

## The Importance of Sleep

By Robert Jonsen, Chief of Police for the Palo Alto Police Department

As law enforcement professionals, our commitment to serve leads to a near constant disruption of our sleep patterns. Whether due to working long hours, covering night shifts, attending to court appearances, or personal and family commitments, our schedules are both demanding and inconsistent. Most of us do this for decades without significant consideration to the toll this takes on our bodies, nervous system, and general well-being. But after reading, "Why We Sleep" by Matthew Walker, Ph.D., the importance of sleep is clear, and the need to optimize our sleep becomes irrefutable.

Dr. Walker explains that inadequate sleep negatively affects our ability to think clearly, impairs our physical performance, and increases the likelihood of becoming overweight or obese. Nearly two-thirds of adults do not get the recommended eight hours of sleep per night. In law enforcement this problem is exacerbated because our profession certainly does not regularly allow an undisrupted optimal night of sleep. In fact, most people I know in our profession consider it a win if they sleep for just six hours. We have a long-standing mentality to "Get up and go, and sleep when you're dead," but it is imperative that we start thinking about sleep differently.

Dr. Walker's research and message are clear, "less sleep leads to a shorter life." Moreover, one could also argue that less sleep leads to a less enjoyable life by a variety of measures. He states, "Routinely sleeping less than six or seven hours a night demolishes your immune system, more than doubling your risk for cancer." Insufficient sleep is also linked to an increased risk of Alzheimer's disease, and clearly increases the risk of heart attack and stroke. And that is only the beginning!

It is now known that sleep deprivation has a series of negative impacts on performance. Sleep deprivation reduces alertness, diminishes your ability to learn, decreases emotional regulation, and increases impulsivity, all without us even realizing that we are impaired in any way. There are still those of us who think we do just fine with six hours of sleep, but for more than 95% of us the research proves this is not the case. In fact, with less than eight hours of sleep our physical performance, often crucial in our line of work, is reduced to about 70% of our optimal output. And potentially even more serious, we are at increased risk of injury. Research has shown that over the course of a single season, athletes who averaged less than six hours of sleep were injured 60% more often than athletes who regularly slept eight to nine hours per night.

The value of sleep in both physical and mental recovery cannot be over-emphasized. Neuroscientists have established that the brain uses 25% of our energy and processes approximately 90,000 thoughts per day - this is one busy system! And our brains do best with consistent and regular sleep. One specific correlation between sleep and brain health is found in the story of a protein called amyloid beta, which may play a role in the development of Alzheimer's disease. Studies have found that insufficient sleep is associated with an increase in amyloid beta in the brain. In his powerful TED talk, *One More Reason to Get a Good Night's Sleep*, Neuroscientist Jeff Iliffe (Oregon Health & Science University) describes how

the glymphatic system functions in clearing out waste products from the brain, including excess amyloid beta proteins. Dr. Iliffe explains, “The brain is surrounded by cerebral spinal fluid (CSF). Waste is dumped into CSF, which is then transported to the blood. To help this, CSF is pumped along the outside of blood vessels – to clean and penetrate deeper into the brain wherever blood vessels are. However, this action only happens while we sleep. As we sleep the brain cells contract, to open up spaces between them and let the CSF flow more easily.”

For the non-neuroscientists among us, think of it this way - evolution designed us to have eight hours of sleep so that the glymphatic system can complete a cleansing cycle for the brain. Six hours of sleep decreases this cleansing by 25%. Of great concern, there is a correlation between decreased sleep in our country over the past 100 years and a rise in dementia. This correlation alone should encourage us to recognize, prioritize, and value sleep.

In our profession, with frequent mandatory shift work, we have to pay even more attention to our sleep routines. Shift work is well documented to worsen health outcomes, so we have to be proactive in developing a strategy to support ourselves when we are serving our communities.

“Why We Sleep” and related research has demonstrated that a few simple strategies can help you optimize your sleep.

- Try to go to bed at the same time every night.*
- An hour before bed, dim or turn off most of the lights in your house*
- Avoid TV, computers and even phones (these all emit blue light that suppresses our normal melatonin production) for at least one hour before bed, preferably two hours.*
- Set your bedroom temperature between 63 to 66 °*
- Know that alcohol and sleeping medications interfere with our normal restorative sleep patterns, so try to limit alcohol intake before bed and find ways to fall asleep without the use of prescriptions.*