



Lack of Sleep Affects Blood Sugar Insulin and Appetite Faster Than Previously Thought

Sleep polls around the world continue to indicate people of all ages are sleeping less well while Incidence of type 2 diabetes has reached epidemic proportions. For the first time in history, children are being diagnosed with adult onset diabetes. New research strongly suggests the mechanism causing poor sleep and how quickly poor sleep detrimentally affects appetite, blood sugar, insulin, and weight gain.

Bangalore, India, May 14, 2008 --(PR.com)-- Research endocrinologist [Dr. Eve Van Cauter](#) of the University of Chicago Medical Center has demonstrated just how quickly poor sleep impacts the hormone profiles related to appetite, weight gain and diabetes.

During a CBS 60 Minutes® report entitled [The Science of Sleep](#) Van Cauter said, "Sleep deprivation is a new risk factor for diabetes. We have an epidemic of diabetes and Type 2 diabetes is now occurring in children and in adolescents. And you know, adolescents and children are sleep deprived. High schoolers are among the most sleep-deprived individuals in our society, because they have enormous sleep need - nine to ten hours. Yet they sleep less than seven hours per night."

A study published in the March '08 issue of Journal of Adolescent Health by the [University of Texas Health Science Center at Houston](#) based upon initial and follow up interviews of 3,134 eleven to seventeen year olds found 24% met one or more criteria for chronic insomnia as defined by the American Psychiatric Association, and a full 50% of those had one or more chronic health conditions including obesity and adult onset diabetes. This research included the largest number of poll participants to date.

In her study, Van Cauter demonstrated lack of slow-wave or Delta-rhythm sleep affects metabolism and appetite to such an extent that previously healthy 20 year olds' blood sugar and insulin parameters can reach pre-diabetic levels in as little as 4 nights.

Van Cauter also showed the bodies of sleep deprived study participants produced less of the appetite-suppressing hormone called leptin that tells the body it's not hungry. In 2005 she first suggested there was a correlation between less sleep, reduced levels of leptin and weight gain. Now its evident that less than a week of poor sleep quality can result in weight gain and elevated blood sugar.

"Mounting research suggests decreased sleep time may be more hazardous to our health than we imagined. We are now learning that those hazardous effects are true even for young infants," according to [Dr. Elsie Taveras](#) of Harvard Medical School whose study of more than 900 mother-infant pairs is published in April '08 issue of the Archives of Pediatric & Adolescent Medicine.

According to a two year old poll of 1000 caregivers by the National Sleep Foundation & Pampers®, infants and toddlers under 5 years old are getting significantly less sleep, not taking naps and were waking during the night significantly more than they did 20 years ago.



Paul F. Becker the developer of a new technology called Sleep on Command™ says, “You should find the downward trend in sleep quality alarming, particularly in children as young as those included in the Taveras study and Pampers® poll. Their poor sleep quality isn't due to work, peer pressure, relationships or cell phone use, but it very well may be due to electromagnetic pollution or EMP”.

Becker believes the deteriorating trend in sleep quality is due to our constant exposure to high frequency EMP. “There is a world-wide crisis in sleep quality where in my opinion, wireless technologies have insidiously infiltrated every bedroom in every urban area on the planet resulting in crippling effect on circadian rhythm, sleep quality and overall health.”

Becker continued, “In India where we develop and manufacture our device, cell phone towers pop up on the rooftops of residential buildings more often than not. Sleep quality has deteriorated remarkably in the last decade and diabetes has reached epidemic proportions as well. Absolutely no one is making the connection between poor sleep quality and the wireless revolution that has occurred during the passed two decades. Dr. Robert O. Becker was alarmed over EMF from power frequency sources back in the 1970's and 80's. This is different, its harder to identify and its particularly insidious, detrimentally affecting us anytime we're inside of the cellular/wireless grid.”

A study completed in November '07 by Wayne State University's [Dr. Bengt Arnetz](#), Uppsala University, the prestigious Karolinska Institute of Sweden and funded by the telecommunications industry themselves through the Mobile Manufacturers Forum, proved exposure to a cellular handset signal for 30 minutes prior to bedtime delayed deep sleep onset by 20 minutes or more, and reduced the total amount of time spent in stage 4 sleep, the deepest and most critical phase of sleep. The study was placebo controlled and participants didn't know if or when they were being exposed.

Because well-rested healthy adults are playing with only 80-100 minutes of deep Delta-rhythm stage 4 sleep per night to begin with, it suddenly becomes evident that even the 20-minute delay is a big deal, especially on a nightly basis.

Although Becker's device received patent protection in 2003 and is the only one of its kind, the [University of Lubeck](#), Germany and the [University of Wisconsin](#) proved just last year that pulsed signals in the very same ultra-low-frequency band enhanced both Delta-rhythm sleep and memory.

Becker concluded, “We have proven since 2001 in better than 90% of several thousand clients that neither contact electrodes nor high density magnetic fields as used in these studies are necessary or preferable. Our unique, compact and portable device relies on a hockey puck sized electromagnet that is slipped between the mattress and box spring. Its sleep programming utilizes a relatively low-amplitude pulsed magnetic field in the Delta-rhythm frequency band that is effectively broadcast through your mattress. In the morning it gradually shifts its frequency to a low-Beta-rhythm alert state to assist user in waking. Clients not only sleep better but gain tremendous amounts of strength and stamina.” Becker just released his 4th version of the digital device now with 4 individual sleep programs.

Sleep on Command™ is EMP's anti-thesis. Where EMP's high frequencies continually “tune” us toward



mid Beta-wave stress states that are completely incompatible with sleep, Becker's device effortlessly guides the user toward the Delta-rhythm frequency band during the night by simply “tuning-down” and disengaging the over-active mind.

Hallmarks of the product include both falling asleep and staying asleep, increased strength, stamina and energy, enhanced blood oxygen and improved mental acuity. The company is currently engaged in an athletic performance enhancement (ergogenic) study whose results can be monitored via the customer feedback link on their home page. Results are exceeding those expected by the Company, even surpassing the effects of illegal anabolic steroids and banned athletic performance enhancing substances.

About [EarthPulse™ Technologies](#):

EarthPulse™ Technologies, LLC is a privately held biotechnology and life sciences company specializing in the field of sleep and physical & mental performance enhancement. Clients range from 16 year old top ranked Girls Junior Tennis players, to men and woman well into their 90's; from professional golfers and world champion swimmers, to UFC champions, WWF wrestlers, world-class power lifters and the military Special Forces. The company develops and manufactures in Bangalore, India and has several thousand satisfied clients in 22 countries.

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Contact Information:

EarthPulse Technologies, LLC
Paul F. Becker, Esq.
+1 772 408 6024
paulbecker@earthpulse.net
www.earthpulsetechnologies.com
Fax:+1 772 539 8437

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