#### **Dementia Journal**

### **SLEEP APNEA MASKING AS DEMENTIA**

The psychologist who had tested my husband, Ulf, looked straight at me and said, "I hope you're affairs are in order because Ulf probably has dementia." His physician had referred him because of symptoms of depression so this diagnosis was totally unexpected. I knew very little about dementia and did not see it coming because the onset was so gradual.

Unaware of the adaptive skills he was developing, Ulf was able to deflect these pauses in his cognition. In spite of daily challenges, he continued to present himself well, even handling his business. I've learned that when we are challenged in maintaining our daily living pattern, it becomes difficult to discern the point where abilities cease and adaptation begins.

Ulf was educated in both the US and Sweden and is a graduate of the University of California. We met in San Francisco where I was employed at Children's Hospital Child Development Center. Having worked professionally with hundreds of children labeled "less than perfect," I learned that labels limit our perception and experience of that person. This can further isolate someone who is already struggling with feeling separate from others. They had also forgotten how to laugh. So my instinct was to bring a sense of lightness and creative expression to our interaction. Little did I know how useful this experience would be to me years later.

After the dementia diagnosis, I became more keenly aware of any signs in Ulf's behavior that pointed to what seemed to be an inevitable and irreversible destination.

Four months later, Ulf began acting out his dreams by kicking in his sleep. I would wake him up and ask what was happening and he would mumble, "Some animal is trying to bite me!" We later learned he was not far from wrong. Something was metaphorically biting him. I searched the Internet and discovered he was acting out his dreams as a result of coming out of dream paralysis. Some sites suggested Obstructive Sleep Apnea might be the cause, so I located an OSA site. I read that the common symptoms were being overweight and snoring. This did not describe Ulf who was tall and thin and rarely snored. However, he would occasionally gasp for breath while sleeping and had daytime sleepiness plus the mild depression. These symptoms pointed to the possibility that Ulf might have sleep apnea. I also learned a diagnosis is determined by a sleep study.

On an impulse, I called a local University to inquire if they had a sleep lab. It so happened they not only had a sleep lab, they were currently engaged in a study with Stanford University correlating Sleep Apnea and Diminished Neurological Capacity. This was among the first studies designed to link these disorders. After a consultation, they accepted Ulf into their program and set up appointments for a sleep study and neurological testing. The test results revealed that Ulf had significant sleep apnea (OSA), and was given a CPAP machine that forced air into his lungs as he slept.

Ulf gradually responded to this treatment and his cognition seemed to stabilize. We were cautiously optimistic. However, an MRI scan revealed considerable damage to his brain due to chronic cerebral ischemic changes—silent strokes—over the years. A neurologist said it was the result of the nightly loss of oxygen due to OSA and the core cause of his dementia symptoms. We were presented with yet another unfamiliar diagnosis.

At first it was difficult for me to absorb so much information but looking back at it now, it only seems logical. After all, we are talking about deprivation of oxygen to the brain! What else would we expect when starving the brain of its most vital food every night. Every cell of our body is affected. After traversing this diagnostic trail, I'm still surprised it is not commonly mentioned in medical discourse, especially since the diagnosis of dementia is increasing.

In doing research on sleep medicine, I came across several specialists in the field who wrote in the Addendum of my book.

# Dr. Don Curran, Psychiatrist and Sleep Medicine Specialist. Dr. Curran saw Ulf as a patient and took him off anti-depressants, saying, he's getting the medicine he needs--oxygen! This is part of Dr. Curran's segment:

There is much information on sleep that has not come into the medical mainstream. The definition of sleep apnea is interrupted breathing during sleep. In interrupted breathing, there is usually an obstruction of the airway between the nose and the lungs that causes air to not get into the lungs and up to the brain and other organs. If this occurs, this person will have significant problems with reduced capacity to remember and make decisions. It also can result in cognitive disorders such as dementia symptoms that Ulf experienced.

## Dr. Steven Park, author of Sleep Interrupted, has a website: <a href="https://www.doctorstevenpark.com">www.doctorstevenpark.com</a>. This segment was published in the New York Times in response to an article on the subject.

There are many studies that show how dangerous obstructive sleep apnea is on the brain. One recent study showed lower brain tissue density in areas that control memory, executive function, autonomic control, and breathing. CT studies show a much higher rate of lacunar infarcts in people with untreated obstructive sleep apnea. Others show diminished brain function and metabolism in many critical parts of the brain. A rat study showed that chronic hypoxia leads to beta amyloid plaque buildup in the brain. Numerous studies show that sleep apnea patients have increased levels of inflammatory markers, including CRP, IL2, IL6, TNF, just to name a few. Blood is markedly thicker in sleep apnea—as a result, blood can stagnate in small vessels, leading to microscopic strokes.

Sleep apnea is such a common problem, that if you have early dementia, it just makes sense to screen for obstructive sleep apnea. Hypoxia and brain tissue injury is a likely reason for amyloid plaque buildup. It's surprising that Alzheimer's researchers and sleep apnea researchers aren't talking to each other.

### Dr. Mack Jones, a neurologist, is author of the book, Deadly Sleep and wrote this segment:

I am a retired clinical neurologist and I have Obstructive Sleep Apnea that I discovered in 2001. After a slow, but successful recovery, I wrote "Deadly Sleep," a book about sleep apnea.

Aside from the long list of known complications of Obstructive Sleep Apnea (OSA), ie, obesity, diabetes, high blood pressure, heart attack, stroke, depression, ADHD, there is mounting evidence that OSA may contribute to Alzheimer's Disease. Hundreds of apneas while asleep, causing low blood oxygen (hypoxemia) over decades, gradually destroys the brain. The bottom line: Have a sleep test and prevent or potentially reverse Pandora's box of diseases, not the least of which may be Alzheimer's Disease.

One of the necessities in course correcting a dementia diagnosis linked to sleep apnea is early detection. The simple fact is these tests and treatments can be confusing when cognition begins to fail. An oral device custom fitted by a dentist and worn at night was effective for Ulf. Hopefully, sleep studies will become the norm for preventative medicine since sleep disturbances can be so devastating to our health. The sleep apnea treatment slowed Ulf's decline for several years, but the damage to his brain was irreversible. As a result of a reaction to a medication Ulf ended up in ER, got a hospital infection and passed away two weeks later on his birthday, six years after his initial diagnosis of dementia.

In this article, I have focused on diagnosis. However, my book, written during what would become our last year together, primarily chronicles a journey that was filled with many precious moments. In many ways, Ulf became my teacher.

Ulf and I shared an interest in exploring new ways of seeing the world, both inwardly and outwardly. We saw life as a classroom that presented opportunities to dissolve fear and open to love, including the concept of welcoming the present moment. This was very fortuitous because as Ulf's memory faded and he entered his own 'present moments', he would smile and say, "I'm not the person I use to be and who cares!" Ulf's gradual acceptance of this new way of perceiving himself opened him to many touching and often humorous moments. Perhaps because of my work with children, it seemed natural for me to join Ulf in his new world. There was a sense of innocence about him that was spontaneous but not childlike. He spoke 'with' his teddy bear that had the word LOVE on his shirt. Time was relative, so on our last New Year's Eve, when I tried to explain time moving forward, Ulf took my hand, looked deep into my eyes and said, "My being here with you is the only time there is." I wrote about these vignettes in a blog that was read by a publisher and later became my book, Our Timeless Year~~~Miracles of Love Lighten the Clouds of Dementia. www.ourtimelessyear.com



There was no roadmap for me on this journey. The vital work all of you are doing is so necessary in paving the road and guiding the way for others on similar paths.