Client Handout

The Steps of CBT-I

Step 1: Continue First Aid for Insomnia

During CBT-I, you'll continue to follow all but one of the basic steps outlined in the "First Aid for Insomnia" handout. To recap, those steps are:

1. Wake up at a regular time
2. Avoid daytime naps
3. Only use the bed for sleep (and intimacy)
4. ~~Only go to bed when sleepy*~~
5. Avoid caffeine, alcohol, and light in the evening
6. Set the stage for sleep

*In CBT-I, only rule #4 is going to change. Instead of waiting until you're tired to go to bed, you'll develop a set time to get in and out of bed. To figure out those times, you'll first need to take a few sleep measurements.

Step 2: Measure Your Sleep

In the first week of this therapy, you'll measure two aspects of sleep: (1) the average time you spend asleep each day and (2) the average time you spend awake *in bed* each day. While you gather that information, sleep according to your usual habits and follow the basic first aid rules as best you can. Each night record:

1. The time you got in bed at night and the time you got out of bed in the morning.
2. The total hours you spent asleep (use your best guess; don't watch the clock).
3. The total hours you were awake in bed.
4. If using a sleep medicine, the milligrams (mg) you took.

The **Sleep Log** for week one (page 169) will help you gather this information. At the end of the week, add the hours you spent asleep for all seven days and divide by seven. That is your *average daily sleep.*

Step 3: Restore Your Sleep Drive by Limiting Time in Bed

In the second week, you'll limit the time you spend in bed. The mild sleep deprivation this creates will intensify your sleep drive. It will be difficult at first, but as that drive grows, sleep will come more naturally.

First, take your *average daily sleep* from step 2 and add 1/2 hour. That number is the total amount of time you are allowed in bed each night. (The extra 1/2 hour is a buffer to give you time to fall asleep.) Whether you are asleep or awake, you can only lie in bed for that amount of time. If that sounds harsh, there is a cushion. You don't need to limit your time in bed by less than 5 hours. If you have bipolar disorder, you shouldn't limit it below 6½ hours. Bed deprivation beyond that is not necessary for this therapy to work. So, if you clocked in at 4 hours allowed in bed, feel free to move it up based on these guidelines.

You can schedule your time in bed for any period in the night, but it's best to keep it at a regular time. Most people base it on their wake-up time. For example, if they need to get up at 8:00 a.m. and are only allowed 6 hours in bed, they'll get into bed at 2:00 a.m. and out at 8:00 a.m. Alternatively, you can schedule it based on the time you're most likely to fall asleep. Suppose you fall asleep best around 10:00-11:00 p.m. When you stay up beyond that, you tend to be up all night. If you are only allowed 6 hours in bed, you could get in bed at 10:00 p.m. and set an alarm to get up at 4:00 a.m.

What should you do when you're not in bed and it's still evening? Stick with the evening routines in Chapter 6. Keep the lights low or wear blue light blockers, but don't get too relaxed. You don't want to accidentally fall asleep.

During this week of bed restriction, continue to record the time you spend awake and asleep in bed using the **Sleep Log** for week two (page 171).

Step 4: Daily Fine-Tuning

As you get into the third week of this therapy, you can start making nightly adjustments to the time allowed in bed with measure a called *sleep efficiency.* Sleep efficiency is the percent of time you spend asleep in bed. If you spend half your time in bed trying to fall asleep, your efficiency is 50%. An ideal number is at least 85%, meaning that you actually slept for at least 85% of the time you were in bed. Use the **Measure Your Sleep Efficiency** worksheet to help measure this.

Client Worksheet

Measure Your Sleep Efficiency

Efficient sleep means that you are asleep for most of the time that you're in bed at night. You can measure your sleep efficiency with a simple method.

First, add up the time you are in bed during a 24-hour period. Include times when you shouldn't have been in bed, like reading during the day or napping. Include times awake and asleep. Do not include times of intimate or sexual activity.

Time in bed: _____

How much time did you spend asleep in that 24-hour cycle? _____

Sleep efficiency = (Time asleep) / (Time in bed) * 100 _____

Example:

Vicky awoke at 9:00 a.m. and got out of bed. She tried to nap for **1 hour** in the afternoon but couldn't. In the evening, she laid awake **1½ hours** before falling asleep. She slept for **6 hours**, and then awoke earlier than expected. She stayed in bed for another **½ hour** and then got up.

Time in bed = 1 hour + 1½ hours + 6 hours + ½ hour = 9 hours

Time asleep = 6 hours

Sleep efficiency = 6 / 9 * 100 = 67%

Using Sleep Efficiency to Adjust Time in Bed

Maintaining healthy sleep is a lot like keeping a car on the road. If the car veers right, you turn a little to the left. If it strays to the left, you nudge the steering wheel to the right. In the first two weeks of this therapy, your sleep was off the road. You needed a strong pull to get you back on, which that first week of bed restriction was designed to accomplish. If your sleep didn't budge with that first week of bed restriction, try another week until you see an increase in your average time asleep.

Once you're on the road, you'll use your sleep efficiency to make small adjustments to the time you're allowed in bed, just as you nudge the steering wheel left and right to drive. When sleep worsens, tighten the reins and restrict time in bed a little more. When it improves, loosen the reins and allow more time.

Begin with the time you were allowed in bed from the night before. Then, calculate your sleep efficiency for that night. Use this guide to figure out if you need to tighten or loosen the amount of time in bed:

- Sleep efficiency less than 80%: Subtract 15 minutes from the time allowed in bed
- Sleep efficiency 80-85%: Continue with the same time allowed in bed
- Sleep efficiency greater than 85%: Add 15 minutes to the time allowed in bed

Example:

Vicky was sleeping well, so her sleep program advised her to allow a generous 8 hours in bed. On most nights she got 6½ to 7 hours of sleep, resulting in a sleep efficiency between 80-85% (6.5/8 * 100 = 81%). This let her keep to the 8-hour limit. Then, she had a rough night. Her sleep efficiency dropped to 67%. She lowered her time in bed by 15 minutes, from 8 hours to 7 hours and 45 minutes (or 7.75 hours).

