

# *Natural Sleep* SECRETS

Discover the  
Natural Secrets of  
Energizing Sleep

*by Martin Brock*

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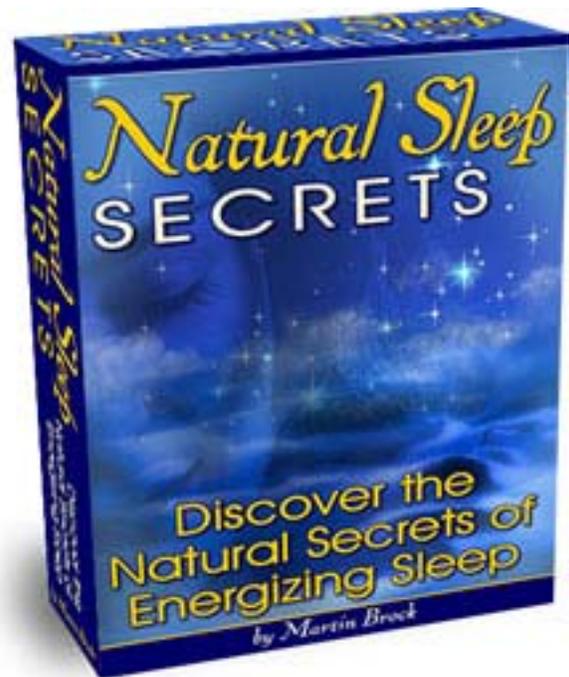
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Natural Sleep Secrets

# Secrets to Restful Sleep



**Proven Natural Sleep Techniques  
that Doctors and Pharmaceutical Companies  
Hope You Never Learn**

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# Overview

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## Before We Begin

The goal of this book is to provide a natural plan for you to overcome insomnia and create naturally energizing sleep. This book is not just for insomniacs, it is for everyone who wants to improve the quality of their sleep and have more energy in their lives. By increasing the quality of our sleep, we see a corresponding raise in the quality of our waking hours.

Through my studies, I have found that the ability to stick with any type program or advice depends much more on the understanding of what is being taught rather than the ability to memorize it. True learning is a process of understanding, not just memorizing. I think it is of the utmost importance to not only provide you with a solution but also to provide you with an understanding of the underlying concepts and principles behind the solution. Just providing you with facts or instructions won't stick in your mind and won't create the incentive needed for making lasting, meaningful change.

Providing you with a series of directions without offering an explanation to give you an understanding of these mechanisms, in my opinion, is futile. It would be similar to a parent telling their child to brush their teeth without telling them the reasons for it. How many of us remember our parents saying at one time or another, "Yours is not to question." That didn't make any sense when we were children, and it makes even less sense now.

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## The Big Picture

Whether you place the blame on the industrial revolution or the light bulb, there's no doubt that ever since man met machine, sleep has gone down the drain! In the course of the last century or so we have brought a most unwelcome intrusion on the natural human sleep system - insomnia - which is exactly why so many people are suffering from lack of energy, and most of us don't even know it!

From an evolutionary point of view, the human race has been pulled out of its natural habitat in a split second. Evolution is something that happens over the course of millions of years. Our sleep mechanisms, partly anchored to the most ancient rhythms of the planet and wired deep into our brains through millions of years, has been systematically tampered with—disrupted for a wide variety of reasons. This will become clear to you as you read this book. You will discover why it's really no mystery why you and so many millions of people around the globe experience a variety of symptoms—health

issues and sleep and energy problems. It's really no wonder we've had to resort to pills and medications of all sorts in order to lead what only can be called a semi-normal life.

Throughout this book, I will shed more light on these factors that have wreaked havoc on our delicate sleep systems and provide you with a step-by-step plan to deal with them. These are the very factors that are at the root of your sleep and energy adversities. Don't worry if this seems a bit confusing right now. It will all become very clear to you as you read this book!

The more you delve into it, the more you learn, the more you will start to perceive your condition as nothing but a bad habit, rather than a disorder. You will also begin to understand how this bad habit is something that can be replaced with healthy alternatives. You're not alone and when you break it down, insomnia is a perfectly logical consequence of the lifestyles and habits of the world in which we live.

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## **Insomnia Is Not a Disease**

Most people wouldn't hesitate to characterize insomnia as a disorder. Similarly, people who experience a lack of energy during the day are also likely to think that they are suffering from a disorder or a disease of some kind – a disorder that requires treatment such as any other disorder or disease. We live in a very drug-oriented society and we're quick to look to pills and medication for relief for almost any symptoms or irregularities that we experience. However, the reality is, often we are merely experiencing symptoms, that should be approached by treating the underlying causes. Taking sleeping pills for instance – won't attack the causes of insomnia, it will simply provide temporary and questionable relief for these immediate symptoms, the inability to fall asleep. The fact is that this inability to fall asleep is the result of a variety of things that you do that you shouldn't be doing, or things that you don't do but should be doing.

# PART I—the Basics of Sleep

Understanding the basics of sleep will be more helpful than you think. I have no way of knowing how much you already know, but if you are not familiar with the basics, this will definitely be the first step towards conquering insomnia/getting more energy in your life.

Understanding the underlying processes and mechanisms that control your sleep will give you a sense of empowerment; you can look down on your problem, rather than your problem looking down on you. The first step is to put you back in the driver's seat so you can take control of the direction of your life.

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## What is Sleep?

It is not until recent years that scientists have actually possessed the technology to measure and study exactly what happens in the human mind and body during sleep.

Up until the 1950s, most people thought of sleep as a passive, dormant, and inactive state where the body and mind are turned off and had nothing to do with our daily lives.

