

## Sleep Diary Guide – Calculating Efficiency and Your Sleep Prescription

### 1) Determine your average

- You should now have 7 nights filled out on your sleep diary. We're going to use that data to determine if you need sleep restriction, and if so how much
- Because your sleep probably was not exactly the same all 7 nights it's best to take the average of the week, you can do this informally by estimating or formally by:
  - i. Estimation - Pick a day from the past week that is most representative of your average for the week and use that data for the calculator
  - ii. Calculation – If you prefer an exact calculation (this is not required!), calculate the sleep efficiency for each of your days using the calculator (see step 2), this then add them together and divide by 7 for the average sleep efficiency score for the week

### 2) Enter data into the calculator

- Go to the website [www.mysleepwell.ca/cbti/sleep-efficiency-calculator/](http://www.mysleepwell.ca/cbti/sleep-efficiency-calculator/)
- Take the data from your sheet and enter it in

 **Sleep Efficiency Calculator**

Answer the sleep efficiency calculator questions based on your typical night's sleep in the past week to estimate your typical sleep efficiency.

What time did you go to bed?

What time did you try to go to sleep?

What time did you fall asleep?

How many times did you wake up during the night?

In total, how long did these awakenings last (in minutes)?

What time was your final awakening?

What time did you get out of bed to start your day?

**CALCULATE**

### 3) Calculate

- Click calculate and scroll down to see the sleep data based on the night you entered. In this example the person was in bed for a total of 10 hours but only 6 of those were spent sleeping for a total sleep efficiency score of **60%** - **this is the key number we will be focusing on**

Total time in bed: **600 minutes (10 hours)**

Total time awake in bed: **240 minutes (4 hours)**

Your sleep efficiency: **60%**

Your sleep duration: **360 minutes (6 hours)**

#### 4) Determine your sleep prescription

- Your sleep efficiency score will dictate what, if any changes are made to your recommended bedtime
- Usually at the beginning of this process the sleep efficiency score will be low (and hopefully increase over time)
- If your sleep efficiency was below 85% you will be implementing mild sleep restriction – this is to help build your sleep drive to improve your time asleep in bed
- If your sleep efficiency was 90% or higher **AND** you did not feel sufficiently rested most days you will be trying to increase your sleep by going to bed earlier
  - i. A “perfect” night’s sleep e.g. you get into bed, fall asleep right away stay asleep without awakenings and get up and out of bed right away when you wake up will give you a score near 100% however this is an *efficiency* score, which only considers your time asleep vs. awake not if it was the right amount of sleep for you. So what do we do?
  - ii. If you were within 7-9 hours of sleep, felt rested and had minimal to no daytime sleepiness this is great! You **do not need to make any changes**
  - iii. If you had less than 7 hours and/or felt unrefreshed or sleepy this means you’ve achieved good efficiency but need to work towards increasing your time asleep by going to bed earlier

If last week’s sleep efficiency was	Your sleep prescription’s set bedtime for this week should be
<b>Less than 85%</b>	15 minutes later
<b>85%-89%</b>	unchanged
<b>90%-94%</b>	15 minutes earlier
<b>95% or greater</b>	30 minutes earlier

#### 5) Continue tracking

- The key now is to start a new diary for the week
- You can enter your prescription on the top right corner as a reminder
- Keep entering your night’s data just as you did the previous week

## FAQs

*Is it better to get my average sleep efficiency or use the typical night?*

It shouldn't make a significant difference which method you use unless your sleep was very variable across the 7 nights

*What if I'm not sleepy at my prescribed bedtime?*

- Keep your bedtime routine at same time
- If you think you might be able to sleep (
- If you're feeling very alert and think there is no chance you could sleep continue

*What if I'm sleepy before by prescribed bedtime?*

- Try to stay awake if you can while still avoiding activities that could impact your ability to fall asleep e.g. don't drink a coffee or put on an intense show to try to last until your prescribed bedtime
- It might feel frustrating or counterintuitive to stay up when you're sleepy, but the idea is we want to increase the sleep pressure to improve your odds of falling and staying asleep

## Stimulus Control FAQ

*Does it matter what kind of light I get in the morning?*

Direct daylight exposure seems to be the ideal for helping regulate our circadian rhythm, but recognizing this isn't always possible light through a window or using a light therapy lamp (SAD lamp) if you have one are also options that can help.

*Do I really have to get out of bed if I can't sleep?*

We recognize this can be a tough change but research shows this is an important behaviour change to help break the insomnia cycle. This can be tricky if you share your bed with a partner, so you may want to discuss how to approach this with them if you feel it could be an issue

*Can I sleep in later on weekends?*

Our recommendation is to try to keep your wake time threshold as close as you can. As we work to reset your sleep, consistency is a key factor for change. One idea is to take the time you would normally sleep in and dedicate it to another enjoyable activity so the time still feels like a weekend treat, just not extra time in bed. This being said we also recognize things come up in life that can throw things off, an occasional night that doesn't follow the prescription (e.g. if you have travel or a special event) is not going to ruin your efforts but where you're able keeping as consistent as possible will give the best results.