

## Tired of Being Tired

Western medicine keeps people alive and awake.

When it tries to make us sleep, it becomes useless.

As an insomniac, I wanted to know why.

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## Contents

Paradoxical Insomniac in Arizona	3
Prevalence of Insomnia	3
Sleeplessness is a Global Problem	4
Pulmonologist's Three P's	5
Why Sleeping Pills Do Not Work?	8
Fifty-eight Million Prescriptions	10
How Is Sleep Measured?	11
Sleep Deprivation Costs Billions	12
Meeting a Sleep Therapist	13
Hyperaroused People	15
I Have to Stop Pushing	16
Bibliography	18

I am tired. I'm fed up. I force myself to move on. That's how I would describe going through the motions of a day after a sleepless night. I know those days and I know those nights. I've spent many of them in the past 20 years. But never before have I spent such a day in the middle of a desert in Arizona, and yet here I stand.

The sun is too bright but I take a little walk to calm myself as I am nervous to meet Dr. Rubin Naiman, an assistant professor of alternative medicine at the University of Arizona in Tucson. He is the founder of the famous Canyon Ranch Resort sleep clinic, which is the first sleep clinic outside of a hospital in the U.S. He is a psychologist, yoga instructor and author of several books on sleep. He has healed thousands of sleep deprived people. Today he's going to meet me. I am about to enter his reception room in the town of Tubac, 40 miles outside of Tucson.

I moved to the U.S. a couple of months ago from Finland and decided to face my problem: I've lost my ability to sleep. Kind of. At least, that is what I think. Academics call this type of condition paradoxical insomnia, and it is thought to be most common in young and middle-aged adults like myself. The American Academy of Sleep Medicine defines it as "a complaint of severe insomnia occurs even though there is no objective evidence of a sleep disturbance."<sup>1</sup> There is nothing wrong with me (at least not that I know of) – I just lose my sleep whenever I am stressed or something out of ordinary occurs. And that is always.

For a long time, I believed that sleeping problems were very Finnish problems. The National Organization of Health and Welfare in my home country of Finland estimates that up to 9.2 percent of working-age Finns suffer from chronic insomnia and up to 45 percent have occasional insomnia-related symptoms.<sup>2</sup>

By definition, insomnia means that a person has a difficulty falling asleep or staying asleep. It is

classified as "chronic" if it occurs at least three nights a week and lasts at least three months.<sup>3</sup> In my case, it has lasted years.

There is no clear reason why that many Finns are such bad sleepers. The amount of sunlight in Northern Europe might play a role. In the winter, the sun is up for only a few hours a day, whereas in the summer it does not set at all for weeks at a time. That kind of lighting messes up people's circadian rhythms. But then why are people sleep deprived in the U.S. too?

The National Sleep Foundation reports that 44 percent of Americans do not get a "good night's sleep" on a typical work or school night.<sup>4</sup> The U.S. Institute of Medicine estimates that around 50-70 million American adults have sleep or wakefulness disorder.<sup>5</sup> During the sleepless nights, I have felt incredibly alone and hopeless. Yet, I have experienced these feelings with millions – or even billions - of co-sufferers on this planet. I am not sure if this fact is a relief. Indian neurologists outline the prevalence of insomnia in India in *Annals of Indian Academy of Neurology*:

Insomnia is a disorder characterized by inability to sleep or a total lack of sleep, prevalence of which ranges from 10 to 15% among the general population with increased rates seen among older ages, female gender, white population and presence of medical or psychiatric illness.<sup>6</sup>

Insomnia is not just a Western disease of affluence, it is a global problem. You could also make the case that sleeplessness is a global business. We pay top dollar for relaxing massages, spas, and yoga. We devour coffees, energy drinks, smoothies and energy bars to stay awake. There is a wide selection of services, gadgets and products offering us relaxation and rest - or giving us a boost. There are sleep consultants and therapists, mattress salesmen and pillow makers whose target customers are us insomniacs. Arianna Huffington, founder of The Huffington Post, has written a new book called *Sleep Revolution, Transforming Your Life, One Night at a Time*, which is on track to become a best-seller even before it is published in April 2016. In it, Huffington claims that "the big idea" that will shape the year 2016, is sleep.<sup>7</sup>

