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Understanding the Basics Associated With Sleep

26 December 2019 | Views | By Ankit Kankar

Not getting enough sleep means that you are poisoning your brain. Sleep is undoubtedly a significant part associated with your routine and every individual is responsible for spending almost one-third of their time sleeping.

Getting quality sleep is almost as important as eating food and drinking water. Without proper sleep, it will be impossible to either maintain or form pathways within your brain, which are responsible for letting you learn as well as create memories. Also, you will find it difficult to concentrate as well as respond quickly. Sleep is crucial for several brain functions, including how your cells are going to communicate with one another. Sleep is one of the important biological processes that every individual requires.

What Is Sleep?

Sleep is a dynamic and complex process, which is responsible for affecting how you function. Defining Sleep is important because people need to understand exactly what sleep is. Both your body as well as the brain can remain active when you are sleeping properly. Sleep can affect all the tissues as well as systems within your body, from your heart, lungs, brain, as well as metabolism and systems like mood, disease resistance, and immune function. Studies have also revealed that sleep deprivation can lead to disorders like diabetes, obesity, depression, cardiovascular diseases, and high blood pressure.

Anatomy Of Sleep

Given below is a list of the brain structures that are associated with sleep.

Hypothalamus- This is a structure, shaped like a peanut, which is responsible for affecting sleep as well as arousal.

Brainstem- The brainstem is responsible for communicating with the hypothalamus and it is capable of controlling the transactions that go on between sleeping and waking up. The brainstem is responsible for including important structures like

the midbrain, medulla, and pons.

Thalamus- The thalamus is responsible for delivering information from your senses to your cerebral cortex. During the several stages of sleep, the thalamus is responsible for becoming quiet, which will help you to block the external world out.

Pineal gland- The pineal gland is located between the two hemispheres of the brain. This gland is responsible for increasing the production of melatonin, which guides you to fall asleep as soon as the lights start going down.

Basal forebrain- This is responsible for promoting both sleep and wakefulness. The cells within your basal forebrain are responsible for releasing adenosine, which helps in supporting the sleep drive.

Amygdala- This structure is shaped like an almond and is responsible for processing emotions. This structure becomes more active during the time of REM sleep.

How Much Sleep Is Required By An Individual?

The need for sleep, as well as sleep patterns, keeps changing as you start aging. You need to know that there are no magic sleep hours, which are going to work for everyone based on their age. Babies sleep for 18 hours, which helps in boosting the growth as well as the development of the brain. School children and teenagers sleep for 10 hours every night. Adults require 7 to 9 hours of sleep. Elderly people prefer taking medications, which are responsible for interfering with sleep patterns.

Conclusion

It is suggested that you get enough sleep every night so that you can function appropriately the following day. Ensure that you are cutting out any substance that can be responsible for sleeplessness.