However, we now know that our brains are in a very active dynamic state during sleep, and this greatly influences our waking hours. New technology gives sleep researchers the ability to measure the brain's electrical activity. These activity levels are called Electroencephalographs (EEG) recordings or brain waves.

Each stage represents a different physical and mental state of the body during sleep. During some stages, the body is in a lighter sleep (faster brain waves) and can be awakened more easily, while others indicate a very deep sleep (very slow brain waves).

## Why Do We Sleep?

No one knows for sure why we sleep, but there are two basic theories:

1. Sleep has a restorative function.
2. Sleep has an adaptive function.

## **Sleep as a Restorative Process**

This theory of sleep suggests that sleep helps the body recover from all the work it did while awake. Experiments have shown that the more physical exercise we do, the more SWS (slow wave sleep) we have. If you are deprived of SWS you'll likely experience being physically tired along with being anxious and irritable.

## **Sleep as an Adaptive Process**

Sleep may have developed from our distant ancestor's survival instincts to protect themselves during the night. Because they didn't function well at night due to their inability to see, search for food, and defend against predators, they slept.

Sleep gives your body a rest and allows it to prepare for the next day. It's like giving your body a mini-vacation. Sleep also gives your brain a chance to sort through things. Scientists think that sleep may be the time when the brain sorts and stores information, replaces chemicals, and solves problems.

## **Why do We Need Sleep?**

Sleep helps the body restore and rejuvenate in many different ways including:

- Encoding and storing information - Sleep enables the brain to encode new information and store it properly. REM sleep activates the parts of the brain that control memory and learning. The parts of the brain that control emotions, decision-making and social interactions slow down dramatically during sleep, allowing optimal performance when awake.
- Immune system function - Similarly, sleep also enables the immune system to function effectively. During deep sleep, the body's cells increase production while proteins break down at a slower rate. Without proper sleep, the immune system becomes weak and the body becomes more vulnerable to infection and disease.

## **Core Sleep**

The term core sleep describes the minimal amount of sleep that an individual needs to perform properly during the day. This amount varies from person to person.

In a typical individual, the first 5.5 hours of sleep contain 100% of deep sleep. As you remember this stage of sleep is what is most important in terms of daytime functioning.

When you actively start to reduce the amount of time you sleep (more on this a little later) you will need to experiment to find your personal core sleep.

Keep in mind that even in the event that you do not obtain full deep sleep one night, your body's natural sleep mechanism will make up for this by a prolonged period of deep sleep the next night.

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## Insomnia and Daytime Functioning

### The Eight-hour Sleep Myth

Most insomniacs and people who have problems with daily energy levels fear that a lack of sleep will impair daytime functioning. You too are likely to be influenced by the media hype and sleep researchers telling you that everybody need eight hours of sleep to function during the day. This is not necessarily true! Yet most insomniacs and people who suffer from lack of energy during the day share a very common belief: “If I don’t sleep for eight hours or more I won’t be able to function tomorrow”. No one can tell you how much sleep you need, in fact it is very likely that you have unrealistic beliefs about how much sleep you need to function during the day.

There are many examples of people who sleep four, five or six hours per night and yet are perfectly capable of maintaining high performance levels during the day. Studies of transatlantic yacht racers, who intentionally limit their sleep to as little as possible, have shown that their performance is not impaired. In fact, studies have shown that those sailors who average just around five and a half hours of sleep perform the best.

You see, it isn’t really about how long you sleep. It’s really all about the quality of your sleep. However, over the next few chapters you will learn exactly what quality sleep really means.

The burning question, “how can I get more sleep,” should really be: “how can I raise the quality of my sleep?”

Raising the quality of your sleep is most definitely possible, because most people engage in daily activities that suppress the deep sleep stage and hence lowers the quality of your sleep. Our goal is to optimize your sleep system so the deep sleep stage is not suppressed.

Therefore, our mission is not necessarily to sleep longer; in some cases that won’t do any good. What is one to do then? Well, you want to raise the quality of your sleep. You want to optimize your sleep system and make sure that the all-important deep sleep stage that occurs during your core sleep is not suppressed, but rather optimized!

In fact, most people engage in a variety of activities that produce lighter stages of sleep throughout the night. If your activities and habits promote a lighter stage of sleep, naturally you will experience problems with daytime functioning.

In fact, your ability to function during the day is dependent on many other factors than simply how long you sleep. We will explore these in detail in the next chapter.

People who experience a high quality of sleep need far less sleep in order to rejuvenate themselves physically than those who experience a lesser quality of sleep.

Remember that most of your all-important deep sleep occurs during the first part of the night. In fact, you obtain 100% of deep sleep during roughly the first five and a half hours of sleep. Here we find a very important reason why you can perform on less sleep than you think.

Since the deep-sleep stage is responsible for your physical rejuvenation and therefore your daily energy levels, sleeping more than your core sleep will do very little – practically nothing – to help you feel rested and energetic during the day! It doesn't really matter much whether you get six hours or 10 hours. The extra four hours contain extremely little quality sleep.

Nevertheless, it's not that simple. If you sleep less and the quality of your sleep is reduced as a direct result of the thoughts and behaviors that we will examine, you will certainly feel tired and groggy, because your deep sleep stage was suppressed!

Furthermore, the extra hours only contribute to disturb your body temperature rhythm making it more difficult to fall asleep at night.

Sleep loss: The important realization here is that the worst thing that can happen is that insomnia affects mood – you may be slightly more irritable.

Research has shown that reduced sleep does not impair performance. In fact, studies have consistently shown that you CAN perform despite not getting the amount of sleep you thought you needed.

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## **Bottom Line on Sleep Myths**

There is no need to worry about losing sleep! You can perform well on less sleep than you probably think and furthermore the body has a natural mechanism that will compensate for any lack of deep sleep. So relax and keep reading!

