Humans spend about one third of their lives sleeping, however, the amount of time we spend during each sleep stage varies with age. Children spend approximately 60% of their time sleeping, whereas adults spend about 37% of their time sleeping. As we age, the amount of time spent sleeping doesn't change, however, we experience less deep sleep. During sleep, we experience slow-wave and paradoxical or rapid eye movement (REM) sleep. Slow-wave sleep has several stages. As we begin to fall asleep, we go from light sleep (stage 1) to deep sleep (stage 4), which lasts for about 30-45 minutes. After this time, we go back through the same stages of sleep in the same amount of time, but in the reverse order. REM follows, which lasts about 10-15 minutes. We continue to repeat this cycle throughout the duration of our sleep. Slow wave sleep comprises 80% of a mature person's sleep cycle, whereas REM comprises 20%.

Electroencephalograms (EEGs) are used to "see" the brain wave patterns of subjects while they sleep. The Sleep Institute in Wyoming, New Jersey, has patients that suffer from different sleep disorders. When a patient is admitted, their sleep wave patterns are measured using an EEG before the patient is directed to the appropriate sleep psychologist for treatment. Control subjects (people with normal brain wave patterns), at the Institute, are used as a baseline for measuring people with sleep disorders such as Insomnia, Sleep Apnea, Narcolepsy and Restless Leg Syndrome (RLS). The following is an EEG of a control subject.

![EEG diagram]

**Figure 1:** Sleep stages of a normal individual