

DREAMS OF A GOOD NIGHT'S SLEEP: *For Good Health, Your Rest Habits May Be As Important As Exercise*

Noel Peterson, ND

One of the questions I always ask my new clients, no matter what their chief complaint, is "How's your sleep"? If you need an alarm in the morning to wake up, if you feel tired or groggy and have difficulty concentrating, then you are probably not getting enough sleep.

At the turn of this century, Americans slept an average of 9 1/2 hours per night, and in rural communities where the majority of the population lived, Americans slept even more hours in the winter. By 1996, we slept an average of 7 hours, and 30% of the population slept less than 6 hours per night.

"One thing is absolutely certain in America: the quantity and quality of sleep obtained is substantially less than what is needed," says Stanford's Dr. William Dement, chairman of the National Commission on Sleep Disorders Research. Their findings have been published in the report *Wake Up America: A National Sleep Alert*.

"At this moment, sleepy individuals are operating millions of motor vehicles, some of them high tonnage trucks. They are operating trains, airplanes, and ships of all kinds", Dement says. "They are responsible for decision making in hospitals, nuclear power plants, space launches, air traffic, and strategic military installations."

- 40 million Americans have a chronic sleep disorder, including insomnia, narcolepsy, and sleep apnea.
- 20 to 30 million have intermittent sleep problems caused by rotating shift work, life stresses, and last minute preparations for exams, meetings, and vacations.
- 20% of high school kids fall asleep during classes at least once a week, and on any given day, 25% of people with no sleep problems did not get enough sleep the night before, and are not alert.
- Sleep needs actually increase during adolescence to nine or more hours, but few teens are able to meet their school and social demands and still get enough sleep.
- Night time secretion of the pineal hormone melatonin may have important anti-cancer benefits that are lost when sleep deprivation reduces melatonin output.
- Sleep disruption can be a sign of endocrine hormone malfunction, nocturnal hypoglycemia, and circadian rhythm disruption.
- Sleep disruption has been linked to poor survival in cancer patients when compared to those with healthy sleep patterns.

Here are my tips for better sleep:

- Go to bed and get up at the same time each day, even on weekends. Variations in your sleep-wake cycle can disrupt your circadian rhythms of hormone output.
- Wind down gradually before bed, leaving plenty of time for quiet and subdued light.
- Turn off that TV early.
- Avoid eating late in the evening. Active digestion and sleep don't mix well.
- Encourage your teenagers to get more rest. Many behavior problems may be nothing more than their response to chronic sleep deprivation. Japanese researchers found that adolescents who complained of poor attention at school had sleep-wake rhythm disorders, and that all improved remarkably with high dose vitamin B 12 therapy, even though none of the subjects had low blood levels of vitamin B 12.*

For more help with sleep and sleep disorders, the team at the Center can help with botanical medicines, hormone regulation, acupuncture, physical medicine, and relaxation techniques. From all of us at the Center, sweet dreams.

**Treatment of Persistent sleep-Wake Schedule disorders in Adolescents and Vitamin B 12". Otah, Tatsuro, et al, Japanese Journal of Psychiatry and Neurology, 1991; 45(1): 167-168. 1.5 mg tid oral B12

SHOULDER PAIN

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Injections are continued until the joint, tendon, and ligaments are free of pain, and function is restored.

Like many of the people we treat, Tom's injuries were complicated by muscle spasms. Muscles spasm as they attempt to guard the injured tendon or ligament. These activated and hypertonic muscles restrict blood flow, inhibit healing, and cause pain to migrate beyond the area of ligamentous injury. Like most patients, Tom benefited significantly from trigger point injections, in which procaine was injected into his hypertonic and spastic rotator cuff muscles. The procaine in trigger point solution relaxes these muscle spasms, inhibits reflex spasm, and increases blood flow to the injured tissue.

Any person with a history of prolonged pain greater than 6 weeks, along with positive signs of pain on movement of the joint, and patients who have been unable to resume their pre-injury activity level all are appropriate candidates for prolotherapy, regardless of their age. I have successfully restored pain free function of children's knees, and in the shoulders of octogenarians who are active and want to stay that way.

I almost forgot: How was Tom's knee connected to his shoulder? I think it goes like this: treating and strengthening his knees allowed him to get back into the game he played in college, and with strong legs he was able to play with more intensity. As his game improved, so did the strain on his racquet arm, and the weak link turned out to be his elbow. Strengthening his elbow allowed his swing to get stronger, until the next weak link (his shoulder) was strained and injured. That, my friend, is how the knee is connected to the shoulder.