# PART II—Brain Waves, the 5 Stages of Sleep, and Your Inner Sleep System

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## Brain Waves

Your brain produces electrical impulses all the time. These currents of electricity determine your state of consciousness and we refer to them as brain waves. For the purpose of this book, there is no reason to get very technical about this – a basic understanding will suffice. What you need to know is the fact that your brain emits waves of varying speed and that these brain waves are a measure of brain activity. High, intense, or fast brain waves mean high brain activity, whereas slow brain waves denote low activity. In other words, it is when your brain waves are fast, you feel most alert and energized. As brain wave speed decreases, you will feel less alert. When you are in deep sleep, your brain waves are at their lowest.

### Why are Brain Waves Relevant?

Because your brain waves can be manipulated, and chances are that you are interfering with your brain waves every single day. Lifestyle choices such as what you drink during the day or even the way you think influence brain waves. We'll examine the specific factors that interfere with brain waves in later parts of this book.

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## The 5 Stages of Sleep

During sleep, your brain waves cycle through five stages of sleep

### Stage 1—Drowsiness also Known as Twilight Stage

This is a light sleep, when you drift in and out of sleep and can be easily awakened. Your eyes roll very slowly, muscle activity slows and relaxes, you breathe deeply and slowly, and you may move your limbs for five to 10 minutes. People awakened from Stage 1 sleep often remember fragmented visual images – like daydreaming.

### Stage 2—Light Sleep

Now your eye movements stop and brain waves become slower, with occasional bursts of rapid waves called sleep spindles. Your heart rate slows and body temperature decreases.

These first two stages of sleep are of a relatively light quality, called transitional periods.

### Stages 3 and 4—Deep Sleep

Almost all your muscles are paralyzed. Your body rejuvenates itself by healing damaged tissue. Blood that is stored in your organs during the day flow to the muscles to replenish them. Your brain predominantly emits delta waves that have low frequency and high amplitude (slow brain waves). You feel well rested after experiencing delta sleep, and it's very difficult to awaken you during this period. There is no eye movement or muscle activity, and if you are awakened during deep sleep, you do not adjust immediately and often feel groggy and disoriented for several minutes after you wake up. It is very difficult to awaken from deep sleep because you are cut off from the external world. The brain and body are shut down.

### Stage 5—REM Sleep, also Known as Paradoxical Sleep

When we switch into REM sleep, our breathing becomes more rapid, irregular, and shallow; our eyes jerk rapidly in various directions; and our limb muscles become temporarily paralyzed. Our heart rate increases, blood pressure rises, and males develop penile erections. When people awaken during REM sleep, they often describe bizarre and illogical tales – dreams. Scientists still don't quite understand why we dream, but people kept from dreaming develop behavioral and mental problems, so REM sleep is clearly a critical behavior.

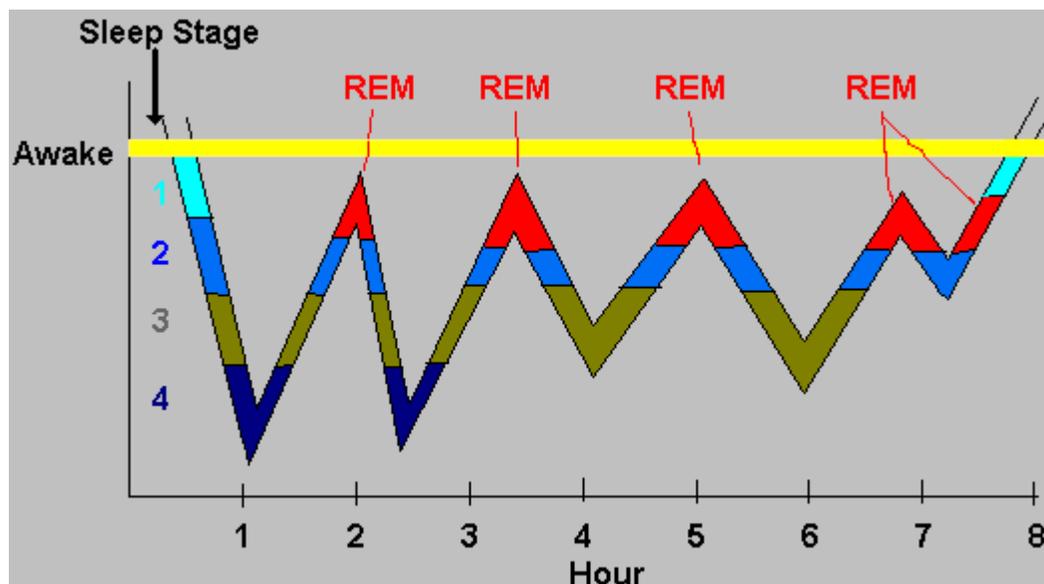
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## Understanding Your Sleep Cycles

It is important to realize that these five stages don't just occur once per night. Throughout the night, you progress through the five stages like this:

1,2,3,4,3,2,REM,2,3,4,3,2,REM,2,3,2,REM,2,3,2,REM,2,3,2,REM,2,REM,1

Are you confused yet? Let's illustrate this concept another way:



Okay, now we know that each cycle occurs several times throughout a normal night. As you may already have figured out, there's more to it than that. Let me explain:

The first sleep cycles each night contain relatively short REM periods and long periods of deep sleep. As the night progresses, REM sleep periods increase in length while deep sleep decreases. By morning, most sleepers spend almost all of their time in Stages 1, 2 and REM sleep with very little or no deep sleep (Stages 3 and 4).

