Sleep Problems: Understanding the Missing Link
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Sleep plays an incredibly important role in your overall health and sense of wellbeing. It is the time during which your body, brain included, does the majority of its REPAIR & REGENERATION. This is crucial, among other things, for maintaining a healthy & robust immune response, keeping female/male hormones balanced, ensuring proper digestive function, and optimizing brain health and cognition (which relates to your mood). Knowing this helps us to understand why prioritizing the quality and quantity of sleep is such a cornerstone of health.

So, let’s get to the bottom of this!

So, what’s at the root of sleep problems?

First, there are many health conditions and drugs that predispose and/or cause sleep difficulties; management of these should be addressed as part of a comprehensive healthcare plan that seeks to correct the underlying cause. This includes things such as sleep apnea, uncontrolled diabetes, traumatic brain injury and restless leg syndrome.

However, the vast majority of individuals who experience sleep problems don’t have any “disease” that shows up on standard lab tests. Individuals in this second category have what I refer to as “Functional Sleep Disorders”, and often have dysfunction in one or both of the following areas:

1) Stress hormone production

and/or

2) Blood sugar regulation (not necessarily Diabetes).

Not only can each lead to sleep disturbances, but they often coexist/overlap because of the intimate physiologic relationship they share.

Let me break it down for you...
Cortisol (and epinephrine) is what is produced by your adrenal glands and its secretion follows a 24 hour cyclical patter (circadian rhythm). It has an intimate relationship with sleep in that SLEEP BEGINS WHEN CORTISOL IS LOWEST (bedtime) AND FINISHES WHEN CORTISOL IS HIGHEST (morning).

Over and above this functional baseline level, it is also released in greater amounts in response to real or perceived daily stressors. Chronic stress leads to changes in the circadian rhythm that can manifest as several different sleep problems: difficulty falling asleep, difficulty staying asleep, early morning awakening and/or unrefreshing sleep/morning fatigue.

Cortisol is also released when blood glucose drops too low. This is an important protective mechanism used to maintain a constant supply of glucose to the brain when your body is in a fasting state overnight. Individuals who have low adrenal function may not have an adequate cortisol release to keep blood sugar stable overnight, which results in hypoglycemia and a secondary alert response whose purpose is to wake you up so you can refuel.

So, what can you do to improve sleep?

1. **Manage stress levels throughout the day**
   The more you engage your parasympathetic nervous system (relaxation response) throughout the day, the more you will support a healthy circadian rhythm. Activities that do this include: walking, spending time in nature, spending time with loved ones, meditation, mindfulness exercises, diaphragmatic breathing, etc. As an additional support, adaptogenic herbs can be very helpful to support healthy stress responses & lessen the burden placed on the adrenal glands. Some of my favorite herbs include: Ashwaganda, Rhodiola & Siberian Ginseng.

2. **Support healthy blood sugar levels**
   Protein, fat and fiber are 3 macronutrients that play an important role in regulating both blood sugar levels and satiety. In particular, make sure you have a good source of protein and healthy fat at breakfast; this meal sets the tone for glycemic control for the rest of the day. Additionally, for some, adopting a low-carbohydrate diet can be helpful to both prevent blood-sugar crashes and promote a healthy cortisol-insulin relationship. For people who have busy lifestyles, using a whey or fermented/sprouted protein powder as a meal booster is a great way to ensure adequate protein. This recommendation is especially important for people with established insulin insensitivity/diabetes as they are even more susceptible to blood sugar dysregulation. Additionally, some supplements to consider include: chromium, bitter melon, cinnamon extract and alpha-lipoic acid.

3. **Help support lower cortisol in the evening**
   As your cortisol levels begin to decline in the evening it is important to support this natural progression. This means engaging in activities that signal to the body it is nearing time for sleep, which may include reading a book, having a bath, meditation, journaling, etc. Eating more carbs at dinner has also been found to promote a better quality of sleep (look into the Adrenal Reset Diet). However, despite our best efforts sometimes the body needs a little extra help. Two nutrients that have shown considerable benefit in helping to bring cortisol levels down are Phosphatidylserine & Taurine. Using these in combination with other calming herbs/nutrients can be part of a good treatment plan to help re-establish a healthy diurnal cortisol pattern.
4. **Establish a regular sleeping schedule**
   The body is a creature of habit wherein hormone production/release tends to follow cyclical patterns. Therefore, the more you train & stick to a regular schedule, the more your natural hormone production will work to keep your sleep quantity and quality intact.

5. **Promote your body’s own production of melatonin**
   Melatonin, which plays a central role in sleep initiation, is very sensitive to light. Therefore, it is important to nurture an environment and activities that set the stage for endogenous melatonin production. In particular, artificial light and electromagnetic radiation should be minimized 1-2 hrs before bed. Some of my favorite supplements to help the promote the production of melatonin include: Magnesium bisglycinate, B6 and tryptophan.
   Also consider eating foods in the evening that naturally contain tryptophan (needed to make melatonin), which includes: nuts, turkey & chicken, whole grains, rice, sesame & sunflower seeds and eggs.