Sleep

You might have noticed, but when we hit the sack, as they say, there are many periods that we go through. Some people think we enter a half-dream state and subsequently go to sleep, and then finally have a deep rest. However, this is not entirely the case. In fact, there are four main stages of sleep: the first three are referred to as non-REM sleep (REM: rapid eye movement), and the last stage is known as REM sleep. Let us dive into these steps in the following paragraphs to gain a greater idea of what it means to sleep.

Before getting into the first stage of sleep though, the cycle of sleep needs to be mentioned. According to Tuck.com, a website dedicated to describing sleep and devices used to better it, “These stages progress cyclically from 1 through REM then begin again with stage 1. A complete sleep cycle takes an average of 90 to 110 minutes, with each stage lasting between 5 to 15 minutes. The first sleep cycles each night have relatively short REM sleeps and long periods of deep sleep but later in the night, REM periods lengthen and deep sleep time decreases” (Tuck Sleep). This means we do not have a continuous span of sleep in one stage, or that we reach a pinnacle of sleep and stay there. It also indicates that we go through four to five cycles of sleep each night.

Jumping to the first stage, it is when you decide to go to sleep and you can be easily be stirred into wakefulness again. It usually lasts between one to ten minutes. Nokia’s health blog states that during this stage, “Your body’s muscles are not inhibited yet: your eyes roll a little bit and you may slightly open your eyelids. Your breathing slows down and your heartbeat becomes regular. Your blood pressure and brain temperature decrease. The hypnic
jerk we sometimes experience when falling asleep, accompanied or not by the sensation of falling down, happens during this stage” (Nokia Health). The initial step of sleep is more a calming down process and regulating stage than anything else.

The second stage is more of a transition to deep sleep than anything else. According to Sleep.org, “During this stage, which is also fairly light, the brain produces sudden increases in brain wave frequency known as sleep spindles. Then brain waves slow down. If you were to schedule a “power nap” you’d want to wake up after this stage of sleep” (Robbins, McLean). So, this step makes sure your brain quietens down in order to enter a deep period of sleep.

The third step in the process of sleep is when things get more interesting. The brain starts making slower delta waves, and there is not much eye or muscle activity. It is also more difficult for you to be awakened by your surroundings. This is the first part of this stage. The second part of this stage involves, “... even more delta waves and you move into an even deeper, more restorative stage of sleep next. It’s most difficult to wake up during this stage. This is when the body repairs muscles and tissues, stimulates growth and development, boosts immune function, and builds up energy for the next day” (Robbins, McLean). There is no dreaming at this point, usually, but this is often the kind of sleep we are thinking of when we need rest.

Next comes the final stage, which is the famed REM sleep. Your brain has been slouched in the first 3 stages, but then it runs again. According to Sleep.org, “This is when most dreaming occurs, your eyes jerk quickly in different directions (hence, the name!), heart rate and blood pressure increase, and breathing becomes fast, irregular, and shallow. REM sleep plays an important role in learning and memory function, since this is when your brain consolidates and processes information from the day before so that it can be stored in your long-term memory” (Robbins, McLean). Thus,
after you have restored your bodily functions, this stage of sleep works out your brain.

Many people believe sleep is a linear process, but in fact, it is cyclical. We even go through four to five sleep cycles each night, with each stage having a purpose. The first stage is mostly about calming us down; the second stage is a preliminary step to entering into deep sleep; the third stage is deep sleep, which restores our bodies; the final stage arranges and sorts through our brain functions. All of this needed to remain healthy people. Without sleep, we would never gain the restorative powers that this part of our life gives.