Sleeping and dreaming

Science, Physics

There are four stages of sleep: Stage one shows low-voltage, high-frequency signals on an EEG similar to those produced while awake, though slightly relaxed. There is slow voltage increase with an immediate drop in frequency through development in stages. Stage two is marked by two diverse wave formations called a K complex and a sleep spindle. Stage three is interrupted by an intermittence of delta waves which are great and measured, while stage four is predominantly delta waves. (Pinel, 2007) After a period of interval in stage four, the sleeper returns to an altered stage one; stage one is reformed from the initial stage because subsequent repeats of stage one are obvious by a loss of muscle tone, REM (rapid eye movement), dreams, and an increase in cerebral and autonomic nervous system activity. The balance of sleep is spent broken between the stages. Each cycle through sleep stages last approximately 90 minutes, and as sleep continues, the time spent in stage one is increased with a decrease in time spent in the other three stages. There are five common beliefs about dreaming; these are that: external stimuli can be incorporated into dreams; dreams are very brief; some people do not dream; penile erections are due to dreams that are sexual in nature; and sleep talking and sleepwalking happen during dreams (Pinel, 2007). Two common theories about dreams are the Freudian theory that dreams are repressed desires and Hobson's activation-synthesis theory that dreams are the result of random brain stem circuits actively overwhelming the cerebral cortex (Pinel, 2007). The two common sleep theories that attempt to address the purpose of sleep and sleep habits: recuperation and circadian. Recuperation theory works off the principle that sleep restores the body to a state of and sleep renovates energy levels.

Recuperation theorists believe that the very act of being woken causes one to become tired and sleep deficiency may cause developmental disorders so that we sleep until the body is physiologically sound. Circadian theorists believe that we become tired when it gets dark outside, the function of sleep is to preserve energy, sleep depends on whether one is vulnerable to predators, and sleep is based on an internal timing mechanism. The main difference between recuperation and circadian theories is that circadian theory focuses primarily on when a person sleeps and the circadian sleep cycles, while recuperation theory focuses primarily on why we sleep and the recuperative value of sleep. I cannot promise to one theory over the other, due to the fact that both theories address different characteristics of sleeping. Very little in life is simple and straightforward; things, opportunities, choices, and even biological and physiological functioning are not simply black and white; rather, there are many shades of gray that exist between the two extremes. To say that either theory, both of which establish very logical reasoning, is more correct than the other is to ignore the nature of the complexities of life that cause a person to initially question why does one sleep and when does one sleep. Reference: Stages of Sleep and Dreaming. (2013). Retrieved from http://www. examiner. com/article/stages-of-sleep-and-dreaming Pinel, J. P. J. (2007). Basics of biopsychology. Boston, MA: Allyn and Bacon.