## Session 3

## Cognitive Restructuring and Sleep <br> Medication Reduction Techniques



## Lesson 1: Introduction to Cognitive Restructuring

Negative Thoughts About Sleep
A major problem with insomnia is the worry that it will affect you the next day. Negative, stressful thoughts about sleep worsen insomnia by triggering emotions such as anxiety or frustration that mobilize the stress response. In turn, the stress response strengthens the wakefulness system, weakens the sleep system, and makes it harder to sleep. And the harder it is to sleep, the more anxious one feels about not sleeping.

NEGATIVE SLEEP THOUGHTS


INSOMNIA

Here are some examples of negative sleep thoughts that are very common:


Recognizing and Changing Negative Sleep Thoughts
As you will learn in this session, negative sleep thoughts are usually distorted and inaccurate. They only make your insomnia worse.

You can overcome insomnia by learning to recognize and change your negative sleep thoughts with cognitive restructuring. Cognitive restructuring means replacing negative sleep thoughts with more helpful, accurate thoughts about sleep. The goal of cognitive restructuring is simple yet powerful: by recognizing and replacing your negative sleep thoughts with more accurate, positive thoughts about sleep, you will reduce worry and other negative emotions that trigger the stress response and disturb your sleep.

Keep in mind that cognitive restructuring is not the same as pretending you don't have insomnia or simply using the power of positive thinking. It means thinking about insomnia less negatively and more accurately.

Scientific Findings: Sleep and Insomnia
To recognize and replace your negative sleep thoughts with more accurate, positive thoughts about sleep, you must first learn about some important scientific findings concerning several aspects of sleep and insomnia:

- Sleep duration and health
- The effects of sleep loss on daytime performance
- How much sleep you think you are getting


## Lesson 2: Sleep Duration, Health, and Daytime Functioning

## The Eight Hour Sleep Myth

Research involving millions of people from at least 35 scientific studies demonstrates that we do not need eight hours of sleep to stay healthy. In fact, as can be seen below, there is a J-shaped curve involving sleep duration and mortality, with the lowest mortality at seven hours of sleep. People who sleep seven hours live longer than people who sleep eight, and sleeping more than seven hours is associated with a greater mortality risk than sleeping less than 7 hours.

In the diagram below, the solid line represents the relative risk of dying (over a fifteen-year followup period) associated with self-reported average sleep duration.


What about cognitive performance and sleep duration? A recent major study involving over a half million people found that cognitive performance during the day peaked for all age groups at 7 hours of sleep. with progressively decreasing cognitive performance occurring with sleep durations longer and shorter than 7 hours.

These studies suggest the human brain may be designed for seven hours of sleep, not eight.
What about the widely publicized relationship between sleep duration and weight gain? Over a dozen studies found no relation between short sleep and weight gain, and many studies have failed to confirm a relationship between sleep loss and overeating/obesity. In fact, long sleep is associated with obesity, perhaps due to reduced physical activity. For short sleep, it appears that it is increased awake time itself, not sleep loss, that is associated with increased caloric intake.


Key Concept: This means that you do not have to worry about getting eight hours of sleep per night to stay healthy.

Similarly, many of us do not need eight hours of sleep to function effectively during the day:

- There is significant variability in individual sleep needs. Adults average 7 hours of sleep, and most adults average between 6 and 8 hours. $40 \%$ of adults sleep less than 7 hours and $75 \%$ sleep less than eight.
- Many people cannot sleep eight hours per night and any attempts to do so only leads to increased awake time in bed.
- The amount of sleep that we need to feel alert during the day varies from person to person. The majority of adults sleep less than eight hours per night and report feeling rested during the day.
- If we needed eight hours of sleep, we would expect adults to average about eight hours of sleep but they average seven.
- The majority of adults who sleep less than eight hours report positive mood during the day, feel optimistic, and are satisfied with their lives.


