

Neuroscience for Memory and Sleep

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The real motivation and reasons why we must sleep at least 6 - 7 hours.

Above all else there are two main reasons why we sleep.

The first one is the memory consolidation is using those nightly hours that the information in our short term memory gets passed onto our long term memory, memory and sleep go hand in hand.

If you have troubles with your memory. Well the first place to check is here.

Do you sleep enough now?

The second reason why we sleep has only been discovered in 2013 namely that our brain has its own cleaning system that activates when we sleep. We basically remove the toxic waste that builds up during the day.

One of the things that filters out is the better amyloid plaque which build up leads to Alzheimer's disease.

So, at night what we observe happening is that our brain kind of shrinks and leaves more space between the neurons. So, the toxins can more easily be flushed out.

And this turns out it's vital.

So, what happens if we don't do that daily maintenance tasks.

In other words what happens when we don't sleep enough.

Where do I start?

I mean blood pressure. The increased blood pressure leads to a 200 percent increase in cardiovascular diseases in adults over 45 who sleep less than six hours a night.

Lack of sleep also causes a Pre - diabetic state of hyperglycemia.

There's also a direct link between lack of sleep and weight gain not simply left in the satiety signaling hormone decreases and we end up eating too much.

Next up is our immune system.

When we feel sick our first instinct is to go to bed.

Right.

Because yes sleeping restores our body and lack of sleep leaves us vulnerable to disease.

We're more likely to catch colds, so short sleep also affects our cancer fighting immune cells and more specifically we see an increase in breast prostate and colon cancer in individuals who don't sleep enough.

Alzheimer's disease already said that the amyloid plaque builds up and ends up killing the surrounding cells.

So, the damage is then, you can't sleep yourselves back to health on top of that.

It's a vicious circle because this amyloid plaque attacks our deep sleep regions first.

So less sleep leads to more plaque which leads to less sleep which leads to even more amyloid plaque and so on.

Summarize. Well the shorter hours sleep the shorter life.

Lack of sleep also leads to a 60 percent amplification of the amygdala which is basically our brain center for fear and aggression ever felt easily irritated when lacking sleep.

This is why lack of sleep in children is linked to aggression and bullying in adolescence to suicidal thoughts.

We sleep in 90 minutes cycles and we need four to five of these cycles to get all the benefits of a night's sleep.

So why aren't we?

We're in the middle of a sleep loss epidemic seriously eight hours are recommended.

Anything less than seven hours of sleep a night is considered sleep deprivation.

Did you know that humans are the only species that deliberately deprive themselves of sleep for no apparent reason?

It has become associated to weakness or even shame a guilty pleasure at best.

We pride ourselves to be busy all the time and so it almost became a status symbol to be sleep deprived but it's not and we shouldn't, sleep is vital to how we function.

You want to function better:

Start by sleeping enough it's non-negotiable.

For best results go to bed and wake up at the same time every day.

There's nothing tough about not sleeping enough.

It's callous.

It's shortsighted.

It's masochistic.

Oh and of course it slows down our neurogenesis.

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