She could be right, though sleep has been a hot topic already for quite a long time. Amazon

gives more than 48,000 results when searching for books on sleep. The site's health and personal care department offers over 27,000 sleep related products.<sup>8</sup> Sleep is so widely searched for on the internet that it was among the 10 most commonly searched for 'conditions' on WebMD.com, one of the top health and medical news websites in the U.S.<sup>9</sup>

Sleep-related spending increased nearly nine percent between 2008 and 2012, and according to The Fiscal Times, the sleep industry reached a volume of \$32.4 billion in 2012, based on estimations by the health care market analytics company IMS Health.<sup>10</sup>

Imagine if you could just sleep – which costs nothing.

That is just one of the many ironies of sleeplessness. The more we spend on sleep remedies, it seems, the worse we actually do sleep. There was 266 percent increase in the number of health care visits in the U.S. for which a sleep-related diagnosis was recorded between 1999 and 2010.<sup>11</sup>

Yet another paradox about sleeplessness is that it is a vital function and basic intrinsic trait. We shouldn't need doctors, remedies or products for it.

The first sleep expert I met with in the U.S. was Dr. Tisha Wang, a pulmonologist who treats people with sleep disorders at the Ronald Reagan UCLA Medical Center in Westwood, California.

We sat at a cafe on campus at the University of California, Los Angeles and laughed at Wang saying that even doctors won't get enough sleep. Doctor Wang makes two things clear during our conversation.<sup>12</sup> First, her role, and that of other physicians, in treating insomnia is to rule out that there is a physical explanation to the problem, such as sleep apnea, narcolepsia, or restless leg syndrome. Without that, then doctors cannot do much. They can prescribe sleeping pills, but these are only a short-term solution, if a solution at all. Second, there are a lot of tired people out there who want the physicians to solve their problem.

"With my colleagues, we joke that we should start a 'Southern California Sleep and Wellness

Center.’ We would make so much more money than now,” Wang says jokingly.

Many sleepless people are reluctant to accept the fact that doctors may not be able to help them.

People would pay anything for a promise of sleep. While physicians can’t promise us that, they do however have information and advice that is worth repeating.

We often hear that we should get at least seven to nine hours sleep per night to be healthy and functioning. Actually no, we shouldn’t.

“We are born with a certain sleep pattern and with a different need for sleep,” Wang says. “If you look at thousands and thousands of people, those people do better who have seven to nine hours sleep. But it doesn’t mean that it implies to each individual. There are people who function well after just four hours sleep.”

Wang says that the amount of sleep an individual needs can only be found out by – ironically – sleeping. If I could spontaneously fall sleep, how many hours would pass before I woke up and felt functional, she asks. I don’t know the answer. I wish I did.

First, she advises, I should start trying to sleep spontaneously. There are numerous tips to get there. Women’s magazines and health websites offer us numbered lists that we’re all familiar with: ”5 ways to improve your sleep” or ”5 facts about sleep hygiene” or ”5 things that make you sleep” . It is also good to know that:

1. If a person follows a steady circadian rhythm, he or she is likely to have a steady sleep pattern as well. That’s why many insomniacs are advised to restrict their sleep at first so that they will get tired, leading to a healthy routine of sleeping and waking up.<sup>13</sup>

2. Cool bedroom temperatures may facilitate falling asleep. When sleeping, our body temperature falls naturally.<sup>14</sup>

3. Darkness, emulated by using blackout curtains in the bedroom, also helps. A hormone called melatonin reacts to light conditions. When it gets dark, our bodies secrete melatonin

which makes us sleepy. That is why additional melatonin intake does help some to get sleep. The blue light emitted by electronic gadgets is also well-known to disturb sleep. A study at Harvard University recently found that readers of e-books had a lower quality of sleep than those who read a traditional book in bed.<sup>15</sup>

4. It seems almost too obvious to mention avoiding stimulants in the evening, such as coffee, chocolate, soft drinks, non-herbal teas, diet drugs, and some pain medicines. But it might be wise to eat something before going to bed. Also, poor diet and low blood sugar are linked to keeping people awake.<sup>16</sup>

5. The sympathetic nervous system is increased after performing hard labor and heavy exercise, and may prevent one from sleeping. It's not wise to go to bed straight after coming off a work shift or exercise.