The next two nights, she slept about 6 hours and 15 minutes, which brought her sleep efficiency to 81% (6.25/7.75 * 100 = 81%). Based on the guidelines for 80-85%, she kept her time in bed the same at 7 hours and 45 minutes. After a few days, she started sleeping 7 hours, which brought her sleep efficiency to 90% (7/7.75 * 100 = 90%). She then added 15 minutes to her time allowed in bed, returning it to 8 hours.

If you have bipolar disorder, you can use sleep efficiency with one modification: Don't restrict your time in bed to less than 6½ hours. That's a safety measure to keep away mania and mixed states.

Once your sleep is improved and you're making those daily adjustments, you'll no longer need to keep the visual sleep log and instead can track your sleep efficiency with the "Sleep Log" for week three and beyond (page 172).

Further Reading

There is a free app to guide you through these techniques. Search for "CBT-I Coach" in your app store or look online at mobile.va.gov/app/cbt-i-coach. A good book is *Overcoming Insomnia: A Cognitive-Behavioral Therapy Approach* by Jack Edinger and Colleen Carney.

Client Worksheet

Sleep Log: Week One

Date	Med?	Hours awake in bed (fill in boxes)									Time in and out of bed		Hours asleep (fill in boxes)																							
		4.5	4	3.5	3	2.5	2	1.5	1	0.5	IN	OUT	0.5	1	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10	10.5	11	11.5	12

Add all hours asleep for past 7 days:		◀Divide this by 7:		◀Add 0.5 to this:		◀Spend only this much time in bed each night for the next week.
Adjustments: If your final number is less than 5, you can raise it to 5 hours. If you have bipolar disorder and it's less than 6.5, raise it to 6.5 hours.						

Examples

1. Can't fall asleep

You go to bed at 10:00 p.m., toss and turn for 3.5 hours, and then fall asleep around 1:30 a.m. You sleep through the night and wake up at 9:00 a.m., which gives a total of 7.5 hours of sleep. Your sleep chart would look like this:

Date	Med?	Hours awake in bed (fill in boxes)									Time in and out of bed		Hours asleep (fill in boxes)																								
		4.5	4	3.5	3	2.5	2	1.5	1	0.5	IN	OUT	0.5	1	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10	10.5	11	11.5	12
9/16	No										10pm	9am																								

2. Waking up during the night

On this night, you go to bed at 10:00 p.m. and fall asleep within 15 minutes. You wake up two times during the night, each time losing about 30 minutes of sleep to go to the bathroom and fall asleep again. Then, you awake a third time at 5:00 a.m. This time, you are unable to fall asleep, and lie in bed for 3.5 hours before getting up to start your day at 8:30 a.m. Your total sleep is around 6 hours, and you spent 4.5 hours awake in bed (or in the bathroom). Here is your sleep chart for this night:

Date	Med?	Hours awake in bed (fill in boxes)									Time in and out of bed		Hours asleep (fill in boxes)																								
		4.5	4	3.5	3	2.5	2	1.5	1	0.5	IN	OUT	0.5	1	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10	10.5	11	11.5	12
9/16	No										10pm	8:30am																								

3. Taking daytime naps

Although daytime naps should be avoided during this therapy, still chart them if they occur. You can use a separate color for that. Imagine you are so tired that you fall asleep on the sofa from 4:00 p.m. to 6:00 p.m. Later that night, you have insomnia and lie in bed from 11:00 p.m. to 1:00 a.m. You then take 5 mg of zolpidem (Ambien), which quickly puts you to sleep, and you wake up at 7:00 a.m. You would add the nap time to your total time asleep that day like this:

Date	Med?	Hours awake in bed (fill in boxes)									Time in and out of bed		Hours asleep (fill in boxes)																								
		4.5	4	3.5	3	2.5	2	1.5	1	0.5	IN	OUT	0.5	1	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10	10.5	11	11.5	12
9/16	5mg										11pm	7am		nap																							

Client Worksheet

Sleep Log: Week Two

What time are you most likely to fall asleep at night? _____. What time do you need to get up each morning? _____.

Devise a schedule using those two times and your total time allowed in bed. Ideally, you would get in bed about 1/2 hour before you are likely to fall asleep and wake up at the time you need in the morning. You'll probably need to compromise, adjusting the in-bed and out-of-bed times to get the best fit.

Ideal schedule: Time in bed: ____. Time out of bed: ____. Total time allowed in bed: ____.

Write those times on this sleep log and follow them for Week 2, still recording the time you spent asleep and awake in bed.

Date	Med?	Hours awake in bed (fill in boxes)									Time in and out of bed		Hours asleep (fill in boxes)																								
		4.5	4	3.5	3	2.5	2	1.5	1	0.5	IN	OUT	0.5	1	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10	10.5	11	11.5	12

Client Worksheet

Sleep Log: Week Three and Beyond

Date	Hours slept	Hours allowed in bed	Sleep efficiency (Hours slept / Hours in bed * 100)	Adjust time allowed for the next night in bed based on sleep efficiency:		
				< 80% Subtract 15min	**80-85%** Keep the same	**>85%** Add 15min
Ex. 2/7	5	7	5 / 7 * 100 = 71%	7 hr - 15 min = 6.75 hr		
Ex. 2/8	5.5	6.75	5.5 / 6.75 * 100 = 81%		6.75 hours (same)	