



# SLEEP PROTOCOL

## WHY IS SLEEP SO IMPORTANT?

### OTHER SYSTEMS TO CONSIDER:

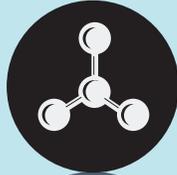
METABOLISM



ADRENAL



ESTROGEN METABOLISM



BRAIN



Our circadian biological clock is controlled by a group of hypothalamic cells called the Suprachiasmatic Nucleus, which responds to light and dark signals received from the optic nerve of the eye. The SCN relays the signal to other parts of our brain, such as those that control hormones and body temperature. When SCN responds to natural light, (morning), the signal is: produce cortisol. It also signals that melatonin release should be delayed. At night, melatonin levels should rise and stay elevated, as signaled by the SCN.

### THE HPA AXIS AND SLEEP:

Sleep initiation occurs concurrently with low HPA axis activation.

The paraventricular nucleus (PVN) in the hypothalamus acts on the anterior pituitary's CRH receptors, causing ACTH release. ACTH acts on the adrenal cortex. The adrenal cortex produces and releases cortisol, and cortisol displays feedback inhibition on the PVN.

## SLEEP DISRUPTORS



Chemical Stimulants



Jet Lag



Daylight Savings Time



Inconsistent Sleeping Schedule

## NATURAL REMEDIES THAT WORK



Chamomile or Lavender Tea + Honey



Fruits like Bananas & Cherries



Almonds

**MELATONIN:** Melatonin works through the MT1 receptor on the Suprachiasmatic Nuclei (SCN) and induce a muscle relaxation response. Melatonin seems to work best when administered 2-4 hours prior to bedtime.\* Mol Cell Biol. 2003 Feb; 23(3): 1054-1060.

**THEANINE:** crosses the blood brain barrier and binds with specific receptors to aid in the balance of dopamine, GABA and glycine.\* AANA J. 2009 Dec;77(6):445-9.

**SENSORIL:** as a result of their mimicking action, glycowithanolides decrease serum cortisol (a stress hormone), pulse rate and blood pressure – and support a healthy circadian rhythm.\*

**GABA:** exerts its main action by binding to GABA-specific receptors on either or both the presynaptic and postsynaptic neurons and resulting in an outflow of potassium cations, making the cell increasing difficult to stimulate. This is the inhibitory effect of the is neurotransmitter.\* Purves et al. Neuroscience. 4th ed. Sunderland (MA): Sinauer Associates, Incorporated; 2008.

**BLUENESSE (LEMON BALM):** appears to have GABAergic activity secondary to inhibiting the enzyme GABA transaminase.\* Award R, et al. Phytother Res. 2009 Aug;23:8:1075-81.

**MAGNESIUM:** natural N-methyl-D-aspartic acid (NMDA) antagonist and GABA agonist, Mg<sup>2+</sup>, seems to play a key role in the regulation of sleep.\* J Res Med Sci. 2012 Dec; 17(12): 1161-1169.

**5-MTHF/B12:** methyl donor that promotes serotonin synthesis. Serotonin is the precursor to the melatonin produced in the pineal gland.\* Sleep Med. 2008 Jan; 9(1): 27-32.

\*These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure or prevent any disease.

## PRIMARY SUPPORT

Sleep Benefits™  
Tri Mag  
5-MTHF/B12 MC 2000

**Sleep Benefits™:** 2 capsules 1-2 hours before bed

\*\*As an alternative if patient responds well to individual nutrient:

**Liposomal Melatonin Spray:** 2-4 sprays  
1-2 hours before bed

**L-theanine:** 2-3 capsules in the evening  
or before bed

**Tri Mag:** 3-6 capsules in the evening or before bed

**5-MTHF/B12 MC 2000:** 1-2 capsules daily  
(preferable in the morning)

## SECONDARY SUPPORT

Cortisol Benefits™  
5-HTP  
L-Theanine  
Relora® with Bacopa

**Cortisol Benefits™:** 2 capsules daily (first try in the evening in case ingredients cause drowsiness)

**5-HTP:** 3-4 capsules 2 hours before bed

**L-Theanine:** 2-3 capsules 2 hours before bed

**Relora® with Bacopa:** 1-2 capsules in the evening

### CONSIDER THESE TESTS TO PROVIDE THE BEST SUPPORT FOR SLEEP HEALTH:



- Adrenal stress index
- Comprehensive Melatonin Profile
- Neurotransmitter Assessment

*Bakky Taylor, N.D.*



*"Eat less food after 7 pm. Mid morning and mid afternoon snacking is important so during sleep the nervous system can rest and there is less digestion."*