However, I can tell you from experience that it's possible to put all these tips into practice and still not be able to sleep.

Wang nods in agreement. "It's a very complex system."

Besides all possible lifestyle and nutrition factors, there are three basic P's that contribute to insomnia: predisposing, precipitating, and perpetuating factors. In other words, genetics, childhood and adult life conditions mess up the sleep, and a neurotic mind takes care of the rest. "In the end, you get conditioned," Wang says.

Many sleep-deprived people will try every "trick" in the books but nothing helps because they have already associated their poor quality of sleep with negativity. Sleep is something they can't get; therefore, it is a problem.

"They have to first uncondition themselves," Wang says. "Undo the condition pattern."

This is why she refers insomniacs to a sleep therapist who does cognitive behavioral therapy (CBT).

"CBT tries to fix the last two of the three P's of sleeplessness even though you are predisposed."

Wang looks straight at me. “You have to train yourself to wind down.”

I have, however, one sure fire way to fall asleep – no matter how conditioned, aroused, or agitated I might be: sleeping pills. Pills do not need to work around my routines or the temperature in my bedroom they just make me fall asleep. And that is their problem. Sleeping pills make us fall asleep - but they do not make us sleep well. Insomnia and sleep deprivation are already serious enough health problems but, in a way, western medicine has only managed to make them worse.

Michael Wincor, associate professor of clinical pharmacy, psychiatry, and the behavioral sciences at the University of Southern California, sat down with me to explain why the sleeping pills currently available on the market still aren't getting better.<sup>17</sup>

He starts his short lecture talking about a hormone called gamma-aminobutyric acid (GABA). GABA is the main inhibitory neurotransmitter in our central nervous system. It reduces neuronal excitability throughout the neuronal system and is directly responsible for the regulation of muscle tone. It is essential in sleep.

Up until the 1970s, sleeping pills were benzodiazepines that contained gamma-aminobutyric acid. They did not give people a “good night’s sleep” but stunned them quickly - and lost their effectiveness in a very short time. People kept increasing their dosages and eventually it stopped working for them, but they could not stop taking the pills either because the withdrawal effects were so severe.

Wincor points out that the study of sleeplessness has a short academic history, as does the study of sleep medicines. It was only in the early 1970s that a small group of scientists interested in sleep started to hold yearly meetings in the U.S. They developed very early sleep disorder diagnostics, which were published in 1979 in the medical journal *SLEEP*. Along with the rise of sleep study, scientists began to examine benzodiazepines more thoroughly. They discovered that some receptors in the brain reacting to benzodiazepines had more to do with sleep while some others



were more involved, for example, in muscle relaxations or anxiety. They set out to create a sleeping pill that would only affect the receptors that made people fall asleep.

They succeeded in creating GABA agonists that mimicked the action of gamma-aminobutyric acid. Agonists – as well as antagonists - are key players in the chemistry of the human body. An agonist acts like another substance and thus stimulates an action.<sup>18</sup> GABA agonists worked in a similar way to the benzodiazepine drugs inside the brain and thereby induced sleepiness, but they didn't have the same side effects. The pharmaceutical industry very soon made their own versions of them, and the drugs all got names that started with the letter Z. Currently, modern prescription sleeping pills are still referred to within the industry as "z-drugs," although American consumers know them by their market names like Ambien, Lunesta, and Sonata.

It seems Big Pharma succeeded in its mission to bring sleep to the masses. Fifty-eight million prescriptions were issued in 2012, up 10 percent from 2007, The Wall Street Journal reported in May 2013.<sup>19</sup> And yet, the chemical structure of America's best-known sleeping pills is the same as it is in the old z-drugs of the 1970s. The GABA agonists are still the most used sleeping pills, says Wincor. "They are not perfect," he says, then emphasizes that "there are no perfect sleeping pills."

