

Psychology 100 Lab: Sleep & Dreaming

Scientists have long known that people pass through a predictable series of stages when they sleep. These stages can be identified by the different brain wave patterns that are characteristics of each, and they also differ from each other regarding the frequency and vividness of dreaming, the degree of muscle tension, the presence of rapid eye movements (REM), and how easily the person can be awakened. In this lab, you will explore the stages of sleep by waking up a “virtual sleeper” every half hour during a simulated night’s sleep. By examining the EEG pattern and listening to what the sleeper reports when you wake him up, you should be able to deduce the stage of sleep that the person was experiencing.

Instructions for Collecting Data:

- 1) Go to the following web address:
<https://pantherfile.uwm.edu/johnchay/PL06/SL/SL.html>. As soon as the page comes up you will see a drawing of a sleeping person’s head along with a running record of the time and several physiological measures.
- 2) Click on the sleeper’s head to wake him up. Do this every half hour, starting at any time before 12:00 A.M.
- 3) To put the person back to sleep and to restart the clock, click on his head again.
- 4) When the sleeper awakens at 7:00 A.M., the data collection will end. You can now log off and write the lab report.
- 5) Each time you wake the sleeper up, describe the brain wave pattern displayed in the EEG and indicate whether or not any Rapid Eye Movements appeared to be present. You can check for Rapid Eye Movements by checking the recorder that is labeled “EOG,” where rapid eye movements will register as high amplitude waves that stand out from the usual pattern of activity. Also, describe what the sleeper said to you when you awakened him. Enter all of this information in the data sheet that is provided for this lab report.
- 6) If you mess up in some way, you can restart the program and do it over.

Writing the Lab Report:

Your lab report will consist of an essay that you will attach to the data sheet that will be found on the next page. In this essay, please address the following points:

- 1) Overall, how confident were you that you were correctly identifying the stages of sleep?
- 2) What measures (i.e., the sleeper’s self-report, the EEG patter, the EOG) did you find most useful in making your judgments?
- 3) Did you find anything surprising in the data? Did some stages of sleep contain things that you did not expect?
- 4) During what portion of the night did dreaming seem most frequent?
- 5) Did you ever detect dreams when REM sleep did not appear to be happening? If so, were these dreams different than REM dreams in any consistent way?
- 6) Please add any other observations about your lab experience that you think are interesting or noteworthy.