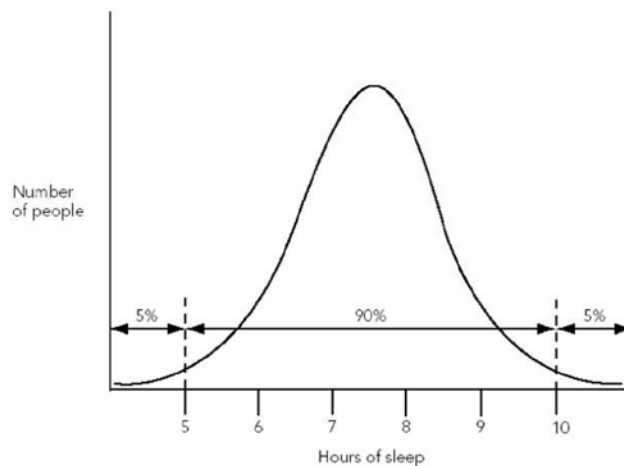


HOW TO FIND OUT YOUR CURRENT SLEEP CAPACITY AND SLEEP PHASE

How much sleep do you need?

Sleep is not a passive phenomenon, but an active process brought about by our brain i.e., **the brain generates sleep**. Your sleep duration is determined by your brain's ability to generate sleep. In other words, it is a capacity. The ability to generate sleep is genetically determined. This varies between individuals.

Normal sleepers **need** as much sleep as their brain is able to generate. Therefore the average daily requirement of sleep ('sleep need') varies from one individual to the other. This means that our partners and friends may sleep longer or shorter than us and we cannot compare our sleep duration with that of those around us. It also varies with age of the individual – as a general rule, sleep need decreases as age advances.



Sleep need among the general population follows a simple bell curve. About 5 percent of people need a little (less than five hours), approximately another 5 percent need a lot (more than ten hours), and the majority need something in between (seven or eight hours).

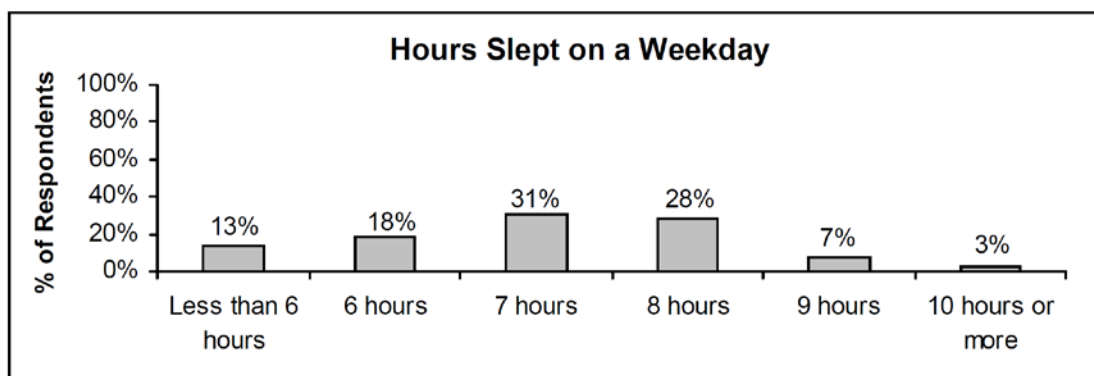
[Source: *The Harvard Medical School Guide to a Good Night's sleep*, 2007. Lawrence Epstein with Steven Mardon, McGraw Hill].

Some people are able to function well with as little as 4 hours of sleep ('short sleepers'). Others need 10 hours or more ('long sleepers'). If you need 11 hours or more, you are likely to have a sleep disorder.

Do you get as much sleep as you need?

Even those with normal sleep requirement may not be getting adequate sleep on a daily basis. If one is a 'long sleeper' then sleeping for seven or eight hours every night will still leave the person with considerable **sleep debt**. Those who do not get adequate sleep during the working week usually sleep more than an hour longer on weekends and when 'off work'. They develop features of chronic sleep restriction. This is an important cause of excessive sleepiness. This is known as **Insufficient Sleep Syndrome**.

The National Sleep Foundation surveyed the duration of sleep in a representative sample of the US population in 2001 (Sleep in America Poll, 2001). The result of the survey is shown in the chart below.



How to find out your sleep requirement

No formula can predict the sleep requirement of a person. The best way to find out is by keeping a sleep diary for at least one week, preferably 10 days.

You will need to set aside 7-10 days when you can sleep whenever you feel sleepy - 'ad lib' sleep.

- Please **go to sleep when you feel sleepy**.
- Wake up **ONLY when you naturally wake up**.
- **DO NOT USE ALARMS**.
- **DO NOT TAKE HELP from partners, friends or family to wake up**.
- **Maintain a sleep diary during this period**.

We discard the sleep duration in the first three days and use the subsequent 4-7 days to calculate the **average** sleep duration. ***This is your sleep capacity.***

- If you feel **satisfied** with the amount of sleep you are getting and can function well in this period we can conclude that this is your sleep requirement regardless of how short or long you sleep.
- If you remain sleepy despite sleeping as much as you need, it suggests that you have a sleep disorder. This will need further investigation.
- If you are not able to sleep well in this period and have difficulty in falling asleep and staying asleep, you have insomnia. This will need further evaluation.

If you have Insufficient Sleep Syndrome, you will sleep for longer periods on the first three nights or so. By then you would have 'caught up' with your 'sleep **debt**'. Thereafter, you will sleep only for the number of hours that you **need** to sleep ('your **sleep need**'). *When you 'get' as much sleep as you 'need', you would not feel excessively sleepy in the daytime.*

How to find out your sleep 'phase' (or sleep timing).

The time window during which you naturally sleep is your 'sleep phase' The exercise above will help you find out your natural sleep timing.

A majority of the population sleep between 9:00 p.m. and 11:00 p.m. and wake up between 5:00 and 7:00 a.m. About one third of the population sleep much later than the usual, and their sleep is said to be 'delayed'. At times the delay can be quite extreme, with sleep onset as late as 7:00 **a.m.** Such individuals tend to wake up much later in the morning, or even in the afternoon. If the delay in their sleep timing causes problems with work or daily life, then we call it Delayed Sleep Wake Phase Disorder.