Those of us who have used them – and there are a lot of us – know that they are *far* from perfect. No matter how "new generation" they claimed to be, they do have side effects; nausea and dizziness are common, among others. If taken regularly, they lose effectiveness. Some researchers suggest there's a link between the use of z-drugs and some cancers. Other studies have shown that some people sleepwalk after taking z-drugs, and some people have reported driving without being aware of it.<sup>20</sup> They also make us forget things. When getting involved in the receptors that make us fall asleep, they also seem to get involved in some receptors that work on our memory. Sleeping pills increase a risk of amnesia; how big that risk is, we don't yet know, says Wincor.

The Z-drugs have only been used since the 1970s. There are no long-term studies on the

correlation between sleeping pills and amnesia, at least not yet.

Wincor, a pioneer in sleep research in the U.S, says that no pills can produce what is essential in "good" sleep – that is rapid eye movement, better known as REM, sleep. This is a unique period of sleep when the eyes are moving rapidly, the muscle tone is completely released, and he or she is likely to dream. It takes us usually about 70 to 90 minutes after falling asleep to reach this stage. Sleep has different stages, and comes in cycles.<sup>21</sup>

The REM sleep is still mostly a mystery to scientists, Wincor notes. He studied to be a biologist but soon became interested in the interplay between biology and psychology. Sleep is all about this interplay. The origins of sleep are inside the brain and in the mind, he says. Unfortunately scientists cannot see into the human mind. They must rely on measurements taken on the surface of the brain.

Sleep is mainly measured by differences in brain waves – with the help of an electroencephalogram (EEG) - and by monitoring muscle tone and eye movements. Four types of brain wave patterns have been differentiated and named with the Greek alphabet. Wincor and the National Institute of Neurological Disorders and Stroke<sup>22</sup> helped me to understand these patterns.

Our brains produce both Alpha and Beta waves when we are awake. Alpha waves are slower than Beta waves. They take over when we are awake but relaxed, such as when we are daydreaming or dozing off. The Beta waves are the normal daytime waves that are highest in frequency and lowest in amplitude. This means they are fast but not very powerful and reflect the many motor, cognitive, and sensory tasks we process when we are active.

The actual sleep brain waves are called Theta and Delta. Theta waves happen when we gradually and subtly fall asleep. During the Theta waves, we enter stages one and two of light sleep.

Sleeping pills can guarantee only light sleep, meaning they can actually deprive users of the deep sleep that people really need. In looking at my own issues, I suppose I am typically getting too little

deep sleep. My impression of having hardly slept at all for years probably means that I have slept, but much of it has been Theta waves and stage 1 or 2 sleep. Scientists have noted that when a person wakes up during light sleep, he or she usually does not recall having slept at all.

The most important sleep brain wave type is Delta, which includes the most important stages of sleep, three and four. Delta sleep is our deepest sleep. Only after we have reached Delta waves can we reach REM sleep.

”We need deep sleep,” Wincor states. REM sleep takes our brains back to the stage similar to being awake and in light sleep but muscle tone is completely relaxed and sleeper can hardly move his or her body. This sleep makes us recover.

Deep sleep and REM sweep away our fatigue. They rejuvenate us a billion times better than any energy drink, pill, massage, or gadget does. Delta or REM sleep cannot be produced with a chemical. It is a miracle in our own body and mind, and as an insomniac, I am irritated that I cannot buy that miracle.

Yet another paradox of sleeplessness is that when we sacrifice our sleep to be more productive at work, we actually become less productive.

Harvard University Medical School found out five years ago exactly how much sleep deprivation costs to companies and the national economy.<sup>23</sup> Researchers at the Department of Health Care Policy gathered a national sample of 7,428 adults over age 18 who were employed health plan subscribers. They then filled out the World Health Organization’s ”Health and Work Performance Questionnaire” and ”Brief Insomnia Questionnaire” as part of the larger American Insomnia Study<sup>24</sup> and were interviewed over the phone.

