

IT'S ABOUT BALANCE!

Stress-Management, Renewal and Well-Being

*Knowledge, Ideas, and Tools
for a Demanding, Opportune Time*

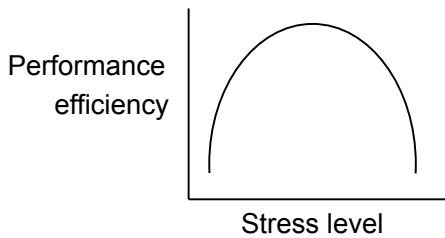
Presented by Tim Burns
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SOME DEFINITIONS....

- **Stress is the non-specific response of the body to any demand made upon it.**
Dr. Hans Selye, 1936
- **Any situation that demands behavior adjustment.**
Herbert Benson, M.D. 1975
The Relaxation Response
- **There is no definition of stress that everyone agrees on, what is stressful for one person may be pleasurable or have little effect on others, and we all react to stress differently.**

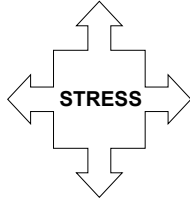
The American Institute of Stress

Yerkes-Dobson Law



The Four Kinds of Stress

Hans Selye, M.D.



Autonomic Nervous System

*Sympathetic
Nervous System (SNS)*



Increases:

Blood pressure
Fuel availability
Activity
Blood clotting
Adrenal hormones

*Parasympathetic
Nervous System (PNS)*



Increases:

Digestion
Fuel shortage
Rest and recovery
Resistance to infection
Endorphins

Autonomic Nervous System

*Sympathetic
Nervous System (SNS)*

*Parasympathetic
Nervous System (PNS)*

GENERAL ADAPTATION SYNDROME

Three Phases:

Alarm

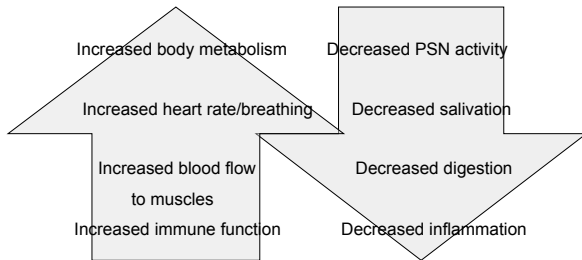




GENERAL ADAPTATION SYNDROME

Alarm Phase: "Fight, Flight, or Freeze"

SNS – HPA Axis



Homeostasis

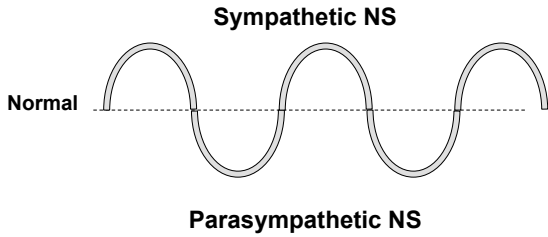
The ability or tendency of an organism or cell to maintain internal equilibrium by adjusting its physiological processes.

Allostasis

The ongoing adaptive efforts of the body to maintain stability (homeostasis) in response to stress.

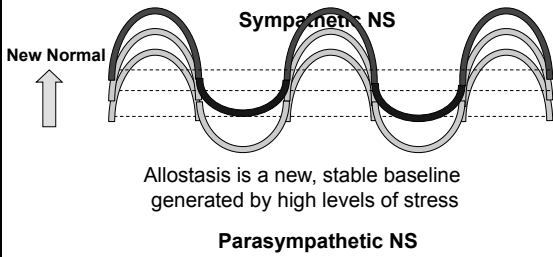
GENERAL ADAPTATION SYNDROME

HOMEOSTASIS



GENERAL ADAPTATION SYNDROME

ALLOSTASIS



GENERAL ADAPTATION SYNDROME

ALLOSTATIC LOAD

- The physiological costs of chronic exposure to the stress response.
- Used to explain how frequent activation of the body's stress response can in fact damage the body in the long run.
- When the new state is chronic and pervasive the new stable base-line is difficult to withdraw from.

McEwen, B.S. Stress, adaptation, and disease: Allostasis and allostatic load. *Annals NY Acad. Sci.* 840:33-44 (1998).

GENERAL ADAPTATION SYNDROME
Exhaustion Phase

High and sustained stress can:

- impair the immune system
- lead to premature aging
- increase weight gain
- increase blood pressure
- decrease bone and muscle mass
- decrease motivation
- damage and kill neurons
- foster depression

**Chronic, high release of adreno-cortisols
can lead to poor food selection and poor health**

Insulin release



Lactic acid buildup



GENERAL ADAPTATION SYNDROME

High, sustained stress in students fosters:

- impaired cognition
- impaired creativity
- increased pressure on attention
- diminished social skills
- discipline problems
- motivation problems

Male and Female Stress Response

Males:

“ _____ ”

Females:

“ _____ ”

Male & Female Stress Response

Testosterone vs. Oxytocin

Male & Female Stress Response

WOMEN

Estrogen increases the effectiveness of oxytocin.

Testosterone reduces the calming effects of oxytocin.

MEN

Testosterone decreases stress levels.

Oxytocin can reduce testosterone, resulting in increased stress levels.

Male & Female Stress Response

THE BOTTOM LINE:

Oxytocin _____ stress levels in women.

Too much testosterone _____
stress levels in women.

Testosterone _____ stress levels in men.

Too much oxytocin _____ stress levels in men.

Mainly PNS arousal

Use Breath
Use Trigger Release
Use Imagery
Use the Relaxation Response
Use Progressive Relaxation
Use Movement



Five Suggestions For Balanced Well-Being