

## ***Examining the relationship between sleep & Alzheimer's***

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There's nothing a good night's sleep can't solve. Many of us have heard this old adage and may have found that it has applied to our own lives. A good night's sleep is easy to take for granted, but so precious when in limited supply. From sleep-deprived parents to people who work overnight shifts and constantly bounce back and forth between day and night schedules, many of us are not getting a good chance for restful sleep. And unfortunately, this greatly impacts our health and well-being. This month, we're examining the relationship between sleep deprivation and Alzheimer's disease.

### **\*Poor sleep quality (how well you sleep) is linked to higher risk of Alzheimer's disease.**

A recent study completed at Washington University in St. Louis published *Reduced non-rapid eye movement sleep is associated with tau pathology in early Alzheimer's disease*, examining the relationship between sleep quality and risk of Alzheimer's disease and cognitive decline. In this study, researchers examined over one hundred people 60 years or older and monitored their sleep patterns over the course of a week. They measured common markers for Alzheimer's disease, such as amyloid beta and tau protein in the brain, and cerebrospinal fluid. Their findings showed that decreased *quality* of sleep produced more tau protein in the brain. In other words, the people who did not enter into 'deep sleep' were more at risk of developing Alzheimer's disease. Although many of the participants had high quantity of sleep, they did not have high quality of sleep, resulting in poorer outcomes.

### **\*Sleep quantity (how many hours you sleep) matters too.**

*β-Amyloid accumulation in the human brain after one night of sleep deprivation*, a recent study published in the National Academy of Science journal, found that there was a direct connection between sleep deprivation and a higher amount of beta-amyloid protein in the brain. Although a small sample size, study participants who had sleep deprivation (remaining awake for at least 31 hours) had higher amounts of beta-amyloid plaques which is linked to Alzheimer's disease and cognitive decline.

### **\*Caregivers of people living with Alzheimer's and related dementia often report lack of sleep and not feeling rested.**

Stress is closely intertwined with physical health, emotional/mental health, and sleep routines. As a caregiver, burden and depression in the caregiving role can disrupt these delicate balances in well-being and health. When I begin working with caregivers, I initially ask them how well they are sleeping and if they feel rested. Those two metrics are not

mutually exclusive, and can be a great indicator if respite services like home care or adult day care need to be utilized to help support the caregiver.

**\*People living with Alzheimer's disease and related dementia often have maladaptive sleep cycles.**

Everything about Alzheimer's disease and related dementia makes it challenging for a person to continue their regular routine. The lack of initiation in doing activities or tasks throughout the day often leads to sleeping too much or sleeping throughout the daytime hours and being awake at night when everyone else is trying to sleep. I often meet with clients who tell me that their loved one sleeps upwards of 18-20 hours a day. This is really the worst possible schedule for a person living with Alzheimer's or dementia – they need consistent routine, exercise, activity, and socialization for their brain to function as best as possible. However, it's so challenging when the routine has already been disrupted. For instance, I have many caregiver clients who take the opportunity to nap throughout the day while their loved one is napping, in order to stay up with them throughout the night when there are increased behavioral symptoms. Although prioritizing routine and activity is an investment for caregivers, especially in the beginning, the long-term outcomes should hopefully be better for both caregiver and person living with the disease.

*Effingham Area Alzheimer's Awareness (EAAA) is a volunteer-run, not-for-profit organization founded to provide education and support to all families, caregivers, and people with Alzheimer's disease and related dementia in Effingham County and the surrounding area. For more information about Effingham Area Alzheimer's Awareness, check out their website at [www.effinghamalz.org](http://www.effinghamalz.org). If you are a caregiver & have specific questions or situations you would like information on, please feel free to call Shannon Nosbisch at 217-663-0010 or Amy Sobrino at 618-363-8372.*