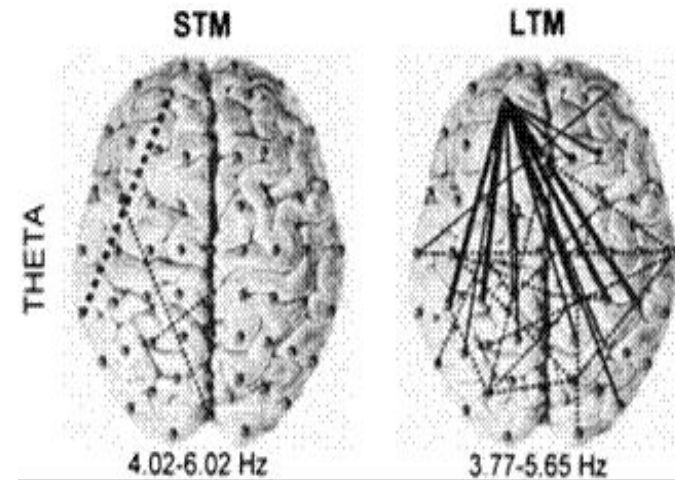


- **CEREBRAL CORTEX – ANALYTICAL PART OF BRAIN INTERPRETS THE STRESSOR**
- **LIMBIC SYSTEM – ASSIGNS SPECIFIC EMOTIONS TO STRESSOR**
(fear , joy, worry)
- **HYPOTHALAMUS – ACTIVATES AUTONOMIC NERVOUS SYSTEM**



"LIFE IS 10% WHAT HAPPENS TO US, AND 90% HOW WE REACT TO IT."

In addition to enhanced fronto-parietal theta activation, the authors also found enhanced connectivity of fronto-parietal theta bands – suggesting the ENFORCEMENT OF ATTENTIONAL NETWORKS.



A reduction in the chaotic dimensional complexity was also observed suggestive of the INHIBITION OF TASK-IRRELEVANT PROCESSES.

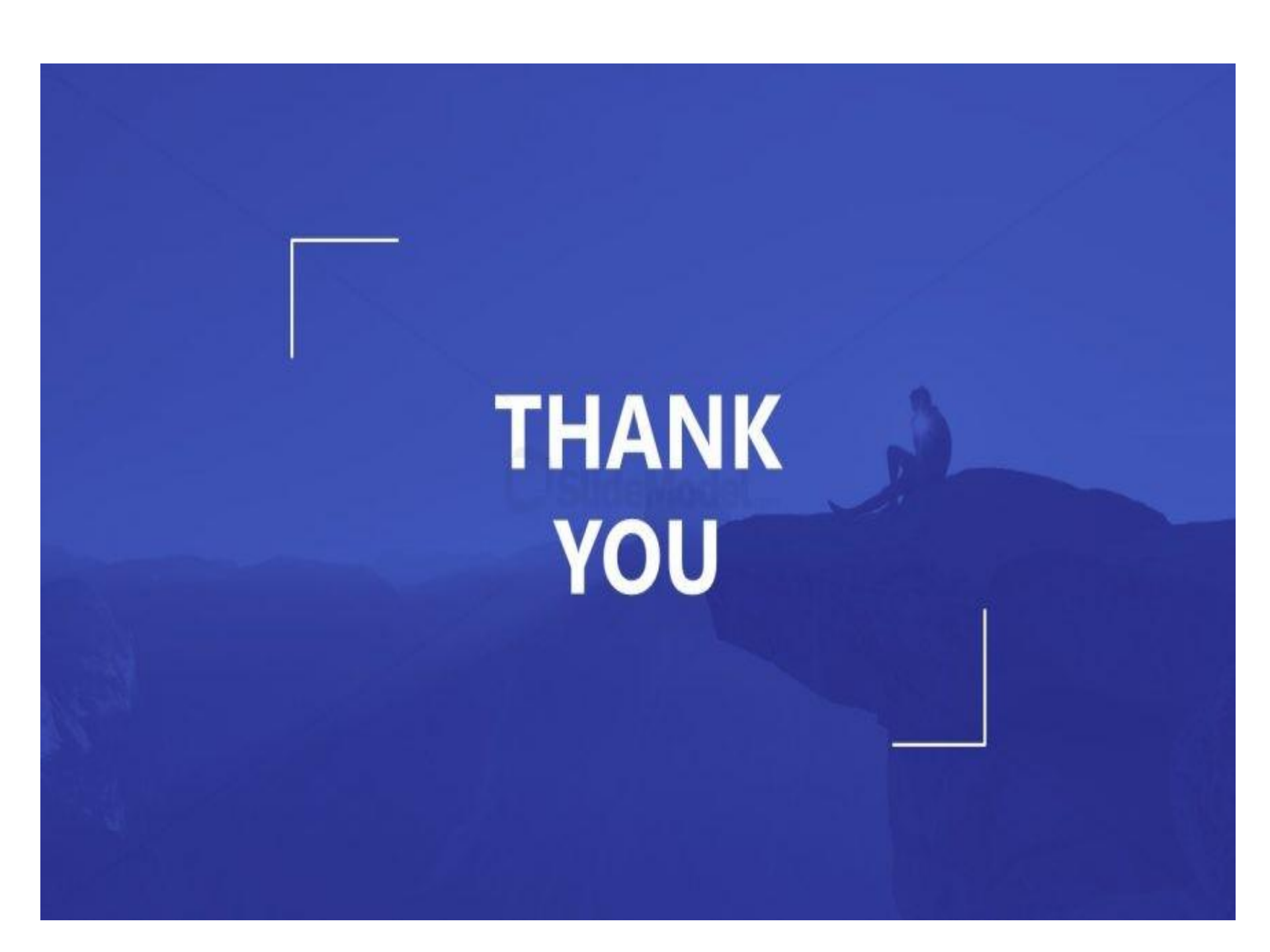
Taken together, the findings suggest that during Meditation, the reduced mental activity is mediated by increased activation of networks of internalised attention which seem to trigger the activity in regions that mediate **POSITIVE EMOTIONS** (left frontal cortex) while **decreasing** networks related to external attention **AND IRRELEVANT PROCESSES.**

“SWITCHING OFF”
the
“STRESS SWITCH”
(SYMPATHETIC – SYSTEM)

ACTIVATION OF THE
THE “DESTRESSING SWITCH”
PARASYMPATHETIC -SYSTEM



- In short, ‘Meditation KNOCKS OFF THE OVER ACTIVE SYMPATHETIC NERVOUS SYSTEM, which is often seen as a Cardinal manifestation of Stress.
 - ENHANCES THE RESTORATIVE AND CALMING PARASYMPATHETIC SYSTEM
 - PREVENTS THE SURGES OF BAD MOLECULES
- RESTORES THE BALANCE BETWEEN THE TWO SYMPATHOVAGAL BALANCE**

The image features a solid blue background with a faint, darker blue silhouette of a person sitting on the edge of a cliff. The person is facing away from the viewer, looking out over a vast, hazy landscape. Two white L-shaped corner brackets are positioned on the left and right sides of the image, framing the central text. The text "THANK YOU" is written in a bold, white, sans-serif font, centered horizontally and slightly above the middle vertically.

**THANK
YOU**