Pain and Sleep: An Intimate Connection

KEY WORDS
- pain, backache, strain, sprain, arthritis, inflammation, bursitis, tendonitis, insomnia, sleep, migraines, fatigue, curcumin, boswellia, DLPA, melatonin, vitamin B6, PSP, P-5-P, pyridoxal-5-phosphate, active B6

It will likely not surprise you that upwards of 90% of people with chronic pain also have some level of disordered sleep. In an ever-worsening downward spiral—pain begets poor sleep, and poor sleep begets more pain and lack of healing. To fully resolve this problem, you must address both pain and sleep simultaneously. You must interrupt this self-defeating cycle.

In fact, Dr. Thomas Roth, PhD, Director of the Sleep Disorders Center at Henry Ford Hospital in Detroit, has stated, “There’s very good data that suggests that disturbed sleep can worsen your pain.”

Poor quality sleep not only causes physical damage and escalates pain, it prevents your body from making key hormones that give you vitality and protect you from illnesses like cancer and heart disease. Health conscious consumers select nutritious food, incorporate an exercise program, and include dietary supplements in their daily regimen, but may devote little thought to the loss of sleep and how it prevents healing and even accelerates the aging process.

In this issue of Terry Talks Nutrition, I’m going to share with you information on dietary supplement ingredients that can powerfully address BOTH pain and disordered sleep!

Our Sleep-Deprived World
Before the invention of the electric light bulb, people slept an average of 9 to 10 hours a night. Sleep and wake cycles were determined by sunrise and sunset. Yet many people today are averaging 7 hours per night or less. The availability and demands of activity, communication devices, and entertainment around the clock offer unprecedented distractions from achieving healthy sleep.

Lack of quality sleep is associated with a whole host of physical problems, because many physiological functions that impact our health significantly occur only in certain stages of sleep. Sleep—specifically stage four, or deep sleep—is when our body kicks into repair mode. In one scientific study, it was found that lack of sleep actually slowed the healing of burns. Additionally, two hormones, melatonin and human growth hormone (HGH), are made almost exclusively during the sleep cycle. Melatonin protects against cancer, and human growth hormone is Nature’s anti-aging hormone. Impairment of HGH production by reduced sleep cycles speeds up the aging process. It also decreases daytime vitality and physical healing. Even one night of short sleep increases inflammatory chemicals in the blood. It also increases hunger-promoting hormones, which may be why lack of healthy sleep promotes obesity. Chronic sleep loss (insomnia) increases the risk of several diseases, such as heart disease, depression, high blood pressure, diabetes and Alzheimer’s.

Professor Eve Van Cauter of the University of Chicago sums it up best when she states that “Lack of sleep disrupts every physiologic function in the body.”

Pain Makes a Bad Situation Worse
I think that now you are seeing how pain and interrupted sleep are a deadly duo. Pain keeps you tossing and turning all night, and prevents full relaxation into deep sleep. Lack of deep sleep keeps you from producing the messengers that direct tissue repair and healing. Lack of healing results in more pain...and on it goes.

In order for you to feel your best, you need to eliminate pain and improve sleep quality. Let’s start with my recommendations for the most effective, natural pain and sleep formula I have ever encountered: curcumin, boswellia and DLPA, combined with melatonin and pyridoxal-5-phosphate, or P-5-P.

Curcumin
Curcumin has been touted as the “most anti-inflammatory herb on the planet,” and there appears to be a certain amount of scientific truth to that claim. This multifaceted compound has proven activity against multiple inflammatory pathways, including COX-2, LOX, TNF-alpha, IFN-gamma, and NF-kappaB. In America, it is estimated that more than 56 million adults experience chronic pain, with the top five experience cited being: low back, arthritis, migraine, jaw/lower facial, and neuropathies. Reducing inflammation is an important relief strategy, which makes curcumin an ideal therapeutic agent due to its ability to address multiple inflammatory pathways with virtually no significant adverse effects.

Unfortunately, there is a challenge in using curcumin medicinally. It does not absorb well. Sometimes people have to take as much as 10 grams to get enough curcumin in the blood stream to have a physical effect. New research has focused on approaches to improve curcumin’s absorption and bioavailability, such as adding lecithin and/or piperine (a concentrated black pepper extract). However, both of these absorption systems have inherent problems. In published animal (rat) studies, lecithin boosted absorption about five-fold, but there are no published human studies on bioavailability using this system, and rats and humans have substantial physiological differences. Piperine, the black pepper extract, does boost absorption, but it unfortunately interacts with a great many prescription medications, including anti-seizure, anti-hypertensive, heart regulating, and cancer chemotherapeutic drugs. Additionally, piperine may actually increase the absorption of many environmental toxins, such as carbon tetrachloride and aflatoxin, and can cause stress on the liver. Because of these drug interactions and liver-stress concerns, many integrative physicians shy away from a piperine-based system.