To summarize, while we are asleep, our brains are on a bit of a "roller-coaster" through different stages of sleep. As we drift off to sleep, we first enter Stage 1 sleep. After a few minutes, the EEG changes to Stage 2 sleep, and then Stage 3 sleep, and finally Stage 4 sleep. Then it's back up again: Stage 3, Stage 2, then a period of REM sleep... then it's back down again, back up again, and down again! As shown in the figure above, in an 8 hour period of sleep, the brain cycles through these stages about four to five times.

During the early part of sleep, deep-sleep periods sometimes last up to one hour, and, REM periods only last a few minutes. However, as the night progresses and you sleep, your deep sleep periods become much shorter and REM periods grow longer - up to one hour.

Think of it this way: during the first half of the night, you obtain most of your deep sleep. You receive most of your dream and light sleep in the second half of the night.

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## Quality Sleep

Okay, so we've seen that your sleep progresses in cycles and each cycle consists of different stages of sleep. What is the significance of this, why is this so important?

Research has shown that it's the lack of deep sleep that negatively impacts daytime functioning. When we are deprived of deep sleep, we are most likely to feel drowsy and have trouble staying focused during the day. Other uncomfortable effects of deep sleep deprivation are nausea, headaches, and aching muscles. In other words, the more deep sleep we obtain the better our performance and energy levels the next day.

Therefore, deep sleep restores your physical energy because during deep sleep blood flows to your muscles rather than to your brain, thereby rejuvenating your physical energy.

Our body's natural behavior gives us other clues to the importance of deep sleep. For example if for any reason you don't get enough sleep one night your brain will compensate for this by increasing the percentage of deep sleep obtained the next night. Remember also that most deep sleep occurs during the early sleep cycles, which may be a clue of the relative importance of this stage: it occurs in the period that is least likely to be missed.

What is the one most important thing we can we learn from all this? Since deep sleep is what replenishes your physical energy (and since our focus is on maximizing energy), then deep sleep is equal to quality sleep. Deep sleep is the most rejuvenating stage of sleep, and you get most of your deep sleep in the early sleep cycles. Your sleep then

becomes gradually lighter as the night progresses, which means that the quality of your sleep diminishes.

Your ability to control and maximize deep sleep rests upon your ability to control your underlying natural sleep clock. This is your built-in sleep system that governs your sleep. Chances are you are doing many things that are systematically making a mess of your natural sleep rhythm. Most people in the western world engage in a plethora of activities that suppress the deep sleep stage, keeping you in lighter, less physically restorative stages. We will examine these factors later on, but first I will give you an understanding of how this inner sleep system works.

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## The Internal Sleep System

### Body Temperature and Circadian Rhythm

Your internal biological clock, often referred to as the sleep clock or circadian clock, regulates your sleep and your daytime energy levels. This inner clock is sensitive to many factors, as you will learn later on.

Your biological clock is very different from a normal clock. The biological clock is a physiological system that allows you to live in harmony with the rhythms of nature, such as the cycles of day and night and the changing of seasons. The most important function of our biological clock is that it regulates our sleep/wake cycle. This clock is located in a very small area of the brain called the *suprachiasmatic nucleus* (SCN) within the hypothalamus. This part of the brain is often referred to as the body's master gland because it regulates such vital functions as heart rate, breathing, blood pressure, hormone production, and body temperature! If anything, this should underline the importance of body temperature.

Now that you have a basic understanding of what the sleep clock is, let us look at the specific components or variables that combine to make up this sleep clock.

### The Importance of Body Temperature

A vital component of your body clock is body temperature. Our body clock regulates body temperature, and is very important with regard to sleep. We refer to the body temperature rhythm as circadian rhythm (from Latin meaning "about a day").

Let further explain circadian rhythm and the ebb and flow of body temperature during a day:

In the wee hours of the early morning, your body temperature is at its lowest point and then it begins to rise before sunrise. Your temperature continues to increase throughout the day until mid afternoon when it drops a bit, and then starts rising again reaching it's peak at about 6 PM. During the next few hours, your body temperature drops until you fall asleep, when it starts to decline rapidly until it reaches its daily low point at around 4 AM.

The variation between minimum and maximum body temperature is about 1½ degrees F. in a healthy young adult. These variations in temperature are closely linked to your

daily activities, alertness, and sleepiness. As mentioned earlier, body temperature and sleep are closely related. During late morning and early evening, you are at your most active and alert when your body temperature is highest. As body temperature declines at night, you grow sleepier and less active.

When your body temperature increases, your brain wave activity speeds up as well. Conversely, when body temperature declines, brain waves slow down.

In other words, in order for you to start waking in the morning and for you to feel energized and alert, your body temperature must rise.

Still, many people lead a lifestyle where this natural body temperature curve is not really a curve at all, but very flat! Meaning there is not a very big variation between high and low--. If there isn't a significant rise in body temperature in the morning, your level of alertness won't increase significantly either, or at least not rapidly. Conversely, if there is not a significant drop in body temperature at night, sleep will not come easily.

This rise and fall in body temperature is what sends a signal to your brain – when to feel tired and when to feel awake.

A good body temperature curve isn't just something that comes along automatically. Your body needs a cue to start its natural rhythm and “align” itself with the cycle of light/dark for your body temperature to rise.

Similarly, in order for you to fall asleep at night, a drop in body temperature is required. If this drop does not occur, you will experience severe difficulties falling asleep! The prerequisite for this drop in body temperature to occur is that your circadian rhythm started on cue upon awakening in the morning!

What has happened to so many people in today's fast-paced world is that they inadvertently do any number of things that inhibit this circadian rhythm and mess with the natural body temperature curve. Two of the most important factors that interfere with body temperature rhythm are your daily level of natural sunlight exposure and your daily level of activity. We'll explore those factors in detail later on.

Remember that if your cycle does not start in the morning but rather later in the day, you delay your natural rhythm, which in turn delays the drop in body temperature that is required for you to fall asleep.