Approximately 23 percent of the interviewees were identified as those who suffered from “broadly defined insomnia” and were differentiated from normal sleepers. Then researchers studied

the associations between insomnia and work performance scores, and concluded that insomnia did not directly cause absences at work but it contributed significantly to lost work performance.

The researchers calculated the amount of lost work performance at an individual level over the course of a year. They estimated that insomniacs lose approximately 7.8 work days a year because of their reduced ability to work due to sleeplessness. Translated into a dollar amount, this was on average \$2.28 million per individual worker and \$63.2 billion when applied to the total U.S. workforce. No wonder that corporations like Google and Goldman Sachs now provide their workers with sleep consultancy. <sup>25</sup> Sleep makes people prosper – and keeps us alive. According to the Centers for Disease Control and Prevention's Morbidity and Mortality Report in March 2011, "drowsy driving, one of the most lethal consequences of inadequate sleep, has been responsible for an estimated 1,550 fatalities and 40,000 nonfatal injuries annually in the United States."<sup>26</sup>

But back to me...Here I am in the Arizona desert, about to meet a psychologist and a sleep expert as if it's my first time seeking help when in fact I already know plenty about insomnia. I have gone through treatment for it. I did not tell Dr. Wang, but I have even tried Cognitive Behavioral Therapy. It surely works for many, but it did not work for me. I felt like Pavlov's Dog, and I am not a dog. So what am I to ask Dr. Naiman?

Rubin Naiman has grey hair and incredibly blue eyes. His gaze is gentle and striking. I know his background from reading his writings<sup>27</sup> and checking his website.<sup>28</sup> He moved to Arizona from the East Coast, founded the sleep clinic of Canyon Ranch Resort and met the famous physician Andrew Weil, a pioneer in holistic health and integrative medicine.<sup>29</sup>

I sit down on the sofa in Naiman's home office. It has the look of a typical therapist's room with an exceptional view of the desert and the mountains on the edge of it. I tell him about myself and my project. It seems that Dr. Naiman is used to dealing with insomniacs who are so desperate to

find a cure, they end up crying on his couch. By the time I'm done talking, the sun has gone down outside and I feel so relieved that I burst into tears. He hands me a handkerchief.

“You do some web research and get literally millions of results on insomnia. Most of them define sleep as a bio-medical condition,” Naiman says. I nod. “They look at what is going on in your brain, in your body, in your neuro-transmitters. There is medication. Mattresses.” I know of all these things already. “Sleep is reduced to technical things. I am not saying that this couldn't be helpful, but we lose sight of a fact that sleep is extremely personal experience.”

Naiman does prescribe some conventional sleep medicines – “they are good interventions but aren't doing the trick” - but his approach is broader.<sup>30</sup> He thinks we should stop medicalizing sleep and, instead, really understand sleep.

Naiman has been a contributing writer to The Huffington Post for years. He says, with some amusement, that when he writes a serious piece on why a generic list of sleep tips don't work, it gets buried immediately. But if the editor puts a number on the headline...“5 reasons, 17 things you shouldn't do”... it immediately gets a lot of attention. “Numbers give a feeling that it is highly scientific,” he says. “But it is a mistake to think that we can reduce sleep into science. Science is there to support sleep.”

Naiman says that the most common question he hears is how many hours should I sleep?

“It's like asking how many calories should I eat? Answer is: it depends. It really is the quality of sleep that matters,” he says.

When asked about the natural rhythm of life, Naiman answers simply, “Things wake up and they go to sleep. They wake up and they go to sleep.”

“We think of waking and sleeping as different places, but they are actually continuous,” he says. “There is connectedness. There is continuity in consciousness that we fail to recognize. It goes back to this notion that sleep resides in us, it's default in consciousness and we never really have to go there.”

I begin to get the picture. We do not get sleep. We do not go to sleep.

“These verbs make us think that we are in control of sleep,” Naiman explains, “and that the part of us called I, the waking part of us, controls sleep – and it really doesn’t. The greatest simple challenge of getting to sleep in the western world is that we have to make it happen.”

