



Low Level Laser Therapy & insomnia clinical research

WAKE UP!! SHEDDING LIGHT ON INSOMNIA

Dr Larry Lytle

Sleep disorders are increasingly becoming a more serious problem. Over 60 million Americans suffer from insomnia or some type of sleep disorder. Diagnostic Sleep Disorder Centers are found in most major cities, many connected with Universities, hospitals and research centers.

It is not unusual to have sleep troubles from time to time. People with insomnia have one or more of the following, difficulty falling asleep, waking up often during the night and having trouble going back to sleep, waking up too early in the morning, and unrefreshing sleep.

Insomnia can cause problems during the day, such as sleepiness, fatigue, difficulty concentrating, and irritability. A person with insomnia may also have another sleep disorder such as sleep apnea, narcolepsy, and restless legs syndrome.

There are two types of insomnia, primary or secondary. Primary insomnia means that a person is having sleep problems that are not directly associated with any other health conditions. Secondary insomnia occurs when a person is having sleep problems because of something else, such as depression, heartburn, cancer, asthma, medications, or a substance abuse.

Insomnia can vary in how long it lasts and how often it occurs. Insomnia can be short-term (called acute insomnia) or last a long time (called chronic insomnia). It can also come and go on an intermittent basis. Acute (short-term) insomnia can last from one night to a few weeks. It is often caused by emotional or physical discomfort, and can be related to a specific event. Causes of acute insomnia can include; significant life stress, job loss or change, death of a loved one, moving, illness, environmental factors like noise, light, extreme temperatures, and jet lag.

Chronic, or long-term insomnia, is when a person has insomnia at least 3 nights a week for 1 month or longer. It can be caused by many things and often occurs along with

other health problems. There are several common causes of chronic insomnia are; depression, chronic stress, and pain or discomfort at night.

Controversy surrounds the cause or causes of insomnia, but one area most doctors and researcher agree is people who do not get enough “good sleep” are less productive and have more illness. For those that suffer from insomnia, it is good advice to avoid stimulants such as caffeine, alcohol, nicotine, sugar and any foods or chemicals that might cause allergic reactions. Avoid eating heavy meals or drinking water or other liquids before bedtime.

Some people do not need eight hours of sleep as taught to us in basic health classes. Many who do not physically exert themselves or expend large amounts of energy can rejuvenate their bodies with four to six hours sleep rather than eight. They may appear to have insomnia when in fact, the body has rested enough. These people need to get out of bed and do something productive. All bodies respond differently and what might affect one person has no effect on another

Regulation of blood sugar plays a role in insomnia. Blood sugar is controlled by the pancreas, which is controlled by the parasympathetic nervous system. The parasympathetic nervous system is controlled by proprioceptive feedback to the brain from the 68 pair of “dental muscles” that control the relationship of the lower jaw to the skull.⁴ This vicious circle is better explained in the Proprioceptive Feedback to the Brain article published in Integrative Health and Self Healing magazine.⁶ If one is suffering from this malady, sleep can be enhanced by using proprioceptive guides or seeking help from a dentist skilled in sleep apnea or snoring devices.

The drug industry offers various over the counter and prescription drugs to combat insomnia. As with all drugs, these drugs have various side effects and perform differently for different users. There are many other natural herbs, vitamins and remedies available, all with varying degrees of success. Some of these are Alluna, St Johns Wort, Valerian, Kava Kota or combinations of these and other herbs.

Melatonin, one of the brain neuropeptides, is necessary to enhance sleep. It is not clear why some people do not produce enough melatonin. Melatonin tends to neutralize the combat brain stimulating neuropeptides such as acetylcholine. The supplement tryptophan is a necessary precursor for our body to make melatonin.