## **Melatonin**

You may have become acquainted with melatonin as a popular supplement, but melatonin is more importantly a natural hormone that is secreted by the pineal gland, a small gland nestled deep within the human brain. Scientists did not become aware of melatonin until 1958! Melatonin is one of the key components of your inner sleep system. When melatonin levels are high, you feel drowsy and tired; and conversely, when melatonin levels are low, you feel vitalized and full of energy.

Sunlight and darkness regulate melatonin levels. When sunlight enters your eyes, melatonin levels decrease. This also causes a rise in body temperature. In other words, you start to feel awake.

## **Prior Wakefulness**

Prior wakefulness is a very basic concept. It is simply the number of hours that have passed from the moment you awaken in the morning until you turn out the lights at night. By increasing prior wakefulness, you are stimulating your “sleep drive.” Naturally, the more hours you are awake the more you increase the pressure for sleep. You’re probably thinking, “of course I will be more tired the longer I’m awake” but there’s more to it than just that. Research has shown that by increasing prior wakefulness your sleep will be more restful. In other words, by increasing prior wakefulness as much as possible (without missing core sleep), your sleep will be more restorative because you will more easily enter the deep sleep stage(s). It is a scientifically proven fact that the more prior wakefulness, the more quality sleep!

Prior wakefulness is also important because if your prior wakefulness is low (you haven’t been awake long enough) then it follows that you’ve had less time in which to be active as well as less time to be exposed to natural light. This weakens your sleep system by inhibiting the rise and fall in your body temperature, which you need to induce deep, quality sleep.

# PART III—Circadian Meltdown

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## Disrupting Your Natural Sleep Rhythm

In Part II, we looked at the mechanism that regulates your sleep and energy, your inner sleep clock. This internal sleep clock is a very delicate physiological system—it is very sensitive and its natural rhythm is easily thrown out of balance by a number of internal and external factors. In other words, insomnia or impaired daytime functioning is often a symptom of the way you live your life and the way you think. It is critically important that you consciously identify and understand the issues that are messing up your natural sleep rhythm. In this part, we will be looking at these specific issues and providing you with a deeper understanding.

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## The Circadian Daredevil

Like many of you, Frenchman Michel Siffre also rejoiced in a New Year's celebration in 2000. Yet unlike most of you, Michel's celebration took place three days late! Michel Siffre, a then 61-year-old cave explorer, descended 2,970 feet into a cave located in southern France as part of an experiment. Michel lived in this deep cave for two months with no contact with the outside world and without any kind of instrument to measure the time of day. He found it extremely difficult to keep track of time while living without cues of any kind to help him tell if it was day or night.

Scientists wanted to study Michel's sleep habits while he was in the cave. For that purpose, Michel wore electrodes on his body that allowed scientists at the cave opening to monitor his sleep. They observed that Siffre's sleep/wake cycles varied considerably. His "day" or prior wakefulness (the time between major sleep periods) varied between 18 and 52 hours (his average "day" equaled 27.5 hours)!

What happened to Siffre? Being confined in an environment without exposure to natural light, his internal body clock was thrown out of balance. As we have already briefly touched upon, sunlight is the cue for your body clock to reset and adjust itself to the environment. During his stay in the cave, Siffre's body clock never received this cue and naturally, his body didn't know when it was supposed to sleep and when it was supposed to be awake. The result: his natural sleep rhythm was thrown out of whack.

### Sunlight

You may be asking yourself, "How is this relevant?" I'm not living in a cave or planning a trip to the moon anytime soon. Okay, you don't need to convince me of that, but the fact is that ordinary home lighting is a very poor substitute for natural sunlight. As far as your body is concerned staying in a office or in your home most of the day with no or

very little exposure to natural light is the equivalent of living in a cave – and as you have probably figured, human beings weren't designed to spend most of their time in a cave.

If you think that there is plenty of light in your home or at work, you are not quite right. You see, an ordinary light bulb emits around 200-500 luxes (a measure of illumination) of light. This is an inadequate amount of light especially when you consider that the light at sunrise produces around 10,000 luxes and at noon around 100,000 luxes. This should make it painfully clear that most indoor lighting is insufficient for our purposes.

This is the reason why sunlight is so important. When bright sunlight enters your eyes it causes melatonin levels to decrease which stimulates wakefulness. The more luxes, the more melatonin production is inhibited. Conversely, when you are primarily exposed to indoor lighting during the day, melatonin levels increase since this type of light contains too few luxes and thereby your sleep system doesn't understand it is getting light (isn't adequately fueled). It thinks you're in near-darkness and you will start to experience feelings of fatigue and tiredness.

We can tell from this that exposure to bright light is required in order to make your body tell the difference between day and night. It is also crucial because if you stay out of natural light the entire day, you are flattening your circadian rhythm curve. This means that your body temperature doesn't rise very much, which means that you are not giving your body a cue to start its natural rhythm. When your body temperature doesn't rise very much, logic tells us that the ensuing drop in temperature will only be very small as well. This means that you are making it harder for your body to decipher the clues it needs to tell whether it is time to be awake or sleep. An irregular and limited exposure to sunlight "flattens" your body temperature curve. If you are not exposed to natural light until later in the day, you are delaying your body temperature curve.

We can probably agree that moving to a cave is just a bit out of the ordinary, some might even call it crazy, but it isn't one bit crazier than depriving yourself of natural light! That's exactly what you're doing if you're not getting sunlight in the morning and throughout the day.

It is often when people fail to expose themselves to sunlight as soon as they get out of bed and during the day that their natural sleep system becomes disrupted. In that case, you are giving your body a good reason to think that it's time to sleep. The inevitable result is that you will be feeling drowsy and likely to fall asleep during the day. Further, the onset of night is not as a strong cue for your body that it is time for rest, because your body doesn't have a clear distinction of day and night. The result is that your body and its natural rhythms become confused.

