**Introduction**

**Sleep Deprivation**

            �Sleep deprivation.� Almost all Americans are familiar with it. Our society is obsessed with work and intent on keeping busy. Baby boomers and their children, with Day Runners and Palm Pilots, always seem to have full schedules, and keep sleep low on their priority lists. In addition, America is keen on the unique idea of �Open 24 Hours�. Our world lives on the convenience of constant availability at all hours of the night and day. More emphasis is placed on the need to get everything done than on the importance of regular, sufficient amounts of sleep. We live in a fast-paced, high tech world where our prioritizing has made us the most �awake� generation in history.

            An abundance of types of people suffer from sleep deprivation; the problem is not solely confined to a certain profession, age or lifestyle.  For adults, work is a major deterrent from sleep. Those in service professions, such as nursing, medicine, police and fire work irregular shifts and therefore can experience lack of sleep due to their schedules. Factors in daily life, especially stress, can also lead to deprivation from sleep. Varying issues that seem of greater importance than sleep keep us up later and later at night. Perhaps the most common types of people who experience sleep deprivation are students. When a busy student has three essays due, four midterms to prepare for, and work and practice to attend all in a five day week, it is easy to see how sleep is the first �activity� to go. Adolescent Sleep Patterns is a recent publication that looks at students and verifies just how sleep deprived they can be. Mary Carskadon, the author, explains that students may be so tired as a result of early start times for schools. Carskadon notes that every human functions based on their internal circadian clock. The natural sleep patterns established by this clock may be different for teenagers than adults. Teenagers get their best sleep from four to six AM, but often have to be at school by seven o�clock AM. So although teens live in the same �24 Hour� society as adults, they are even more likely to suffer from sleep deprivation due to early mornings and their unique circadian rhythms. (Carksadon)

            What exactly constitutes sleep deprivation? Numbers aside, deprivation can simply be considered any amount of sleep that leaves one feeling unsatisfied in the morning. If one continually wakes up tired, then chances are that they are not getting enough sleep. Generally, adults should receive seven to eight hours of sleep per night. Recent studies have suggested that teenagers need even more than eight hours of sleep; in Adolescent Sleep Patterns, Carskadon said that their ideal number could be closer to nine or 10. (Carksadon)

            While sleep deprivation may be bothersome and leave one cranky in the morning, it can effect one�s health in a variety of manners and magnitudes. A well known impairment of sleep deprivation is the ability to control a car. �Drowsy Driving� is a major issue of concern for the National Sleep Foundation. According to the Foundation and the National Highway Traffic Safety Administration, 100,000 crashes (including 1,550 deaths) annually are the result of drowsy driving. (www.sleepfoundation.org) Many of these drivers are presumed to be young, sleep deprived males. In addition, one�s immune system can be impaired under conditions of sleep deprivation. Without sleep, the number of white blood cells decrease, along with the activity of the red blood cells in the blood stream. This weakens the sleep deprived person�s ability to fight off complex or even standard infections and diseases.

While the aforementioned areas are well known dangers of sleep deprivation, a new area of concern is weight gain due to lack of sleep. An ongoing study from the University of Chicago has shown thus far that subjects getting less than desired amounts of sleep have impaired abilities to break down glucose with insulin. Storage of glucose leads to weight gain and the possibility of obesity. This, along with other obvious issues, shows the many significant effects of sleep deprivation on the human body. (www.abed.com)

While many are well aware of the immediate physical problems that come from sleep deprivation, the psychological problems that can arise are less known. To understand anything about the brain, it is first imperative to have  basic knowledge of general brain anatomy. The brain is divided into various lobes. The Frontal Lobe, including its anterior and posterior portions, is responsible for organization, attention, personality, creativity, cognitive functions, and motor skills. Many movement nerves are located in the motor areas. The Occipital Lobe, in the back of the brain, is where visual images get processed into information. There are two Parietal Lobes situated between the Frontal and Occipital lobes, and together they control visuo-spatial aptitude, the capability to understand the written and spoken word, and sensation. The last lobes are the Temporal Lobes, and are the most well-known to the general public. Together they are most important for short-term memory. The Right Temporal Lobe is responsible for visual memory while the Left is in charge of verbal memory. Lastly, there is the brainstem, which regulates neurological functions, and the cerebellum, which controls balance and coordination. (www.waiting.com/brainanatomy.html)

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