About our perception of sleep

Estimating sleep accurately is an incredibly difficult, if not impossible task. For example, most people have had the experience of intending to take a nap, for just 10 minutes but then waking to discover that an hour has passed. It felt like just a few minutes. It's very difficult to tell how much time has passed during sleep.

It's not just the total amount of sleep we obtain that is difficult to estimate. Research has shown that reliably estimating the time taken to get to sleep is also difficult. This is because sleep is defined by the absence of memories. That is, it is very difficult to remember exactly when you fell asleep. Even with the help of a clock, estimating time taken to fall asleep is incredibly difficult. You might check the clock at 1 am and then recheck it at 1:30 am. Between these two checks, you might briefly fall asleep. A final reason that sleep estimation is difficult may be more surprising. We typically think of sleep and wakefulness as "all-or-nothing" phenomena, i.e., that we must be either one or the other. However, we now know from sophisticated EEG studies and brain imaging studies that sleep does not occur at the same time or with the same intensity in different parts of the brain. Furthermore, people with insomnia differ from good sleepers in these regional patterns of sleep intensity. Thus, difficulties with sleep estimation may also reflect alterations in regional sleep.

Do you know the saying, 'Time flies when you're having fun'? The opposite also seems to be true. When you were a kid at school do you remember knowing that there was 5 minutes until the bell signaling school's out. Yet watching the clock it seemed to take forever. You weren't having fun and time crawled! There is evidence that people who are tense and anxious in bed feel like more time has passed than has actually passed.

We also have difficulty accurately determining the quality of our sleep. On waking, if someone thinks, ‘I feel terrible. I must not have slept well, ’ they are unlikely to be correct. On waking we have to pass through the transition from sleep to wake, a state known as ‘sleep inertia’. People often feel groggy, find it hard to get out of bed, and feel that if they were able to stay in bed they’d fall asleep again immediately. These feelings are normal and, fortunately, they pass quickly. They certainly do not reflect the quality of sleep obtained.

In fact, in the same way that our body automatically prompts us to breath or to digest the food we eat, during sleep our body will automatically take the type and quality of sleep it needs. So if you have slept poorly for a few nights your body will recoup, immediately on nodding off, the type of sleep it most needs. That is, the human body keeps watch and looks after all your sleep processes by itself. The technical term for this is homeostasis.

To summarize:

- The total amount of time slept and the time taken to fall asleep and are incredibly difficult to estimate.
- There is a distinction between how much sleep you FEEL you get and how much you ACTUALLY get. Your feeling may not be accurate.
- The homeostatic processes within the body ensure that you get the type of sleep you need when you need it.