Key Concept: This means that you do not have to worry about getting eight hours of sleep per night to function effectively during the day.

## Sleep Loss and Daytime Performance

What about the effects of sleep loss on daytime performance? Although research shows that not getting enough sleep can make it harder to do your normal daily tasks, the effects of sleep loss also depends upon how much sleep is lost and how often it happens. Research also shows that:

- Everyone is different. Some people are affected a lot by sleep loss while others may be affected very little.
- Some individuals show a remarkable tolerance for sleep loss, particularly if the person is motivated to cope with sleep loss (such as caring for a newborn) or if the sleep loss occurs under positive circumstances (such as a vacation or a party).
- Some of the effects of sleep loss may actually be due to the effects of stress that led to the sleep loss. In fact, stress has been shown to have much greater effects on our functioning than sleep loss.
- Most studies on sleep deprivation are typically on young, healthy, eight-hour sleepers who are restricted to four hours of sleep. However, these younger eight-hour sleepers are more susceptible to the effects of sleep loss than shorter sleepers or older sleepers.
- Studies on insomnia patients show that sleep loss does not affect them as much as normal sleepers.


Key Concept: This means that sleep loss does not always have adverse effects on daytime functioning.

## Lesson 3: Sleep Loss and "Core" Sleep

## Core Sleep

Now let's explore the concept of core sleep. Research also suggests that many individuals can maintain performance for extended periods of time on about five and half hours of sleep, or what some sleep researchers call "Core Sleep":

- People who need to maintain performance under challenging circumstances -such as rescue workers, armed services personnel, physicians, and solo yacht racers - can maintain their performance with five to six hours of sleep.
- Studies on insomnia patients show that they average just under six hours of sleep yet do not have poorer daytime performance or alertness than good sleepers.
- The reason core sleep can maintain performance in those who suffer from insomnia is that it contains $100 \%$ of our deep sleep (the most important stage of sleep) and $50 \%$ of our dream sleep (the second most important stage of sleep).
- Core sleep does not have to be obtained continuously. We can sleep for two hours, be awake for an hour, and then sleep three or four more hours. Also, your brain is "programmed" to get core sleep. It will do its best to obtain core sleep each night.


Key Concept: This is not to say that we only need core sleep, since most people need additional sleep to feel their best. However, it does mean that your performance will usually not suffer significantly if you obtain core sleep.

## Lesson 4: Perceived vs. Actual Sleep Duration

You Are Getting More Sleep Than You Think
Research shows that people with insomnia are getting more sleep than they think:

- They overestimate how long it takes to fall asleep and how long they are awake during the night.
- They underestimate how much sleep they get.

This misperception of sleep occurs because they perceive stage 2 sleep as wakefulness; and, time perception is altered under the stressful circumstances of lying awake. As a result, perception of time seems longer than actual clock time.


Key Concept: This means that, by recognizing you are likely getting more sleep than you think, you will reduce negative sleep thoughts and sleep better.

## Lesson 5: Insomnia and Daytime Mood

Finally, let's take a look at the relationship between insomnia and daytime mood.


You may notice that the biggest effect of insomnia is on your mood the following day. You may feel irritable, worried, tired, or a little depressed. This is important to know for changing your negative sleep thoughts:

- In most cases, it is only your mood that may be affected for the day after a bad night's sleep.
- It is not just how much sleep you lose that affects your daytime functioning but also your negative thoughts about your sleep loss. If you can reduce negative thoughts about your sleep loss, you will reduce the effects of insomnia on your daytime mood and functioning.
- If you wake up and begin your day with a negative sleep thought such as "The day is going to be miserable because I did not sleep well", it is the combination of sleep loss and negative mood from this thought that affects your daytime functioning. You can prove this to yourself by noticing that sleep loss due to positive events (such as parties, vacation, etc.) does not have as much of a negative impact on daytime functioning.


