

# **How Much REM Sleep Do You Need?**

You may have heard about the various sleep stages and that REM or Rapid Eye Movement sleep is one of them? Enhancing our mind-functioning abilities, REM is actually a very important stage within the sleep cycle. In this article, let's broaden the discussion on REM sleep including what it is, why it's important, how much we need, as well as at which points it surfaces during the night.

#### **Sleep and its 5 Stages**

When we close our eyes and fall asleep, a lot of unseen brain and body activity go on all night long. Sleep is a time for us to take it down a notch. It allows our minds and bodies to restore and recharge. Part of what it takes to get healing and restorative sleep is to successfully pass through the various 5-stages of the sleep cycle, multiple times, throughout the night.

The chart below captures sleep information provided by the <u>University Health News</u> and highlights the 5 sleep stages adults pass through including what they are, the percentage of time they're active within a standard 90-120 minute sleep cycle and why they're important. As you'll see, REM sleep is unlike the 4 non-REM sleep stages. From this chart, we'll also be able to calculate how much REM sleep we need.

Stages of an Adult Sleep Cycle: 90-120 Minutes (Sleep cycles last a bit shorter earlier in the night.)

Stage	Time in % and Minutes	Brain Waves	Importance
1	5% or ~ 6 minutes	Very Light	Slow-down in brain and muscle activity. We easily awaken. Prepares us for progressing into deeper sleep.
2	50% or ~ 52 minutes	Light	Heart rate, breathing and brain waves slow down. Muscles become relaxed.
3	10% or ~ 11 minutes	Deep	Very slow brain waves & breathing, blood pressure drops, muscles relax more. Difficult to wake up. Stage is

			associated with tissue repair and hormone release including growth hormone.
4	10% or ~ 11 minutes	Deep	Continuation of Stage 3
REM	25% or ~ 27 minutes	Active	Heart rate, breathing, blood pressure all increase to awake levels. Intense brain activity. Eyes dart under closed lids. Most important stage for dreaming, memory consolidation & new learning.

Typically, a 90-120 minute sleep cycle recurs 5-6 times during the night. For the first 2-3 sleep cycles, we spend most of our time in deep NREM sleep (stages 3-4), whereas during the final 2-3 sleep cycles, we spend much more time in REM sleep. When factoring the above variables together, they reveal that we need approximately 1hr 45min to 2hr 45min of dreamy REM sleep each night. Too little REM, as well as too much, can create challenges for us as we shall see.

### Do Children Need as Much REM Sleep as Adults?

While the typical <u>adult's need for REM sleep averages approximately 20-25% of total sleep time, babies and very young children require far more. Research indicates that the time a baby spends in REM reaches close to 50% of their overall sleep time.</u> The amount of REM sleep we need decreases from childhood to teenage years and finally settles in at the 20-25 % adult quota.

#### What Else Happens During REM Sleep?

While non-REM sleep stages involve a physiological slowdown of our bodies including brainwaves, once we enter REM sleep, all bets are off. Our brains become quite active in REM with brain waves coming close to those of a waking brain. Moreover, the vast majority of dreams take place during REM sleep which may explain the rapid movement of our eyes.

During REM, our muscles become temporarily paralyzed; also known as <u>REM atonia</u>. This is believed to occur as our bodies' way of protecting us from becoming physically active while sleeping which could put us at high risk for injury. Some people suffer from <u>REM Sleep Behavior Disorder</u>. This is a condition where sleepers become lively during REM by yelling, screaming, moving, kicking, punching and even jumping and running out of bed.

REM appears to offer important restorative function of the brain. According to <u>Dr. M. Breus</u>, in infants REM sleep seems to play a critical role in neurological development. In addition to the role REM has in our dreams which is believed to help us resolve things, as adults REM sleep also may support memory, emotional processing particularly of difficult experiences, and clearing out clutter of the prior day's learning and information collecting.

### What If You Get Too Much or Too Little REM Sleep?

They say that too much of a good thing is no longer good. This seems to be true for REM sleep as well. According to the organization ResMed, stress can extend REM sleep beyond normal levels and too much REM may contribute to feeling tired the next day. Too little REM may lead to consequences on your mood, alertness and ability to focus. You may have more difficulty taking in new information and memory. Alcohol consumption too close to bedtime diminishes time spent in REM sleep.

#### **Summing up REM Sleep**

When wondering about how much REM sleep we need, there are a few factors to keep in mind. Our need for REM varies throughout our lifetime but in particular from infancy to adulthood. While as adults we satisfy our REM sleep needs at 20 to 25% of total sleep time, babies and very young children need to spend up to 50% of their time asleep in REM.

As adults and throughout our lives it's important to continue acquiring a healthy amount of REM sleep. For most of us this amount falls between 1hr 45min to 2hr 45min each night. Not short-changing ourselves of REM sleep is without a doubt in our best interest as it supports our mind function overall and helps to regulate our emotions, memory, learning and taking in new information.

## Sources – How Much REM Sleep Do Yu Need?

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