

THE SCIENCE OF SACRIFICING SLEEP

On sleep deprivation and the horror it brings

Whenever the question about the basic needs for human survival arises, air, water and food instantly comes into the mind. There is, however, another crucial factor in our existence that we, human beings fail to consider—sleep.

What actually happens when you get your snooze or don't get it adequately? When we sleep, the body can effectively get into the business of restoring vital biochemical homeostasis or balance. Moreover, while we are oblivious to the outside world while sleeping, the mind is as busy as the body gets during restorative sleep. Why else do you think we dream?

According to **Dr. Eric J. Olson** of the Mayo Clinic, lack of sleep can compromise your immunity. One is more likely to get sick after being exposed to a virus. Sleep also determines how fast you can recover from sickness.

During sleep, the immune system works in fighting infection and inflammation by producing protective proteins called cytokines. This protein is a potent sleep inducer and is the main reason why we feel drowsy whenever we get the flu.

When sleep is lacking, the immune

system produces less white blood cells specifically tumor necrosis factor (TNF) and *interleukin 6* (IL-6). Decreased production of these cytokines causes heart and bone problems as well as insulin resistance. Production of white blood cells known as natural killer cells (NK) is also compromised, rendering us vulnerable to cancer. Antibodies that help fight infections are also optimally formed during sleep.



HEALTHY EVER AFTER
CHESHIRE QUE,
RND, RN, RD

And then it gets worse because sleep deprivation does not only depress the immune system, it damages the heart by clogging up arteries with calcium deposits. This leads to narrowed arteries, decreased blood circulation, high blood pressure, and even death. It can also cause diabetes as lack of sleep impairs the function of the pancreas in insulin production. Have

9 SLEEP DEPRIVATION EFFECTS

- risk of cancer
- memory problem
- obesity
- easily catch cold
- diabetes
- car accident
- hungrier
- heart disease
- early death



you ever wondered why you have been gaining weight despite exercising whenever you are sleep deprived? Hormones that control your appetite go haywire. *Ghrelin* increases your food cravings and appetite as *leptin*, the appetite suppressing hormone decreases.

Apart from a busy lifestyle, stress may be the most common cause for sleep deprivation or lack of quality sleep. Under stress, the adrenal glands release **cortisol**, a stress hormone that keeps you awake. On the other end of the spectrum, lack of tiredness or exhaustion, which is common in this digital era where everything is just one click away, can also cause sleepless-

ness. We are no longer as physically active, plus the blue light emitted from gadgets can disrupt sleeping pattern.

A good seven to eight hours of sleep for the adult population is considered adequate. It must not, however, exceed 10 hours as this might cause sleep disturbance. Teenagers need about nine to 10 hours while younger ones need more than 10 hours.

Environmental factors such as temperature, lighting, noise, room setting, and the likes play a role in promoting quality sleep. Diet also impacts sleep as sugar and caffeine can keep a person alert and awake. There are, however, conditions that should not be ignored. In fact, it must be given immediate medical attention. Sleep apnea or the cessation of breathing for brief periods while sleeping should be addressed by a sleep doctor. This is characterized by loud snoring, halted breathing followed by snorting or choking. If you wake up feeling tired after getting 8 hours of sleep and still feels sleepy during daytime, don't wait for your vital organs to be damaged. Seek the help of a sleep specialist now.

cheshireque@gmail.com
Instagram: @cheshirequerdn

Sleep deprivation does not only depress the immune system. It damages the heart by clogging up arteries with calcium deposits... leading to high blood pressure and even death.