WEIGHT GAIN

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eating junk foods, not exercising, neglecting relaxation, ignoring fatigue, not getting enough sleep, using sugar or caffeine to function beyond when you are already tired, worrying, etc. Any of these feelings or behaviors can keep the adrenals pumping out their eventually limited supply of stress hormones.

After going through a period of stress, our adrenals need rest for their own repair and rejuvenation, and for the biochemical changes that foster the nourishment and rejuvenation of other vital organs. If they are not given the opportunity to rest, repair and rejuvenate, their functional abilities will diminish. If you suspect your cortisol could be too high, you should consider having it checked.

Too Much for Too Long

When cortisol stays elevated for extended periods of time, the pH of our bodies changes to an acidic state. In an acidic state, our bodies' enzymes cannot do their jobs properly and many metabolic processes such as digestion, making energy, and repairing muscle are slowed down. Because the body's processes are interdependent, one stalled process affects the next until your entire system becomes bogged down and sluggish. For example, when your digestive system is bogged down, nutrients do not get absorbed and your body has less regeneration and repair capabilities. You are likely to suffer from GI problems such as heartburn, bloating, gas, constipation and irritable bowel. When your energy making processes are stalled, your metabolism slows down. You are likely to gain weight, have less energy, feel less creative and have less excitement for life.

If you have experienced a weight gain that is unresponsive to dieting, and you have lower energy than you wish you had, you might want to consider having The Adrenal Stress Index test. Treating an abnormal cortisol level could be the beginning of a much more successful weight loss strategy. Call Dr. Horan for an appointment to determine if the Adrenal Stress Index test is right for you.

TESTOSTERONE PREVENTS ALZHEIMER'S DISEASE AND DEPRESSION: *Both Men and Women Are at Risk*

Noel Peterson N.D.

Every spring, male songbirds turn up the volume and repertoire of their mating calls, attracting females with the beauty and eloquence of their songs. As it turns out, increased testosterone production is the key to their happy mood changes.

Testosterone is thought to play a major role in physical, mental and emotional well-being. Over 30% of men over age 55 are testosterone deficient and suffer from decreased muscle mass, bone loss, low libido, fatigue and irritability. New research points to increasing risk of developing depression and Alzheimer's disease in men and women when testosterone is low.

Three studies published in the January 27, 2004 editions of *Neurology* and the *Archives of General Psychiatry* indicate that free testosterone levels are lower in men who later develop Alzheimer's disease. In the first study, 574 men aged 32 to 84 years were followed for an average of 19 years. Fifty-four subjects eventually developed Alzheimer's disease.

Researchers looked at the free testosterone index (FTI), calculated by dividing free testosterone by sex hormone binding globulin (SHBG). Higher FTI correlates with higher "free" testosterone, the form of the hormone that is available to our cells, vs. the unavailable form bound to SHBG. They found that the higher the FTI, the lower the risk of developing Alzheimer's. In fact, for each 10 point increase in FTI, there was a 26% decreased risk of developing the disease.

In the second study, 32 men and 64 women with Alzheimer's were compared to 32 men and 72 women who were free of Alzheimer's. They found that regardless of total testosterone, those with Alzheimer's disease had higher sex hormone binding globulin (SHBG) and lower FTI.

In the third study, 278 men 45 years and older were found to have over a 3-fold increased risk of developing depression if their testosterone was low.

This follows on the heels of previous studies, including the Rancho Bernardo Heart Study in 1999 where researchers from the University of California evaluated over 800 men between the ages of 50-89. They found that men lose as much as 40% of free testosterone in their advancing years, even though their levels of total testosterone often remain unchanged.

"There was a graded stepwise decrease in bioavailable testosterone with increasing levels of depressed mood," the investigators observed. "This association was independent of age, weight change, and physical activity." No association was found between total testosterone levels and depression, underscoring the importance of measuring the bioavailable form of the hormone.

Researchers speculated that testosterone may improve mental state by binding to specific androgen receptor sites in the brain. "These results suggest that testosterone treatment might improve depressed mood in older men who have low levels of bioavailable testosterone," they concluded.

So if you feel like you've lost the spring in your step and the song in your spring, contact Dr. Peterson for information about hormone testing and regenerative procedures.

Sources:

Moffat, et al. Free testosterone and risk of alzheimer's disease in older men. *Neurology*, 2004 Jan 27;62(2):188-93.

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Shores M, et al. Increased incidence of diagnosed depressive illness in hypogonadal older men. *Arch Gen Psychiatry*. 2004;61:162-167.