There is a newer methodology just recently patented that has been the most successful at safely improving absorption by formulating micronized curcumin with phospholipids and turmeric essential oils. Published human dose-comparison testing has shown that it has 7 to 10 times the bioavailability, as well as greater blood retention.

When in doubt, always consult your physician or health care practitioner. This column is to provide you with information to maintain your health.

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Boswellia and DLPA

Boswellia’s anti-inflammatory and pain-reducing activity is linked to the array of boswellic acids in the extract. Scientists found that every single boswellic acid has anti-inflammatory properties—except one. One boswellic acid (beta) was actually pro-inflammatory. They found that boswellia’s activity greatly increased when beta-boswellic acid was reduced to less than 5%. Research studies have found that boswellia is especially potent at reducing joint pain associated with arthritis. It does this by inhibiting the inflammatory enzyme, 5-LOX. Together, curcumin and boswellia reduce the activity of the two most significant pain pathways in the body—COX-2 and 5-LOX.

Melatonin: The Hormone of Darkness

Melatonin is called the hormone of darkness because production is inhibited by light striking the retina of the eye. This is one reason you should keep your bedroom as dark as possible and avoid lights in the middle of the night, because it will reduce the amount of this powerful hormone your body can make. Melatonin helps regulate your circadian rhythms, which are deeply integrated with your sleep/wake schedule. It is a potent antioxidant, and may have cancer prevention properties. But it is perhaps best known for the impact it can have on increasing REM and stage 4 sleep (the stage of repair and rejuvenation). You may notice that you have very vivid and lively dreams when you first use melatonin. That is because of its expansion of the time you spend in REM (or dreaming sleep). This often tapers off with continued use.

Why Drugs Are Not the Answer!

It is almost criminal that these over-the-counter drugs are being marketed for nightly use. Let’s take a look at the down side of some of these drugs marketed for pain and sleep.

Diphenhydramine (i.e., Benadryl®). This is an allergy medicine sold for its adverse effect—sleepiness. Other side effects include motor impairment (ataxia), dry mouth and throat, flushed skin, increased heart rate (tachycardia), blurred vision, lack of pupil accommodation which can lead to dangerous falls in older adults, abnormal sensitivity to bright light (photophobia), pupil dilation (mydriasis), urinary retention, constipation, difficulty concentrating, short-term memory loss, visual disturbances, hallucinations, irregular breathing, dizziness, irritability, itchy skin, confusion, decreased body temperature, erectile dysfunction and delirium.

Ibuprofen (i.e., Motrin®, Advil®). This is a non-steroidal anti-inflammatory drug (NSAID) responsible for over 16,000 deaths per year! Other adverse effects: gastric bleeding, ulcers, confusion, hypertension, increased risk of heart attack and stroke, coughing up blood or vomit that looks like coffee grounds; swelling or rapid weight gain; urinating less than usual or not at all; kidney failure; nausea, stomach pain, low fever, jaundice (yellowing of the skin or eyes); fever, sore throat, and headache with a severe blistering, peeling, and red skin rash; bruising, severe tingling, numbness, pain, muscle weakness; or fever, headache, neck stiffness, chills, increased sensitivity to light, purple spots on the skin, and/or seizure (convulsions).

Acetaminophen (i.e., Tylenol®). It is shocking that a drug Americans think of as “harmless” is actually the number one cause of liver failure, as well as the most common cause of serious overdose in North America! Acetaminophen is especially dangerous with alcohol consumption, and it depletes glutathione, a vital endogenous antioxidant and detoxifying compound. Adverse effects are associated with liver toxicity, and include jaundice, nausea, vomiting, abdominal tenderness, interfence with normal blood clotting, weakness, kidney failure, cardiomyopathy, and death.

Potent Combination = Astounding Results

The best answer to the deadly duo of pain and disturbed sleep is a natural solution. Curcumin, boswellia, DLPA, P-5-P, and melatonin combine to make the most powerful anti-inflammatory, pain relieving, and sleep combination you can find. These ingredients have been proven time and again to be highly effective and safe for extended use.

These ingredients will benefit anyone who is suffering from sleep problems worsened by pain, whether it is acute, sudden pain such as a strain, over exercising, sprains, or any exercise-induced injury, or chronic pain from arthritis, migraine headaches, bursitis, back pain, or any recurring pain. As scientific research shows, these ingredients are as effective (or more so) as synthetic drugs and have no significant side effects. Using a blend of these natural ingredients can change the quality of your life. You can be pain-free, get the rest you crave, and enjoy your life to the fullest.

Look for a product with this formula at your local health food store:

- Vitamin B6 (from pyridoxal-5-phosphate) 60 mg
- Melatonin 5 mg
- Proprietary EP612 Complex 1400 mg
- DLPA (dl-Phenylalanine), Boswellia (Boswellia serrata) Extract standardized to contain >70% boswellic acid with AKBA >15%, Curcumin (Curcuma longa) Extract standardized for curcuminoid complex (curcumin, demethoxycurcumin, and bisdemethoxycurcumin)

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