

An Essay on Sleep Disorder

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Abstract

This document is an informal comment on sleep disorder. It's written for the curious few who wonder what true insomnia is (when they don't have it.) I have not gone into exploring the circadian rhythm or the mechanisms of the human body which require and facilitate sleep.

1 Dyssomnia

Sleep disorders are broadly classified as Dyssomnia. There are possibly 30 known disorders under this classification. The most common being Insomnia, Hypersomnia, Narcolepsy, Jetlag, Obstructive Sleep Apnoea (a.k.a OSA), Delayed sleep phase and Advanced sleep phase disorders.

2 Insomnia

This is an essay on sleep **disorders** and not necessarily sleep or biorhythms. Drinking loads of coffee, Red Bull, Black Dog, or consuming caffeinated mint, or trying to stay awake for days together are effective ways to break your body's sleep machinery. The trouble is no one knows how the machinery works, to put it back in order. If you are right now trying to stay awake late nights, I advise you to turn off the lights, stop reading this essay and sleep.

If you didn't believe that there can be sleep disorders (well belief is everything), time to believe that some people can have such a disorder. The only good thing about this is, out of (unnecessary) habit, these people **can** stay awake for several days at a time. I advise you not to emulate them (nor even desire so). This is a curse from Hypnos and not worth desiring as a gift. There are some I know who can sleep at will (and wake up too), and that truly is a gift.

If you have ever watched "Star Trek - The Next Generation", there is an episode where Q is banished to be human. He falls asleep and is astounded by this period of "unconsciousness". Sleep, it is believed, is the price we pay for our intelligence.

3 The Medics

If you have ever been unable to sleep for continuous days, You have probably been to a general physician, a psychiatrist, a psychologist or a neurologist. Today's journals which they read, talk about Cognitive Behavioural Therapy (a.k.a CBT). The ideal treatment is to put you on **short term** sleep medication and solve your problem in a more behavioural way. There are many for whom this works. And then, there are those for whom it does not. Many would advise daily exercise, yoga and other methods that have a behavioural component. The only trouble with these methods is that many of us find it difficult to change a habit. Habit formation and change occurs over very long durations and requires tremendous will (fear not, we all have this will).

to list what you would be suggested:

1. Light Music, Relaxation Music
2. Dedicated Room and environment for Sleep

3. Warm Milk which contains natural sedative (tryptophan)
4. Controlled wake up time and sleeping times
5. Heavy afternoon meals, light evening meals 3 hours prior to sleep
6. Acupuncture and Herbal remedies (I have not met someone who has tried these.)

All of the above have a behavioural component associated and necessitate some sort of environmental change. Remember, something needs to be done before you are diagnosed as a chronic insomniac.

All known sleep medication and techniques are either chemically or psychologically addictive and can make you dependent on them. Starting to use one of them is a harsh decision, because stopping them is going to be more than an ordinary task.

4 The Works

After a certain period the human mind tries to lock on to a habit and use cognitive ability for other purposes. After most of us reach adulthood, we normally rid ourselves of the ability to learn a new language, stop growth and progress differently. The trouble is there are very few mammals with learning and development cycles (in terms of time) close to us. (relative fact: Over the past 150,000 years there is no known animal who can match our cognitive capabilities and we only have a recollection of about 3000 years of our history.)

What is known about the human rhythm is probably only symptoms of the biorhythm and not the true mechanism. Melatonin and Serotonin levels in our blood is known to affect both sleep and mood. In theory, the brain regulates the levels by generation and degeneration (a.k.a. consumption a.k.a. re-uptake) of these [neural] receptors. These receptors also affect mood. The trouble is, the human body is a *complex* (used in the context of system modelling) system. Therefore multiple cycles regulated simultaneously make it confusing to study either mood or emotion or drive or sleep as individual systems. To put this in perspective, a single living cell is exponentially more complex than any machine we humans have ever modelled accurately.

The human body clock like many mammals, has been regulated by solar (day-and-night) cycles. However, the solar cycles are themselves unstable due to precession (the tilting of the earth's axis). Hence most mammalian body cycles are approximated to this solar cycle (including the seasonal cycles).

Quoting from Wikipedia: The Circadian "clock" in mammals is primarily located in the suprachiasmatic nucleus (SCN), a distinct group of cells located in the hypothalamus. Destruction of the SCN results in the complete absence of a Circadian rhythm. Contributing to this clock are light receptors found in the retina which have a pathway, (called the retinohypothalamic tract), leading to the SCN.

5 The Helpful Souls

Get family, if you love pets, get them near you. Taking a Dog for a walk is a better exercise than walking alone and guess what, Dogs can even share your room if they're well trained. They have very strong ways of controlling their sleep cycles and you'll easily learn from them. You wouldn't want to keep your lights on when your dog is lying beside you and trying to sleep.

6 The Aftermath

As I type this document, I am feeling sleepy under no medication and I am enjoying my drowsiness. You never know the gifts you have until you misplace them sometimes. Regaining that which is lost is considered as far greater than any treasure you can possess.

The fine print

This essay is solely about my view of insomnia. I am no authority on the subject nor a medical practitioner. Take this essay only as an opinion or a comment on the subject.