

# Exercise

Professional Version | US English

# Sleep Restriction



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## Description

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Sleep restriction is behavioral intervention used in the treatment of insomnia. It is an evidence based treatment for insomnia, both as a standalone technique and as part of a package of cognitive behavioral therapy for insomnia (CBT-I). The rationale for sleep restriction is that insomnia is perpetuated by spending excessive time in bed. Spending large amounts of time in bed relative to little sleep results in poor sleep efficiency.

One goal of sleep restriction is to increase sleep efficiency by reducing the amount of time spent in bed relative to the time spent sleeping. Sleep restriction initially creates a mild sleep deprivation which promotes the natural onset of sleep.

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## Instructions

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The *Sleep Restriction* handout includes a description of the sleep restriction intervention followed by instructions for carrying out sleep restriction.

1. Clients are instructed to keep a sleep diary for a week. This allows calculation of baseline measures.
2. Clients are instructed to calculate their average total sleep time (ATST). This is the average number of hours slept per night.
3. Clients are then instructed to restrict the time they spend in bed to no more than their average total sleep time. This involves deciding what time to get up in the morning then subtracting 'ATST' hours from that time – this is the new 'going to bed' time.
4. Clients are instructed to monitor their sleep efficiency by continuing to keep a sleep diary.
5. Rules are given for increasing total amount of sleep.

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## References

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# Sleep Restriction



Sleep restriction is an effective technique for treating insomnia. The aim of sleep restriction is to ensure that the time you spend in bed is actually devoted to sleeping – rather than spending time in bed awake, thinking, or worrying about not sleeping. Sleep restriction works by initially creating a mild sleep deprivation. Sleep happens naturally when we are tired (as long as our conscious mind does not get in the way), and so mild sleep deprivation promotes the onset of sleep, and increases the quality of the sleep that we get. In time it allows us to increase the amount of sleep that we get.

Sleep restriction aims to increase your **sleep efficiency**.

- Time that you spend **asleep in bed** is considered **efficient**.
- Time that you spend **awake in bed** is considered **inefficient**.

$$\text{Sleep efficiency} = \frac{\text{Time asleep}}{\text{Time in bed}} \times 100$$

For example:

6 hours asleep / 8 hours in bed = 75% sleep efficiency

9 hours asleep / 10 hours in bed = 90% sleep efficiency

## Sleep restriction instructions

### 1. Keep a sleep diary for a normal week

This will give you a baseline measure of your sleep. You will need to record:

- Time you went to bed.
- Time you got up.
- Number of hours of sleep.

### 2. Calculate your 'average total sleep time' (ATST)

This is the average number of hours you slept per night.

Add up the total hours of sleep you got in the past week, then divide the answer by 7.

### 3. Now restrict the *time you spend in bed* each night to your ATST

To do this you will need to:

- Decide what time you want to get up.
- Go to bed ATST-hours before then.
- Do not go to bed any earlier – even if you feel tired.



Getting up time  
e.g. 7:00am



Going to bed time  
e.g. 7:00am - 6 hours = 1:00am

### 4. Monitor your sleep efficiency

Continue to keep a sleep diary so that you can keep track of your sleep efficiency.

You should be aiming for 90% sleep efficiency.

### 5. Follow the rules to increase your total amount of sleep

Once you consistently reach 90% sleep efficiency allow yourself 15 minutes extra in bed by going to bed 15 minutes earlier.

## General rules

- Stick to your new schedule 7 nights per week – do not make exceptions or you will reduce the effectiveness of the technique.
- You must not allow any sleep outside your set hours – no napping!
- The minimum amount of sleep that you should be aiming for is 5 hours.

## Warning

- When you attempt sleep restriction **you should expect to be tired to begin with** – you should take this into account if you drive or operate machinery.
- Some people find it easier to begin implementing sleep restriction while they are on holiday (rather than being tired for work).

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## Resource details

Title: Sleep Restriction  
 Type: Exercises  
 Language: English (US)  
 Translated title: Sleep Restriction

URL: <https://www.psychologytools.com/resource/sleep-restriction>  
 Resource format: Professional  
 Version: 20230721  
 Last updated by: JP

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