



Data from your sleep study are described in the attached **Personal Sleep Summary**, and in the **Sleep Summary Report** which displays three charts prepared to show your sleep patterns during your overnight sleep study.

The **Sleep Stage Chart** uses a pie chart to show the percentage of time you spent in each “*sleep stage*.”

Another representation of your “*sleep stages*” is shown in the **Sleep Stage** graph. When reading this chart the abbreviations Mvt = Movement, W= Wake, R = REM, N1 = Stage 1, N2 = Stage 2, and N3 = Stages 3 & 4. As you read the graph from left to right you can follow your sleep pattern from lights out to your wake time the following morning.

When brain activity during sleep is recorded, through small wire leads pasted on the scalp, each sleep stage has a unique pattern. This brain wave tracing, or EEG, allows us to separate and sort sleep stages.

There are two general categories of sleep, REM and non-REM. REM sleep is named for its characteristic, rapid eye movements; fast, darting eye motions, obvious even beneath closed lids. However, REM sleep’s most notable feature is its link to dreams. Sleep researchers found that 80% of the research subjects they woke during REM sleep could recall a dream. Along with dreams, a distinct set of physiologic changes are seen during REM sleep. Blood flow to the brain increases, so does body temperature and breathing rate. At the same time, large muscles of the body are virtually paralyzed; the arms, legs and trunk cannot move.

While REM sleep has been tagged “*active sleep*,” its counterpart, non-rapid-eye-movement or NREM, sleep is often referred to as “*quiet sleep*.” NREM sleep is divided into four stages and each stage has its own characteristic brain wave pattern. Stage 1 is a transitional state between relaxation and sleep. In normal sleepers, stage 1 lasts from one to seven minutes. Stage 2 sleep is the first actual sleep stage. The EEG pattern changes and the sleeper becomes more difficult to wake up. Stages 3 and 4, or slow wave sleep, are so similar they are often considered together. Slow wave sleep (also called delta sleep) is the deepest sleep stage. Blood pressure, heart rate, and blood flow to the brain all decrease.

In addition to different sleep stages, sleep is organized into sleep cycles. Typically, adults will sleep through 3-5 sleep cycles in one night. The cycle begins with a brief stint of stage 1 sleep and progresses through stage 2 into slow wave sleep. The first REM period begins after delta sleep. Sleep cycling continues through the night, returning to stage 2 after REM. During the night REM stages lengthen, while slow wave sleep decreases in length. About 75% of sleep is non-REM sleep, and, on average, about 25% is spent in REM or “dreaming.”

Your **Body Position** is noted as: Left, Right, Prone = Front, Supine = Back, and Sitting in the graph at the bottom of the page. Again, you can follow your movements throughout the night from lights out to the time you woke.