Sleep Restriction

Cognitive Behavioral Therapy for Insomnia (CBT-I) has been developed to provide patients with a "bespoke set of techniques intended to break bad sleep habits and address anxieties" (Walker, 2018).

One of the surprisingly successful techniques for improving sleep quality is to restrict time spent in bed. By doing so, the patient is encouraged to form a stronger connection between the bed and sleep.

The aim is to limit the number of hours spent in bed to the typical number of hours asleep, known as the *sleep window.*

When we are sleeping poorly, we often spend too much time in bed – despite not being asleep. Restricting time can resynchronize natural sleep cycles.

Use the following sleep tracker to capture time spent sleeping (in yellow) and time spent in bed (in blue). The aim is to calculate the sleep window.

Time sleeping

- Complete the yellow columns with the time at which you fell asleep (D), time at which you woke up (E), and how much time was spent awake in the night (F).
- Use the values in (D), (E), and (F) to calculate the number of minutes asleep (G) for each day.
- Total column (G) and then divide by 7 to get the *average number of minutes asleep* over the week (H).

Time in bed

- Complete the blue columns with time went to bed (A) and time got up (B).
- Use the values in (A) and (B) to calculate the number of minutes in bed each day (C).
- Total column (C) and then divide by 7 to get the *average number of minutes in bed* over the week (I).

Sleep efficiency

Sleep efficiency is the percentage of time in bed spent asleep – an ideal is between 80-85%.

- Divide the average time asleep (H) by the average time in bed (I) to give the sleep efficiency.
- Multiply that number to get a percentage (J).

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	Time in bed			Time sleeping				Average number of minutes asleep per day (H)	Average number of minutes in bed per day (I)	Sleep efficiency % (J)
	Went to bed (A)	Got up (B)	Minutes (C)	Fell asleep at time (D)	Woke up at time (E)	Length of time awake in night (F)	Total number of minutes asleep (G)			
Day 1										
Day 2										
Day 3										
Day 4										
Day 5										
Day 6										
Day 7										

Once you have a week's worth of data and have calculated your average number of minutes sleeping per day (H) and your sleep efficiency (J) you can work out your sleep window.

If your sleep efficiency (J) is less than 80%, then take off 15 minutes from the sleep window.

For example, if your average time asleep (H) is 6 hours and your sleep efficiency (J) is less than 80% (let's say it's 75% in this example) then take off 15 minutes. We now have a new sleep window of 5 hours and 45 minutes.

Work back from your wake-up time. So, if you typically get up at 6am, your time for bed for the week will be 00:15AM.

Actions

- Do not go to bed before the sleep window begins, even if you begin to feel tired.
- If you are awake when the sleep window begins, only go to bed when you feel tired.
- Get out of bed when the sleep window ends, even if you feel tired. Set an alarm.

Under this heavier form of sleep pressure, the patient will, over time, gain more psychological confidence in "being able to self-generate and sustain healthy, rapid, and sound asleep, night after night" (Walker, 2018).

As that confidence increases, it will be possible to increase time in bed gradually.

There are more resources for CBT-I at the National Sleep Foundation's Website. For any prolonged trouble sleeping, it is advisable to seek expert help. Lack of sleep has health risks and affects judgment and skills in driving and operating machinery, etc.

References

- Walker, M. P. (2018). *Why we sleep: The new science of sleep and dreams*. London: Penguin Books.

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