

That Elusive Sleep

Poor sleep means poor health. Sleep is responsible for the body's recuperation. Specific physical and mental regenerations occur during slumber; and without a "good night's sleep", health and wellbeing cannot prevail.

Approximately 100 million people annually may experience difficulty with some aspect of sleep. Population studies have shown the magnitude of the negative impact of poor sleep on the nation. In fact, insomnia causes great economic, social, physical and psychological problems. This translates into billions of dollars lost in poor job performance, traffic accidents and ill health. Without sleep, health is lost.

There are gender differences in sleep habits. While women may complain more about sleep problems, several scientific studies imply that sleep in men is often of a lower quality than in women.

So, just what is sleep? For the most part, the general public still regards sleep as a state of stupor or quiescence where inactivity prevails. But in reality, sleep is actually a state of wakefulness for the brain. Sleep is a process of major activity within the body where the brain is involved in much turbulent activity. There are arousal mechanisms in the brain, and it is the activation of these arousal mechanisms rather than the inhibition of brain functions that are involved in sleep. Sleep can be considered a form of modified consciousness. Stress, poor nutrition, excessive fatigue and environmental pollutants definitely impact the brain's sleeping and waking mechanisms. There are many pharmaceutical agents that will help an individual to sleep but these same drugs carry disadvantages and limitations.

The pharmacological revolution of the 20th century has overshadowed the value of natural nutritional support for the promotion of healthy sleep. The popular prescription drugs presently available for sleep have short term benefits with long term disadvantages because the brain is not so easily fooled by a simple chemical that may focus on a relatively distinct and small number of tissue receptors. The premature or indiscriminate use of prescription drugs, or OTC drugs is not only unwise but potentially dangerous. Frequently, clinicians prescribe antipsychotic medications for sleep based on their side effect profile and often utilize medications "off label" to treat certain maladies. In 2013, however, the APA advised clinicians to carefully evaluate patients before prescribing antipsychotics to ensure they were clinically warranted.

The issue of achieving that elusive sleep seems to be a particular problem for those struggling with substance abuse. As we know, substance abuse is the exact antithesis of sleep; and the drugs of abuse interfere with the normal functions of the brain that control sleep. There is a pervasive push in the rehab culture to utilize various medications for sleep that have a sedation side effect profile. One such medication is Seroquel. This medication can cause movement disorders, chronic metabolic problems, and can be very difficult to discontinue once used for sleep. The bottom line is that the FDA has not approved the use of any antipsychotic for the first line treatment of major depressive disorder or insomnia, or any atypical antipsychotic for the first line treatment of anxiety disorders. And yet, we see a lot of this application in the addiction arena.

The CDC recently completed a study estimating how many adult ER visits were made each year in the U.S. because of adverse events from such medications as Haldol, Risperdal and Seroquel. Using data from all ER visits for 2009-2011 at 63 randomly selected U.S. hospitals, it was estimated that there were more than 20,000 visits to the ER for adverse events associated with these medications each year. It was noted that antipsychotics as a class caused 3 times more visits to the ER for adverse drug events than sedatives and anxiolytics, 4 times more visits than stimulants and 5 times more visits than antidepressants. Antipsychotic medications have great benefits for those with serious mental illness, however, they carry risks and sometimes potentially harmful side effects.

Melatonin is also frequently used in the addiction arena to recalibrate sleep in higher doses than is physiologically warranted. Melatonin is a hormone. Humans usually make 0.5-1 mg a day naturally. When melatonin is given in supraphysiological doses, it ultimately causes reduced serotonin. People on long term high dose melatonin become depressed. In addition, it can cause anxiety at high doses. When you alter one neurochemical, you are affecting another. They work in symphony and in balance.

It would seem that avoiding the use of these medications for sleep in favor of other options that are less likely to cause adverse events may be particularly appropriate when considering the treatment of insomnia and anxiety in those struggling with substance abuse issues. In my opinion, when we as clinicians put our patients who are already struggling with addiction issues on medications like Seroquel for sleep, we do a great disservice to them. Frequently, patients leave the rehabs on these type of medications and they are reluctant to “give them up” because they now can’t sleep without them. The inability to sleep and the related anxiety surrounding this particular issue, frequently fuel the relapse journey of the best intended. Thus, it may behoove us as clinicians to try a more benign approach to a patient’s sleep issue. These issues are usually multifactorial even when not complicated by addiction. For example, one of the main culprits could be elevated cortisol.

A discussion about sleep would be incomplete without talking about cortisol. Cortisol, released in response to stress, is mainly produced by the adrenal gland. A full examination of the role and function of cortisol is beyond the scope of this article; however, suffice it to say that elevated cortisol levels can impede sleep. You might ask, “Who has elevated cortisol levels?” Probably a majority of the population who are living a stressed out existence would fall into that category, as well as the addicted individual. The good news, however, is that there are a number of natural agents that can modulate cortisol and facilitate sleep.

Magnesium is one such agent. It is a cofactor—a molecule that binds to and stimulates an enzyme—that is involved in the activation of over 300 enzymes in your body. It acts as a natural tranquilizer and can help induce sleep. It relaxes muscles, relaxes electrical impulses and facilitates calmness. The glycinate form is a highly absorbable magnesium chelate.

Another, L-theanine, is an amino acid derived from the biologically active constituents of green tea responsible for promoting relaxation. It has been shown to enhance alpha wave production in the occipital and parietal regions of the brain calming the sympathetic nervous system for a relaxing effect. It also supports healthy cellular function. Furthermore, L-theanine has been reported to moderate the effects of caffeine in the central nervous system. It can be taken during the daytime hours as well to combat anxiety.

Glycine is an inhibitory neurotransmitter. When used at a dose of 3 grams often in combination with magnesium glycinate, it promotes healthy sleep quality by working in the area of the brain responsible for controlling circadian rhythm. Glycine has been associated with healthy sleep properties including post synaptic inhibition responsible for REM sleep atonia and a decreased core body temperature associated with sleep. In another study, glycine enhanced sleep quality, sleep onset time and daytime alertness.

There are a number of herbal and amino acid proprietary blends that are useful in managing cortisol levels and facilitating sleep as well. In a recent study, Sensoril, ashwagandha extract, promoted relaxation and maintained healthy cortisol levels and C reactive protein levels. Maintaining a proper vitamin D level supports normal cortisol production and phosphatidylserine is also known to blunt cortisol. And when you are wired and tired, you might find adaptogens to be useful. Inositol is yet another agent that when compounded at high doses (9-12 gm) calms mind chatter and minimizes the number of sheep you count till sleep. This listing is certainly not exhaustive.

It is vitally important to speak with a qualified, trained clinician to explore these and other options.

For further information, please contact the office by email at totalhealthsolutions@protonmail.com or by phone at 954-577-0008 to request an appointment.

T. Boland, ARNP, LMFT, Ph.D., ABD, FAARM

Total Health Solutions, Inc.™

totalhealthsolutions@protonmail.com