WAKING UP TO A HEALTHIER YOU

By Swathi Rao, PA-C

We have all been there, 1 AM and we know we should be sleeping but the pull of the television, internet, e-mail, kids, job demands take over. Our society even rewards us for poor sleep. Decent slumber is increasingly hard to come by. The average adult sleeps an average of 2 hours less now than a century ago. After all these years, sleep is still a mystery.

Although the purpose of sleep is still unknown, we do know that it is essential for normal functioning. Not surprisingly, lack of sleep causes daytime drowsiness, loss of memory and concentration, increased risk of accidents and depressive symptoms. But chronic lack of good sleep (7-8 hours at a time) has been linked with pre-diabetes, high blood pressure, chronic pain, cardiovascular disease and breast, prostate, and uterine cancers. The International Agency for Research on Cancer has named the "graveyard shift" as a probable carcinogen joining ultraviolet radiation. I can't imagine what a fire fighter's or police officer's schedule with the obligatory 2 AM calls does to the body. Because good sleep is not expected on on-duty days, it is essential during off-duty days.

Sleep Architecture: What is good sleep?

Sleep is an active process and involves every organ in the body. It is highly regulated by the brain. When we sleep we alternate through two stages, REM (rapid eye movement) and NREM (non-rapid eye movement) sleep. We cycle through these stages throughout the night with the REM sleep taking on longer and longer time spans. NREM sleep is "deep sleep or delta wave sleep" and is predominant in the first 2-3 hours of sleep. REM sleep or "dream sleep" is highly active with irregular heart rate, respirations, variable blood pressures, and increased amount of oxygen to the brain. REM sleep dominates during last 2-3 hours of normal sleep. It is this crucial REM sleep that most of us lack. Every individual is different, but an average adult needs 7-8 hours per setting to cycle through all the necessary stages of sleep.

Sleep and Weight Gain

Sleep duration and appetite are also intricately related. Leptin is a hormone that is released by fat cells in the body to signify satiety to the brain and in effect suppress appetite and hunger. An interesting study took young healthy subjects and restricted their sleep to 4 hours for 6 days. There was a marked decrease in leptin concentrations. The study states that hormone levels "were signaling a state of famine" even though the participants were eating and exercising normally. There was a notable increase in hunger for foods with high carbohydrate content. Diabetes testing was done in these individuals and the results showed a decreased tolerance to glucose. The bottom line, the risk of diabetes was increased in healthy people who had less than one week of poor sleep. The metabolic implication for those of us who make poor sleep a constant is eye opening.

Treatment for Sleep Deprivation

The obvious answer to a healthier life is to sleep 7-8 hours/night consistently. A tip for shift workers or on call workers is to limit napping. It can be tempting after a bad night to give into sleepiness and take a nap. This can diminish the ability to fall asleep and stay asleep the next night. This can perpetuate insomnia. The nap trap is the 3 PM nap and then getting 4-5 hours of sleep at night as a constant. This is dangerous cycle that puts the body at risk. If a nap is absolutely necessary, make it short and keep nighttime sleep duration a priority.

There are many treatments available now for sleep issues. Some have been proven very effective and some unfortunately just exacerbate the problem. Look for details on these treatments in the next issue. Until then, remember that a restful night will help your body, mind, and soul.

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