ALIVE!

SWEET SLEEP

TIME IS CENTRAL TO planet Earth. Every facet of this globe is regulated to some degree or other with time. Creation was based on time segments. Separate and unique accomplishments were designed in each sequential day. Heavenly bodies were assigned to direct seasons and periods. Time is valued as it relates to the possibilities it contains and therefore is extremely precious. Most of us receive monetary remuneration of our work in the context of time. Our level of education is largely quantified in relation to how much time we spent in study. We typically assess projects and chores on how much time they require. Even the level of intimacy in our relationships is largely based on time spent with each other.

Rarely do we seem to have enough time. We keep track of days, hours, minutes, and even seconds to maximize time. Our attempts at accomplishing, experiencing, and enjoying everything we need or want often results in time being sacrificed from another aspect of our lives. Sleep is one of those time slots we rob from the most to provide for other areas of life and I hope that after being confronted with the following information, you will agree with me that pillow time is time well spent.

Both scientific research and human experience has revealed that lack of sleep dysregulates how our body functions and has been associated with weight gain, obesity, diabetes, cardiovascular disease, and stress. Take type 2 diabetes, for example, one of the most pervasive diseases in our culture.

Typical risk factors that are associated with the development of type 2 diabetes are: being overweight; physical inactivity; and excess fat in the diet. Apparently, lack of sleep is equally predictive of a diabetes diagnosis.[1] Healthy individuals, who typically slept 8-9 hours a night, subjected themselves to a period of experimental sleep restriction of 4-6 hours a night. The result? Insulin resistance. Insulin resistance is the foundational mechanism responsible for diabetes.

Data from large studies indicates that diabetes increases with too little or too much sleep. Both insulin resistance and type 2 diabetes are associated with how much time we sleep. In those who have diabetes, poor glucose control has also been associated with both short and long sleep durations.

Even in adolescence lack of sleep negatively affects how the body responds to insulin. Six hundred and fifteen adolescents were observed. Getting less than 8 hours of sleep a night was associated with being overweight, increased abdominal fat, and decreased insulin sensitivity.[2]

My fascination with the gut led me to find the following study quite intriguing. Nine normal weight men were studied on two occasions in a lab setting with fixed meal times and exercise schedules. During the study, the men were allowed approximately four hours of sleep for two nights, compared with two nights of eight and a half hours of sleep. The researchers found, after testing stool samples, that merely

two nights of sleep loss altered the composition of the community of microbes in the gut. Certain strains of bacteria increased while others decreased, and a corresponding decrease in insulin sensitivity was experienced as well.[3]

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Shift work messes up the circadian rhythm. This misalignment is said to contribute to health problems including obesity, diabetes, metabolic syndrome, heart disease, mood disorders, cognitive impairment, and accidents. One of the ways our body keeps internal time is by the secretion of certain substances that promote sleep and wakefulness. Melatonin is a chemical we produce which regulates sleep time. Researchers found that when they altered the circadian rhythm by reducing sleep to 5 hours a night and eating when the body should be sleeping, insulin resistance developed.

As a woman in midlife, I realize the precarious nature of sleep for women. Hormonal fluctuations associated with menopause often result in shaky quality of sleep and in turn has been found to increase heart disease. In 256 women, shorter sleep time was associated with increased carotid artery atherosclerosis. In addition, sleeping less than 7 hours per night is related to hypertension.[4]

Sleep deprivation stimulates our fight or flight nervous system. We end up producing more cortisol, a stress hormone, at wrong times of the day, which can in turn lead to difficulty trying to get to sleep. Even a modest sleep loss increases secretion of other substances that promote inflammation.

Sleep loss is also considered a factor in the development of neurodegenerative diseases and has been found to compromise the blood brain barrier in rodents who were forced to experience sleep deprivation. The blood brain barrier is meant to protect the brain and selectively allow certain molecules to enter the brain while keeping other potentially damaging molecules out.[5]

I'm sure I'm not the only one who struggles with trying to fit everything in a day. Frankly, I don't and there are nights when I feel like I must cram more in. Then I remember a friend who shared with me how they wrote the word Trust on their pillow, a reminder that we have the privilege of resting our head, our lives through the night in total trust that the great God of the universe knows us by name, has every detail of our life in His view, and will make good on every promise. Then let's claim the promises and "let them not depart from your eyes–keep sound wisdom and discretion . . . When you lie down, you will not be afraid (or stressed, or anxious); yes, you will lie down and your sleep will be sweet" (Proverbs 3:21, 24).

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