

# Stress Resistance

NEWSTART Intensive Program

Keith Horinouchi DrPH, MPH, CNS

## Definition

*“Stress is the nonspecific response of the body to any demand made upon it.”* Dr. Hans Selye

## Stressors

Physical - work, exercise  
Biological - viral, fungal  
Environmental - heat, cold  
Situational - family, job

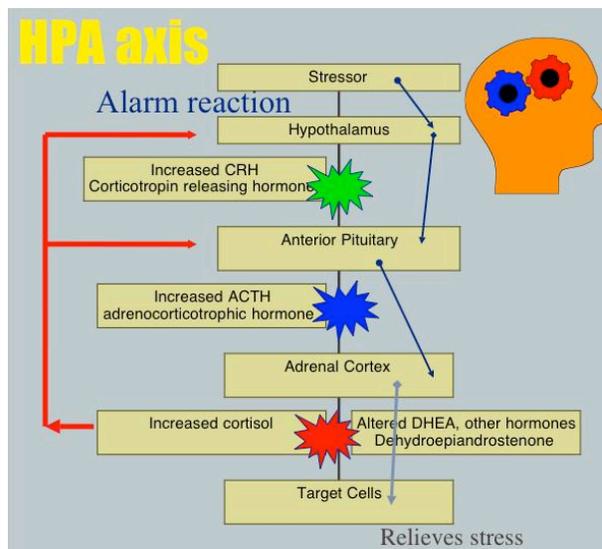
## Resistance

Stress resistance is the body's ability to handle everyday stresses, preferably through a healthy lifestyle.

## Fight and Flight Response

The average person may experience 30-50 stress events a day, some small and some big, which then activates the body's fight and flight response. This prepares the body to either fight or run away from the stressor. On occasion, we may experience a very big stressor that causes us to highly activate the stress response of the hypothalamus - pituitary - adrenal axis (HPA) so

that we cannot fall asleep at night. The diagram to the right shows how this occurs in our body starting from the perception of the stressor to the activation of the organs in the brain and finally to the release of adrenal hormones of the adrenal glands. When the stressor is gone and the hormones have been released, then the alarm reaction can be shut off. In our very busy lives and highly stressful jobs and family circumstances we may experience a dysfunction of this complex fight and flight response. Too much stress and a poor diet can lead to “burn-out” of the adrenal glands that are the cause of many health problems today. By following the NEWSTART program recommendations one can have a greater resistance to stress and eventual burn-out of the adrenal system.



## How to increase resistance to stress

- Eat a healthy diet
- Get regular exercise
- Avoid caffeine, alcohol and tobacco
- Avoid pollution and environmental toxins
- Avoid BBQ & fried foods
- Avoid sugar
- Drink 8 glasses of water
- Avoid allergenic foods like corn, wheat, soy, gluten, dairy and MSG

## What Does Cortisol Do?

- Stimulates conversion of protein and fats into sugars. Increases availability of sugar in the blood for energy.
- Slight decreased utilization of sugars in some tissues to increase blood sugars.
- May cause obesity by increasing appetite. This is done to replenish protein and fat stores.
- Acts as an anti-inflammatory chemical in response to injury. Our body's natural chemical to keep inflammation down. Too much inflammation is a risk factor for heart disease, stroke, cancer and pain.



## Adrenal Dysfunction

- An imbalance of adrenal hormones like cortisol, DHEA sulfate and epinephrine. This may be caused by changes in releasing factors or sensitivities of the hypothalamus or pituitary that then stimulates the adrenal gland.
- Symptoms of adrenal hypofunction or fatigue includes:
  - a. Fatigue
  - b. Low blood pressure
  - c. Salt cravings
  - d. Depression
  - e. Inability to concentrate
  - f. Carbohydrate craving

## Psalms 62: 1-2

My soul finds rest in God alone; my salvation comes from him. He alone is my rock and my salvation; he is my fortress, I will never be shaken.

## Nutritional Supplementation for managing adrenal fatigue

- In addition to following a healthy lifestyle, nutritional supplements may be beneficial in adrenal fatigue.
  - Needed for hormone production:
    - Vitamin C, magnesium, pantothenic acid
  - Provides additional adrenal support:
    - B vitamins, Glycerrhizin, DHEA, Pregnenolone, Phosphatidyl serine, Melatonin, Ginseng