Anyone that has suffered from insomnia has “counted sheep” over and over with the hope of putting their brain in the sleep wave mode with little or no results. Brain waves are divided into four types based on the length of the wave emitted. Delta brain waves are from 0 to 4 Hz (0 is death), Theta, the sleep brain waves, range from 4 to 8 Hz, Alpha ranges from 8 to 12 Hz and Beta is 12 and above. Rapid-Eye-Movement is more specific and the brain waves are in the Alpha/Theta transfer frequency of 7.83 Hz. This frequency is also considered the dream state and time seems to stand still at this frequency. Alpha brain waves are achieved through relaxation techniques including meditation and prayer. One “self help” exercise that works for some people is to practice

controlling the brain waves by controlling breathing rhythms. Mind Mapping by Buddy Frumpker is an excellent resource for learning this technique.²

A new way safe and economical way to control insomnia is to use low level laser therapy to regulate the brain waves and produce melatonin. As discussed, the brain emits various wave lengths that regulate brain function. These waves have been interpreted with EEG machines for 110 years. Now, with new low level lasers, the user can safely modulate brain waves. These newer lasers use computers to control the frequency, power density and create unique waves, which can penetrate the skull and normalize brain waves. Not only can these unique wave lasers modulate brain waves, they can be specially programmed to stimulate our body to produce more sleep enhancing melatonin. It makes good sense to stimulate our body with light to produce melatonin rather than take a drug, vitamin or artificial source with the hope that it will be absorbed and utilized to produce melatonin the necessary sleep enhancer.

Insomnia may also be treated using low level laser on the acupuncture points. In my experience the best laser for laser acupuncture is a 30 – 50 mw laser capable of producing 2 - 4 joules of energy per minute. Both untrained professionals and lay people can easily locate acupoints and use these instrument. Acupuncture needles must be inserted in several acupuncture points and left for 30 to 45 minutes and requires a professional acupuncturist to properly place the needles to accomplish what low level lasers will do in about a minute.³

Energy medicine is the medicine of the future and is here now! The body is all energy. Light is energy so it makes good sense to use laser light energy to balance the brains energy and resolve insomnia.

46 Cases of Insomnia Treated with Semiconductor Laser Irridiation on Auricular Points *by Yao Shuying (Institute of Acupuncture and Moxbustion, China Academy of Traditional Chinese Medicine, Beijing 100700)*

Insomnia is a commonly encountered symptom in clinical practice. The author has treated it with semiconductor laser irradiation on auricular points with satisfactory therapeutic results. A report is presented as follows.

General Data

In this series, there were 46 cases of insomnia. 19 cases were male and 27 female, ranging in age of 23-55 years, averaging 38 years. The course of disease ranged from over 1 month to 12 years. 15 cases were differentiated as disharmony between the heart and kidney, 18 cases deficiency of both the heart and spleen, and 13 cases liver-fire upward invasion.

Method of Treatment

Bilateral auricular points of Shenmen, Endocrine, Subcortex, and Brain were selected. Add Heart and Kidney for disharmony between the heart and kidney; Spleen and Stomach for deficiency of both the heart and spleen, and Liver and Kidney for liver-fire upward invasion. PU-I semiconductor laser apparatus developed by the Physics Department of Qinghua University was used to irradiate on the above-mentioned

auricular points, with a wave length of 820 nm, output power 3 mw and facula 2 mm in diameter. Each point was irradiated for 1 minute till a local warm sensation was felt. The treatment was given once daily, 12 treatments constituting one therapeutic course with a 5-7 day interval between courses. The clinical results were evaluated after 1-3

courses of treatment. **Therapeutic Criteria**

Cured: Able to sleep for more than 7 hours. Improved: Able to sleep for 5-6 hours.

Ineffective: Able to sleep for less than 3 hours.

Therapeutic Results

Of the 46 cases treated, 32 cases (69.5%) were cured, 13 cases (28.3%) were improved, and 1 case (2.2%) failed. The total effective rate was 97.8%. **46 Cases of Insomnia Treated with Semiconductor Laser Irradiation on Auricular Points** by Yao Shuying (*Institute of Acupuncture and Moxibustion, China Academy of Traditional Chinese Medicine, Beijing 100700*)

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