Barrett-Connor E, Von Huhlen DG, Kritz-Silverstein D. Bioavailable testosterone and depressed mood in older men: the Rancho Bernardo study. *J Clin Endocrinol Metab* 1999;84(2):573-577.

YOU DON'T HAVE TO TOLERATE BACK PAIN

Lori Horan, ND, LAC

John is a 31-year-old young man who has lived with low back pain for most of his life. He hurt his back at the age of 15 while helping his father lift a heavy object out of the back end of a truck. He used pain killers for years, had back surgery to fuse 2 vertebrae, and finally tried chiropractic care. Having his back manipulated helped, but only temporarily. After having his back adjusted, he felt relief but within 48 hours it started hurting again. It was worse in the morning, and in the cold weather. He tried acupuncture for the first time one year ago, and after ten sessions, he is almost completely pain free.

John is in good company. It is estimated that up to 80% of the world's population suffers from back pain at some point in their lives with the lower back as the most common location of pain. John's success with acupuncture is very common. Acupuncture has been validated as an effective and reliable method of pain relief for certain types of low back pain.

The *Clinical Journal of Pain* published a recent randomized placebo-controlled study with long-term follow up. The study proves that acupuncture is a safe and effective procedure for low back pain, and that it can remain effective long term without the negative side-effects that often accompany more traditional pain remedies like surgery or pain relievers.

This study selected fifty patients with chronic low back pain who had all tried a variety of other therapies with no success. Only people who had never received acupuncture before were chosen for this study. Patients were informed that treatment might not be felt. Patients kept diaries, which measured pain intensity, intake of pain relievers, sleep quality, and activity level.

Significant differences between acupuncture and placebo patients were found in the patient diaries, all of which revealed acupuncture as an effective form of pain relief. In all measurements, the acupuncture group fared better than the placebo group: pain scores were better, activity levels and sleep quality improved, and the total intake of pain relievers dropped dramatically.

John's treatments were given once per week for 8 weeks, each lasting 20 minutes. Two months later, a follow-up treatment was given and a 10th and final treatment was given after an additional 2 months. He accompanied his treatments with some therapeutic exercises for the low back, and eliminated inflammatory foods from his diet.

The study proves, and John would agree, that there is more than reasonable evidence that acupuncture has a clinically relevant pain-relieving effect on certain forms of chronic pain, particularly low back pain that is caused by injury or disease outside the nervous system.

If you have experienced chronic low back pain and have never tried acupuncture, this study suggests you have a very good chance at finding relief. Call Dr. Horan today for an analysis of your pain condition to see if acupuncture is right for you.

Source: *The Clinical Journal of Pain*, 2001;17(4):296-305



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MERCURY IN THE AIR: *A Political Update*

Fifteen state attorneys general, working with a coalition of environmental groups were successful in convincing the United States Court of Appeals to block the Bush administration's proposed rollback of Clinton-era mercury pollution controls. If the administration's "Clean Air Initiative" were allowed to go through, over 1,100 coal-fired power plants across the nation will be allowed a 7-fold increase in mercury emissions over the next 15 years. 20,000 aging power plants and other industrial facilities will be rewarded with \$100 's of millions in savings while being allowed to spew millions of tons more toxins into our air, including 50 more tons of mercury.

After working in secret with Vice President Dick Cheney's energy task force, utilities and industries were rewarded for their millions of campaign contribution dollars when the administration issued it's new polluter-friendly rules last October. Unfortunately, the battle for our air is not over, as the administration has planned a vigorous defense of it's policy initiatives.

INSURANCE ANNOUNCEMENT

As of March 29th, Dr. Lori Horan is now a preferred provider for Pacific Source Health Plans. Due to this change, we will be billing for any of Dr. Horan's patients that have naturopathic and/or acupuncture coverage under Pacific Source. If this applies to you, please call the front staff and provide them with your insurance information. We will call to confirm your benefits and will set you up with an insurance account as soon as possible.

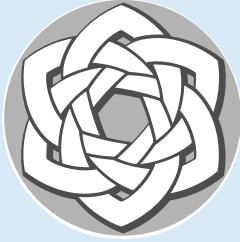
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THE KNEE BONE CONNECTED TO THE SHOULDER BONE?

How Regenerative Therapies Can Heal The Connection.

Noel Peterson, ND

Tom had a good first experience with regenerative injection therapies when he consulted with me on his 45th birthday having knee pain when he ran. He still enjoyed regular rounds of his college game, Lacrosse, and helped coach his daughter's team. He'd been having difficulty demonstrating and playing along and he was only 45 years young! We treated his knees with a round of 4 prolotherapy sessions, and he was able to resume Lacrosse with greater intensity than he had in years. So what does this have to do with his shoulders? Maybe nothing, but read on and you decide if there is a connection.