## Lesson 6: Practicing Cognitive Restructuring

Now that you have spent some time learning about the scientific findings concerning sleep and insomnia, you are ready to practice cognitive restructuring each day to reduce your negative sleep thoughts and improve your sleep and your daytime mood.

## Your Negative Sleep Thoughts

To begin, you can identify your most frequent negative sleep thoughts using the list below. For each negative sleep thought, there are positive sleep thoughts you can use to replace those negative sleep thoughts. The positive sleep thoughts are based on the information you just learned involving sleep, health, and performance; and, on the information we reviewed in Session 1 concerning basic facts about sleep and sleeping pills.

You will begin to use these positive sleep thoughts each day to replace your negative sleep thoughts. Review them regularly. It may be helpful to write them down, print them or keep them by your bed to refer to at night or when you wake up in the morning.

The 10 Most Common Negative Sleep Thoughts
Now, choose the negative sleep thoughts from the following list that are similar to those you experience most frequently, then review the positive sleep thoughts on the next page that you can use to replace those specific thoughts:
$>$ I will never fall asleep.
$>$ I woke up in the middle of the night/early morning and feel wide awake. This means I will not be able to fall back to sleep.
$>\quad$ I will not be able to function tomorrow.
$>\quad$ I must get eight hours of sleep.
$>$ My insomnia is going to cause health problems.
$>$ I did not sleep at all last night.
$>$ I cannot fall asleep without a sleeping pill.
$>$ I feel terrible today due to my insomnia.
$>$ I will never learn to sleep better.
$>$ What is wrong with me? I must have a psychological problem.

Positive Sleep Thoughts That You Can Use to Replace Specific Negative Sleep Thoughts


I will never fall asleep
$>$ I am more likely to fall asleep as my body temperature falls throughout the night.
> My brain wants to obtain my core sleep.

I woke up in the middle of the night or early morning and feel wide awake. This means I
will not be able to fall back to sleep.
$>$ It is normal to initially feel alert if I awaken at the beginning or end of dream; drowsiness will soon follow.
$>$ If I awaken after about five and a half hours of sleep, I obtained my core sleep. If I do not fall back to sleep, I will be okay.

I will not be able to function tomorrow.
$>$ In most cases, the worst thing that may happen if I do not sleep well is that I may not be in the best mood during the day.
$>$ Sleep loss does not always have a significant impact on my daytime functioning.
$>$ I can handle sleep loss, especially if it only occurs a few nights per week.
$>$ My performance will not suffer significantly if I get my core sleep.
$>$ My functioning will improve during the day as my body temperature rises.

## I must get eight hours of sleep.

$>$ Sleep requirements vary from person to person.
$>$ Sleeping seven hours per night is associated with the longest life expectancy.

## My insomnia will cause health problems.

$>$ There is no cause-and-effect evidence that insomnia causes any significant health problems.

I slept very little or not at all last night.
$>$ I am probably getting more sleep than I think I am.
I cannot fall asleep without a sleeping pill.
$>$ As I learn these CBT-I techniques, I will fall asleep more easily on my own.
$>$ I am better off without sleeping pills since many of them cause a hangover effect and reduce my deep sleep.
> Sleeping pills do not work that well anyway, and part of their effect is actually a placebo effect.
$>$ It will become easier to fall asleep without a sleeping pill the more I try it.
I will feel awful today because I did not sleep well.
$>$ My daytime functioning is due in part to my negative sleep thoughts. If I minimize my negative sleep thoughts, I will improve my daytime functioning.
$>$ My daytime functioning is not just affected by my sleep.
I will never learn to sleep better.
$>$ These techniques work for most people with insomnia, they will work for me.
> My sleep will get better as I learn these CBT-I techniques.
What is wrong with me? I must have a psychological problem
$>$ Most cases of insomnia are due to learned thoughts and behaviors, not mental health problems.
$>$ Insomnia is very common. It affects over half of adults.