### **The Bottom Line on Circadian Rhythms**

You need sunlight – by exposing yourself to sunlight you are communicating with your body in terms that your body can understand. Exposure to sunlight in the morning tells your body that another day has started and that the time for sleeping has ended.

You also need darkness. When you are in a completely darkened room, you are telling your body that it is time to sleep.

Failure to expose ourselves to daylight is only one of the many ways that we are interfering with the inner sleep clock. We also engage in a variety of additional activities that only further disrupt the inner sleep system.

It's important to remember that it's exposure to **natural** full-spectrum light (sunlight) that affects melatonin levels and body temperature—the sleep clock's thermostat.

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## The Passive Lifestyle

We live in a day and age where physical activity is becoming less and less required in order to lead a perfectly functional life. Rather than spending hours outside chopping wood, we simply turn the knob and turn up the heat. At work, we send an email to our co-workers rather than getting up and talking to them in person. Tasks that were once done by hand are increasingly automated. We increasingly automate our homes. Our places of work increase efficiency by using robots, computers, and other labor saving equipment. In general, lifestyles with a pronounced tendency toward physical inactivity are becoming the dominant lifestyle.

The consequences of a life of physical inactivity are severe. You've heard a million times that exercise is healthy and that the human body was designed to be physically active and not to be passive, doing practically nothing! We've all heard it, yet many people fail to incorporate regular exercise into their daily routines. We hear everywhere that exercise is healthy, but often we do not hear about the exact consequences of inactivity. I often think that's a major reason that we lack the motivation to start living an active life. We know that exercise is good for our health, but we aren't always equally aware of the very dramatic consequences of a life of inactivity.

Let the following serve as a reminder of just how important exercise is for your health and well-being both mentally and physically.

The most obvious benefit of regular exercise is reaching your ideal body weight. When you lose excess weight, your body image improves and you feel better about yourself. This is both a mental and physical benefit in one! However, there are so many more benefits of exercise, for example:

- Exercise helps **decrease** anxiety, stress, anger, blood pressure, cholesterol, and depression.
- Exercise **eases** muscular tension.
- Exercise **sharpens** the brain by increasing the amount of oxygen available.
- Exercise **strengthens** the heart and lungs and **vitalizes** the nervous system.
- Exercise **increases** endorphin production. Endorphins increase well-being and pain resistance.
- Exercise **increase** energy levels, mood, and self-esteem.

- Exercise **reduces the risk** of a wide variety of diseases including diabetes, osteoporosis, coronary heart disease, hypertension, obesity, back problems and colon cancer.

An important thing to note: Exercise not only helps you attain better health, it is also an outlet for mental and emotional distress such as anxiety and anger. It is also an effective tool in warding off depression. Anxiety, anger, and depression all have a very negative influence on sleep! We'll learn more about this later on.

Did you know that exercise has a more tranquilizing effect than many medications against anxiety?

I could go on about the general benefits of exercise, but that is not the focus of this book. I hope that this has been a wake up call for those of you who lead an inactive lifestyle. Let's look at exactly how sleep and exercise relate to each other. There are several reasons why physical inactivity can lead to increased insomnia.

Recall how your daily rise and fall in body temperature – your circadian rhythm – dictates your ability to fall asleep. The more physically inactive you are during the day, the more you are inhibiting your daily rise and fall of body temperature – and we have already learned how inhibiting your natural temperature fluctuations can cause sleep problems.

Exercise produces a quick rise in your body temperature followed two hours later by a drop in body temperature, which will last from two to four hours. This drop in body temperature will make it easier to fall asleep and stay asleep.

Exercise is also conducive to sleep because it puts strain on the body. When you physically engage your body, your brain will compensate for this by increasing the length of the deep sleep stage. This means that exercise will not only help you fall asleep and increase sleep efficiency, it will also help you raise the quality of your sleep. Furthermore, because you will be in a prolonged period of deep sleep, it decreases the likelihood of you waking up!

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## **The Effects of Sunlight and Exercise**

**Now that we have learned about sunlight and exercise**, let's look at the exact implications of this newly found knowledge.

Both exercise and sunlight have a direct impact on your sleep system and your body temperature rhythm. If you don't get sufficient exercise and sunlight, you increase daytime drowsiness because you inhibit the daily rise and fall of body temperature.

When feeling drowsy and lacking energy during the day most people quickly jump to the conclusion that it is because they didn't get enough sleep. For this very reason, they rest more and decrease their activity level based on the theory that "I'm feeling tired, so obviously I didn't get enough sleep last night and I should probably get some rest."

This is a faulty theory and exactly the sort of behavior that will only create additional sleep problems for you! It is counterproductive because by being inactive and staying indoors you are flattening your body temperature curve so you will feel more tired,

when in fact; you are supposed to be feeling awake. You can easily get caught in a vicious cycle: the more fatigue you encounter, the more you are likely to stay inactive (and consequently the less restorative your sleep will be at night). You are also more likely to stay indoors and thereby limit your exposure to sunlight.

Also, keep in mind the lesson we learned earlier: you CAN perform on less sleep than you think! In addition, for a brief period you can perform with less sleep than you need, so discard that particular worry for now. Although you may get less sleep than you need on occasion, the proper way to combat this reality is by being physically active and staying outdoors in order to receive exposure to natural light! Go get up, get out and get active!

When you're feeling tired, fatigued and lacking in energy you are likely to try to compensate for this by getting to bed early. Nice try! Unfortunately, this only weakens your sleep system by decreasing your prior wakefulness, which decreases your "sleep drive."