Tom returned 6 months later to see me for pain and weakness in his right elbow. His legs were feeling great, but in Lacrosse they use a racquet (called a crook) to throw the ball, and this action was causing pain in his right elbow. I found he had the Lacrosse version of lateral epicondylitis, better known as tennis elbow, which is common in golf, baseball, and tennis. His elbow pain would come with activities of daily living, and at times he could not pick up a mug of coffee unless he held his arm just so. We treated his elbow and soon he returned to his favorite game.

That brings us to Tom's 47th birthday and the subject of this article, namely his shoulder. He'd been playing more Lacrosse than he played in years, decades really, and was glad to have the legs to play it well. But with the increased competition came overexertion of his shoulders. His work as a jeweler required him to use his shoulders in a constant state of tension. In his work he often had to hold his arms steady for hours while fabricating a custom piece. Eventually his hands would go numb, and his grip became weak. He'd been getting up from his bench and stretching every half hour, but his shoulders were hurting worse and lately had been keeping him from sleeping. It became hard to lift a coffee mug or raise his arms over his head, and when he did he had no strength to play the game. At rest, both shoulders would lock up when his arms rested on the back of the sofa.

As it turns out, Tom was experiencing a combination of degenerative changes in his shoulders. All those over exertions and minor injuries were conspiring with his body clock to cause osteoarthritis of his shoulders. Specifically, he had glenohumeral ligament instability, supraspinatus calcific tendinosis, and subacromial impingement, most likely due to capsulitis under the coracoacromial ligament. To put it another way, his shoulders were trashed. He'd been offered surgery by the orthopedic doctor covered by his insurance plan, but was not ready to go that route if there was a chance his shoulders could be treated with prolotherapy as successfully as his knees and elbow had been. Since the cost of a course of prolotherapy was a small fraction of the cost of shoulder surgery, and since with prolotherapy he would have no post surgical recovery or rehabilitation time to contend with, we proceeded with a course of treatment. In the words of someone wiser than I, nothing ventured, nothing gained. Eight months later Tom had returned to all his former activities and was pain free. His shoulders were as good as he could ever remember them being. Of course his knees, ankles and elbows were doing just fine as well.

Why did Tom's knees, elbows and shoulders give out, and how did regenerative therapies and injections make the tendons and ligaments around them stronger?

Ligaments, tendons, and joint tissues have poor blood supply and therefore are slow to repair. Tendon and ligament injury initiates an inflammatory reaction which attracts the migration of pluripotential cells called fibroblasts and macrophages to the site of injury. These cells begin the repair process by removing damaged tissue, and then laying down new connective tissue, including fibro-elastic fibrils.

This process continues as long as there are growth factors present to drive the repair. The local action of growth factors is dependent on age, nutritional reserves, immune competency, and hormonal status. All interact to either promote or quench the healing and repair mechanisms. Often the repair process peters out long before the work of restoring normal function has been completed.

Prolotherapy injections induce the new production and release of growth factors in tissues. Fibroblasts again migrate to the site of injury, and the repair process is renewed.

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CORTISOL AND WEIGHT GAIN

Lori Horan, N.D., L.Ac.

Our last newsletter contained an article titled "Just How Tired Are You?," which describes what happens to you when your adrenal reserves are depleted. This article prompted many questions by my patients about the relationship of cortisol to weight gain. It's true—if you are at risk for adrenal fatigue, and you have trouble with weight gain, you may have high cortisol. A high cortisol level could be sabotaging your best weight loss efforts. The Adrenal Stress Index test measures the level of cortisol in your blood and definitively tells us if your adrenals are involved in the reason you have a hard time losing weight.

Our adrenals produce cortisol, otherwise known as a stress hormone. A healthy level of cortisol maintains energy and blood sugar balance, diminishes inflammation, and regulates our immune responses. If we engage in behaviors that promote above-average adrenal output of cortisol for extended periods of time, we are living the life of someone who could be on the road to adrenal fatigue and a weight gain that seems to have a mind of its own.

More Isn't Necessarily Better

When cortisol is too high, it promotes water retention, muscle wasting and weight gain around the middle. High cortisol also blocks the action of insulin, which stores food in our cells for energy. As a consequence, we produce even more insulin, which metabolically predisposes us to adult-onset diabetes. Excess insulin also promotes water retention and fat accumulation.

Stress Affects Your Cortisol Level

Behaviors which set the stage for high cortisol are: skipping meals or dieting,

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