

Nature of sleep essay



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The nature of sleep remains complicated, and mostly unexplainable. Sleep is necessary for all mammals. Sleep serves the body as energy conservation processes as well as letting the nervous system recuperate. This bodily recuperation process also allows emotional regulation for the body.

The circadian rhythm, also known as the biological clock or circadian clock, regulates the sleep-wake cycle. The circadian clock is located in a group of cells just behind the optic nerve, called the Suprachiasmatic nucleus.

Because the Suprachiasmatic nucleus is located behind the optic nerve, it is extremely sensitive and highly responsive to changes of light externally. The first stage is described as the lightest stage of sleep, when the body is slowly losing responsiveness, but if wakened, does not recall sleeping. The second stage is defined as the beginning of "real sleep."

"During this stage the body's muscle tension, heart rate, respiration and body temperature gradually decreases as the mind becomes more difficult in awakening (Plotnik, Kouyoumdjian, 152.) The third and fourth stage is defined as the rapid eye movement stage, REM sleep. REM sleep is also the stage when the mind dreams. REM sleep helps us remember information and encode the information into our memory better. Typically we spend twenty percent of sleep dreaming. The brain enters this state approximately five or six times a sleep cycle, balancing fifteen to forty five minute intervals of REM sleep, with thirty to ninety minute Non-REM sleep intervals.

Those who are deprived of REM sleep do not show signs of major behavioral or physiological effects though. The theory was presented by Freud, which suggests that dreams are disguised symbols of repressed desires and

anxieties (Huffman, 149). What I find interesting about this theory is how it believes that dreams have a direct relationship with people's wishes.

Unfortunately, most people focus on the "content" of dreams than the "form" of dreaming. This would impact Freud's work because scientists were looking for the meaning, rather than for the source. I find this theory most valuable because if the source is suppressed anxieties and the dreams help your body relieve some of those fears, it is very important to confront such feelings or else one might have a breakdown.

Shift workers may experience major circadian problems due to abnormal sleep schedules. It has been discovered that shift workers are much more susceptible to accidents, due to drowsiness, lousy attitude and overall less alertness. The only way to help shift workers and insomniacs is by installing artificial bright lights in the work place.

Researchers have found that this can help workers be more alert, also improving their performance and job satisfaction (Plotnik, Kouyoumdjian, 151). Jet lag affects many travelers and can be a temporary sleep disorder. The body's circadian rhythm is developed over a period of time and routines. When a person travels through the many time zones, the circadian rhythm is disrupted and can take a few days, and sometimes longer, to adapt to external clock times of new locations. Melatonin is a natural hormone secreted by the pineal gland, located behind the suprachiasmatic nucleus, which increases with darkness, making the mind sleepy, as well as decreases with light. It also is found on the shelves of most stores as a natural supplement that promotes sleep and regulates the circadian rhythms. REM behavioral disorder affects the elderly, in most cases elderly men.

This disorder affects voluntary muscles that do not become paralyzed during REM sleep. Such cases enable sleepers to act out their dreams physically. Patients that are affected by this disorder often times must sleep in separate beds than their partners, when symptoms worsen. It can sometimes be treated, when diagnosed appropriately, with life modifications and medications.