You will also tend to decrease activity levels and your exposure to natural light by going to bed early. Remember the goal is just the opposite: you want to INCREASE prior wakefulness to create a deeper, restorative sleep. By doing the opposite you will only encourage lighter and less rejuvenating sleep which leaves you feeling drowsy and without energy during the day. This, in turn leaves you with a tendency to be inactive and stay indoors, and the vicious cycle continues!

Remember! Even if you DID in fact get too little sleep, the best way to counter a sense of tiredness, fatigue and lack of energy is by **getting** sunlight and exercise and NOT by staying inactive and resting. This will only trap you further in this cycle!

Bottom line: No matter how little you sleep or how little you think you have slept or how drowsy you feel - **get out and get active!** This is the best way to turn this vicious cycle around: incorporate an element of daily outdoor activity into your life!

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## Compensating for "Lost Sleep"

### Why Catching up on Sleep doesn't Work

Catching up on sleep is a preferred strategy among many insomniacs. In fact, trying to catch up on "lost sleep" is counterproductive, because it throws off your natural body rhythm. It creates even more of the very problems insomniacs are trying to solve. As you recall, your circadian rhythm governs your sleep. By getting up later, you delay your exposure to sunlight and postpone the physically active start of your day. By delaying these factors, you also delay the corresponding rise in body temperature. That means that you delay the needed drop in body temperature (that is conducive to sleep) by that same length of time at night. If you try to get to sleep at your usual bedtime, your body temperature may still be too elevated, and you will find it difficult or impossible to fall asleep.

This is how by sleeping in on Sundays, for instance, you are actually creating a kind of artificial jet lag. (If you fly three hours east, morning arrives three hours early. It's three hours later on the East Coast of the US than on the West Coast.) You haven't been on a

plane, but the effects are exactly the same. You are creating a shift in your natural rhythm. Trying to catch up on sleep only disrupts your natural rhythm of your body. In effect, you will prolong this and create fertile ground for insomnia at night.

You can always catch up on quantity of sleep simply by sleeping longer hours, but what you can't catch up on is quality sleep, which as we've learned is what really matters! As you remember, you get most of your quality sleep (deep sleep) during the first part of the night, during the first cycles of sleep. So if you extend your sleep time to ten hours or more you will obviously be increasing your amount of sleep (quantity), but the benefits in terms of increased energy will be limited since the extra hours of sleep contain brief, if any periods of deep sleep! You see now that trying to catch up on lost sleep is another strategy that is destined for failure!

The good news is that this is not really something that you should worry about since our sleep system has a self-restorative function; a "drive" that will compensate for the lack of deep sleep one night by increasing the percentage of deep sleep you receive the next night!

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## **Drugs, Drinks, and Food—the Basic Sleep System Disruptors**

### **Caffeine**

Caffeine is the most commonly used drug in the world and is naturally found in coffee and cocoa beans, cola nuts and tea leaves. Caffeine is a stimulant that speeds up brain waves (increases alertness), heart rate and increases blood pressure.

The big problem with caffeine is that as a stimulant, it increases the speed of your brain waves. This increased brain wave speed means that your body will experience difficulties entering the deep sleep stage for very long if at all, if you consume caffeine too close to bedtime. In order to achieve deep, restorative sleep, your brain wave function needs to be slower.

The effects of caffeine can last six hours or more. This means that a few cups of coffee in the morning or before noon probably won't negatively affect your sleep.

It's important to note here that people differ greatly in their sensitivity to caffeine, although insomniacs tend to be very reactive to caffeine due to an extremely sensitive sleep system.

### **Nicotine**

Nicotine is not only toxic to your health it disturbs your sleep as well.

Nicotine is also a stimulant that speeds up brain waves thereby promoting poor sleep. Nicotine use can cause you to have trouble falling asleep and can also cause more awakenings during the night. Nicotine can also lead to an increase in heart rate and blood pressure.

A little known fact is that smokers often experience nicotine withdrawal symptoms during sleep, which means your body will have more difficulty entering the deep sleep stage.

## **Alcohol**

People who are experiencing difficulties falling asleep often try to solve the problem with alcohol - the so-called nightcap. Although alcohol initially has a stimulating effect, that effect is followed by a decrease in the time needed to fall asleep. However, while alcohol does help people fall into light sleep, it also robs them of REM, which robs them of the deeper, restorative stages of sleep. Instead, it keeps them in the lighter sleep stages, from which they can be easily awakened.

In other words, if you drink alcohol to induce sleep you are doing yourself a grave disservice – by using alcohol as a quick fix, you are harming the stage of sleep that is responsible for restoring your physical energy, which is likely to have a negative impact on your daily energy levels.

## **Food, Serotonin and Digestion**

Serotonin is a chemical neurotransmitter in the central nervous system. Studies have shown that serotonin is an important regulator of the sleep/wake cycle. In studies where serotonin production was inhibited, the results were lack of sleep or insomnia. Conversely, when serotonin levels were increased, restful, and deep sleep was induced. What is important to know is that serotonin promotes sleep!

Some foods, such as foods with high contents of complex carbohydrates, increase serotonin levels while others such as red meat inhibit the production of serotonin. In other words, some foods will strengthen your sleep system, while others weaken it. In the next part, we will look at specific diet changes that will promote restful sleep.

It is also not a good idea to eat right before bedtime. This is important because your digestive system slows down at night making it more difficult to digest food. As you recall, during the deep sleep stages our bodies rejuvenate physical energy by pumping blood to the muscles. By putting a strain on your digestive system at this time, the deep sleep phase will be less energizing because your digestive system is consuming energy that would otherwise rejuvenate the body.

