Why is restoring HPA-T Axis function so *critical* for patient health? Various HPA-T Axis Imbalances Affect Your Health

Links between chronic conditions and your neurotransmitter & hormone levels

This sheet provides an overview of the association between elevated or low levels of neurotransmitters and adrenal hormones with many chronic symptoms and conditions.

Associations with HIGH Levels:

Cortisol

- Anxietv
- Poor Sleep
- Insulin Resistance
- Immune Suppression

Dopamine

- Developmental problems
- Schizophrenia
- Psychosis

Norepinephrine

- Stress and Anxiety
- Hyperactivity
- Increased Blood Pressure
- Pain

Hot flashes

- Migraines
- Anger

Epinephrine

- Insomnia
- Anxiety
- Stress
- Blood Sugar Elevation
- Insulin Resistance

Glutamate

- Neurotoxicity
- Anxietv
- Stress
- Decreased Mood
- Seizures

GABA

• Sedation



Associations with LOW Levels:

Cortisol

- Fatigue
- Inflammation and Allergies Sensitivity to loud noise
- Low Libido
- Fatigue/Lethargy
- Aging

- Salt cravings
- Difficulty with waking up
- Second wind at night • Daytime sleepiness

Dopamine

- Lack of Motivation/Focus
- Addictions and Cravings
- Low Libido

Norepinephrine

- Lack of Focus/Energy/Motivation
- Depression with Apathy

Epinephrine

- Poor Methylation
- Lack of Focus/Energy
- Poor Blood Sugar Control
- Difficulty losing weight

Glutamate

- Fatigue
- Low Brain Function

GABA

- Anxiety
- Hyperactivity
- Sleep Difficulties

Serotonin

- Depression
- Anxiety
- Carbohydrate Cravings
- Insomnia
- Anger/Rage

- Pain
- Low libido
- Headaches
- Constipation
- PMS/Hot flashes



Interaction of neurotransmitters, thyroid, adrenal hormones, and sex hormones

HORMONES » NEUROTRANSMITTERS

Hormone Effects on Neurotransmitters:

• Estrogen: Enhances Serotonin, Modulates Dopamine

Progesterone: Enhances GABA

•Testosterone: Enhances Serotonin, Enhances Dopamine

• DHEA: Enhances Dopamine, Norepinephrine, Serotonin

Neuroprotective, Increases neuronal plasticity

•Thyroid: Enhances Serotonin

• Cortisol Excess: Blocks Serotonin and Tryptophan metabolism into

Serotonin; Use 5-HTP to bypass

• Cortisol Deficiency: Decreases Serotonin, Epinephrine

Increases Norepinephrine, Glutamate

• Insulin Excess: Decreases Serotonin

(Insulin Resistance) Increases Norepinephrine and Dopamine

NEUROTRANSMITTERS » HORMONES

Neurotransmitter Effects on Hormones:

• Serotonin: Modulates Thyroid Function

• GABA Excess: Impedes Thyroid Function

• Dopamine Deficiency: Decreases Prolactin; Increases growth hormone;

Increases TSH

• Norepinephrine Excess: Acute; Increases Cortisol

Chronic; Decreases Cortisol

• Epinephrine Excess: Insulin resistance - Increases Insulin

Learn more about assessing, monitoring, and correcting neurotransmitter imbalances.





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