What Naiman says is obvious. It sounds easy. Sleep is already inside of us, I don’t need to chase it. But still, I cannot find sleep inside of me.

Are all the sleep products, therapies and programs for nothing? No. “Everything you will do to improve your sleep will improve your waking life. Unless there is that hyperarousal,” Dr. Naiman replies.

Hyperarousal? I instantly feel like I can relate to that word.

Hyperaroused people are, in a way, battling against gravity, Naiman says. “If you allow your hand to pull down, can you feel the heaviness of your hand?” he asks me. Yes, I can. “It’s right there, right? You don’t have to make it happen. Gravity pulls us down. Gravity is sleep in the world. We just have to stop being awake, stop pushing.”

Hyperaroused people are pushing all the time. They are like planes that are flying too high – unnecessarily high, describes Naiman. “If we are hyperaroused, we get far away from sleep. To keep sleep close at hand is to keep sleep with you. It does not mean you are sleepy, but you keep quiet and serenity with you.”

Hyperarousal is a known syndrome but it’s not diagnosed. It is a physical condition with symptoms of high EEG, elevated cortisol and reduced melatonin. Cortisol is the human body’s response to stress and inflammation, but if its release is continuous, it becomes harmful. As Naiman puts it, “hyperarousal is a result of a chronic posture toward life.” He says that after doing therapy for years, he has a sense that most hyperaroused people are trying to run from something. It is a “very, very common” syndrome. If it is so common, why didn’t any experts bring it up to me

before?

Maybe I wasn't listening to the right people. No known drug can conjure a hyperactive person from one end of active daytime brain waves to the other of deep sleep waves. I can, however, learn to wind myself down toward Delta waves. As an instructor, Naiman recommends practicing yoga, and there are studies supporting its effectiveness. Very experienced yoga nidra practitioners have even been measured to have Delta waves of deep sleep while being conscious and practicing. Not surprisingly, yoga nidra is often referred to as "yogic sleep."

Mindfulness and meditation are also researched ways to calm down the hyperactive mind.

I have to stop pushing. Naiman says it's a question of willingness. Am I willing to let go? Am I willing to encounter night?

"The best sleeping medication, in my opinion, is night," he says. "You can profoundly correct people's circadian rhythms and their sleep by taking them out camping for a week with no electronic light," he says, sounding decidedly more pragmatic and less philosophical.

Then he advises me to fall in love with sleep. "Falling in love with sleep is really important. Remembering how delicious it is, how sensual it is. When we think of sleep as being unconscious, we think it's not an experience. It is like diving into a beautiful lake of warm, dark, sweet water. It carries you."

We are finished with our meeting now, and I am standing in the parking lot outside his house. It's dark. I cannot see the desert or the mountains on the edge of it.

Naiman believes that insomnia is a physical, psychological, and spiritual issue. I opposed the spiritual aspect, as I am not religious, but he explained that even if I did not have an image of God inside of me, I do have an inner conception of the universe. What is it like when I see the desert and

the mountains in the daylight -- are they good or bad? How about in the darkness of the night, are they good or bad for me? Am I ready to lean on my universe when I fall asleep?

When I think about how to answer those questions, I almost unconsciously begin running my fingers over some scratches on my elbow that I got from accidentally brushing against a small desert cactus earlier the day. The universe is unpredictable, but I guess I can count on it.

In my everyday sleepless life, I am constantly flying high and at a breakneck speed. I have my work and my studies. I am responding to my child's needs, to my family's needs. I have my hobbies and my friends and sometimes even late nights out. I am keeping myself up with such a determination that it is not easy to land and let go when I go to bed. If I let go, I might not be able to get up again at all. That is what I fear. That is the paradoxical insomnia of young and middle-aged adults.

With all of this on my mind, I drive to my motel across the dark desert. It is time to go to bed. I hear Dr. Naiman's words. We never sleep alone. We sleep with the world. Right now on Planet Earth, there are approximately two billion people asleep.



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