## Lesson 7: Sleeping Pills



## Putting Sleeping Pills to Rest

If you are taking sleep medication and you want to reduce the amount you are taking, you are ready to begin sleep medication reduction techniques along with the cognitive restructuring techniques this week.

Several studies on CBT-I have shown that $90 \%$ of people who take sleeping pills can reduce or eliminate sleeping pills with CBT-I and these sleep medication reduction techniques. Two important elements underlie these techniques:

- You can reduce sleeping pill use at your own pace.
- The techniques allow you to gradually decrease sleep medication rather than stopping abruptly "cold turkey", which can backfire and cause increased anxiety and insomnia.


## Putting Sleeping Pills to Rest

Since regular users of sleeping pills can experience withdrawal symptoms or rebound insomnia if they stop sleeping pill use abruptly, gradually tapering sleeping pill use minimizes the likelihood of these problems. Be sure to discuss these medication reduction guidelines with your physician.

Here are the sleep medication reduction techniques:
First, begin by determining the number of nights you generally use sleeping pills during the week, and the typical number of pills on those nights.

Next, reduce the number of pills you are taking by one-half on two nights this week. Space the two nights apart:

- If you are only taking one pill, cut the dose in half and consider this a half pill.
- Choose easier nights when there is little pressure or work obligations the following day.
- Use positive sleep thoughts that we have explored such as "In most cases, the worst thing that may happen if I do not sleep well is that I may not be in the best mood during the day".

Once you are sleeping reasonably well on the two reduced pill nights (this may happen immediately or may take a week or two), you will feel more confident about reducing sleep medication and can then:

- Reduce the number of pills by half on two more nights during the week.
- Space these four medication reduction nights apart (e.g., every other night).

Continue in this fashion until you have reduced the number of pills you take by half on all of the nights that you typically take sleep medication (you will eventually have to take the half dose on consecutive nights). Avoid going back to the original dose.

Once you have reduced the number of pills you take by one-half, begin to go medication-free in the same gradual fashion:

- No medication two nights a week
- Then no medication two more nights
- Then no medication every night


## Examples of Sleep Medication Tapering

I take a sleeping pill every night. Therefore:

- I will pick two nights this week and take half a pill.
- My next goal will be to take half a pill every other night, then every night.
- Once I am down to half a pill nightly, I will not take a pill on two nights a week, then every other night, then every night.

I take sleeping pills four nights per week. Therefore:

- I will pick two nights this week and take half a pill.
- My next goal will be to take half a pill on all four nights per week.
- Once I am down to a half pill on the four nights I take a sleeping pill, I will not take a pill on two nights a week, and then I will stop altogether.

I take two sleeping pills every night. Therefore:

- I will pick two nights this week and take one pill.
- My next goal will be to take one pill every other night, then every night.
- Once I am down to one pill nightly, I will take a half pill on two nights a week, then every other night, then every night. Then I will not take a pill on two nights a week, then every other night, then every night.


## Lesson 8: Week \#3 Goals



In addition to your goals from the prior week, your new goals this week are to:

1. Begin using your positive sleep thoughts to replace your negative sleep thoughts.
2. Work on your sleep medication reduction goal.
3. When you have completed all seven nights on your sleep diary, e-mail it to Dr. Jacobs at info@cbtforinsomnia.com to receive your individualized sleep scheduling guidelines. Then go on to Session 4.

Tips for meeting these goals:
To help you practice cognitive restructuring for negative sleep thoughts:
$\checkmark$ Review this session again on the importance of cognitive restructuring.
$\checkmark$ Post your positive sleep thoughts on your mirror, keep them by your bed, etc.
To help you reduce sleep medication:
$\checkmark$ Review Session 1 on the drawbacks of sleeping pills.
$\checkmark$ Use positive sleep thoughts such as "This will get easier with practice", "Sleep medications do not work that well anyway", or "Part of the effect of sleep medications is the placebo effect."