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## **Sleeping Pills—Why You don't Need Them**

As mentioned, insomnia is not a disorder, illness, or condition that should be medicated away. The reason for this is very simple: Insomnia has several underlying causes that we have just examined in this part. Sleeping pills do nothing to eliminate these causes; they only address the symptoms. Even on the symptomatic front, they are a very poor substitute for the natural approach.

When you are finished reading this section, I expect that you will see that the minimal benefits of sleeping pills do not (by a long shot) outweigh the negative aspects and side effects. You'll come to realize that the only appropriate places to put your sleep medication are in the trash or flushed down the toilet – not in your mouth. Still, it is important you consult with your doctor before doing so.

A few of the negative sleep and health effects of sleeping medications include:

- Dependency
- Higher mortality rate
- Lower self esteem due to feelings of lack of control
- Loss of effectiveness over time

Because sleeping pills leave chemical leftovers in your body, some of the side effects that will last for days even after discontinuing their use include:

- Drowsiness during the day
- Nausea
- Blurred vision
- Weakness
- Loss of appetite
- Memory loss

While drugs may offer some temporary symptom relief, our quest goes beyond that. As mentioned, sleeping pills have an all-important flaw – they fail to eliminate the actual **causes** of insomnia, and they can never be considered a remedy for chronic insomnia! Furthermore, regular use of sleeping pills most often lead to dependency, trapping the user in a cycle of insomnia and dependency – that in reality means that you are left with two problems where there was only one, and you’ll make no progress toward the goal of becoming a natural sleeper.

It is also common for one’s self-esteem to suffer because of the use of sleeping pills. Sleeping pill users are often left with a feeling of powerlessness, a feeling that they cannot control their own lives. Regular users of sleep medications often report that they feel like addicts. Their sense of power over themselves is severely impacted due to this lack of self-control – the feeling that the “solution” for the problem is attributed to external factors rather than internal factors. Sleeping pills only further fuel the belief that you are not in control of your own life.

Furthermore, sleeping medications cost money, and will leave you with a recurring expenditure.

The effects of sleeping pills wear off. It is a recognized fact that sleeping medications become gradually less effective with regular use.

Despite these facts about sleeping pills and their potential side effects, physicians continue to prescribe them. Doctors receive very little specialized training on insomnia during their medical education. When was the last time you heard of a doctor performing a “sleep rotation?” Since they aren’t particularly qualified in this area, they often simply prescribe sleep medication to avoid dealing with the problem – take two and call me in the morning!

Traditionally, little money has funded sleep research, and this has resulted in precious little scientific information to guide doctors to an effective resolution. In short, you're pretty much on your own to solve "routine" insomnia problems.

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## The Mind Body Connection

*"The soul's passions, seem to be linked with a body, as the body undergoes modifications in their presence."*

*Aristotle*

Thoughts and beliefs about the connection between mind and body date back to the ages of long-gone thinkers. It is not until recent times, however, that there has been real scientific evidence to support specific theories.

Stress and worry are integral components of everyday modern life, and they can affect your emotional health. You may have negative thoughts about many things in your life, including **sleep**. You may worry about getting laid off, marital problems, divorce, financial troubles, or you may just have an overwhelming work schedule.

Chances are you are exposed to a huge number of daily stress factors. In fact, on average people experience 150-200 stress factors per day! I'm sure we can agree that modern life is filled with many stressful situations and a lot of ensuing negative thinking.

You know all too well how these negative thoughts, events, and emotions affect your mood, happiness, and general emotional well-being. It is important to understand that these factors do not only interfere with your well-being on an emotional level, but also your body responds to these negative thoughts and feelings on a physiological level, by trying to tell you that something isn't quite right in the only way it knows – through pain, illness and other physical symptoms. Modern science has established as fact that your thoughts and feelings cause parts of your brain to produce hormones in your body, and these hormones regulate body processes. In other words, your thoughts and feelings are converted into physical responses in your body. Your body "translates" these thoughts and feelings and responds to them. When you are emotionally unbalanced due to generally stressful circumstances or a particularly stressful event in your life, your body will give you a signal that something is not quite right. This signal is most often one or more health problem such as:

- Back pain
- Change in appetite
- Chest pain
- Constipation or diarrhea
- Dry mouth
- Extreme tiredness
- General aches and pains
- Headaches
- High blood pressure

- Insomnia (trouble sleeping)
- Lightheadedness
- Palpitations (the feeling that your heart is racing)
- Sexual problems
- Shortness of breath
- Stiff neck
- Sweating
- Upset stomach
- Weight gain or loss

Don't worry. You don't need to memorize this list; there won't be any pop quiz at the end of the chapter. It was just an illustration of the many ways your thoughts and feelings can affect you physically and to underline the importance of emotional health.

### **The Mind Body Connection is Stronger than You Think**

That the mind has power over the body may not be news to you. What may be newsworthy however is the extent to which the mind wields its power over the body. This is most often underestimated!

In recent years, recognized scientists have made discoveries that would have been unheard of just a few short decades ago. Dr Herbert Benson, the father of the relaxation response (that we'll learn about later) discovered something that was definitely not in tune with conventional medical thinking when he discovered it back in the 1960s.

Examining practitioners of transcendental meditation, he found that their brain wave frequency was significantly lower than normal, as was their metabolism and breathing rate.

This is very interesting. Can meditation really lower brain waves? How and why can this be? By simply changing their thought patterns through meditative practice, he found corresponding physiological changes.

In fact, what happened in their bodies due to their altered thinking patterns was a phenomenon that essentially is the exact opposite of stress. It was the result of a deliberate act of meditation. Dr. Benson called this reaction "the relaxation response". This response can be consciously triggered, and you will later learn how this technique is an immensely powerful remedy and how you can elicit it at will.

### **Why the Mind Body Connection is Important**

The mind body connection is important to our study of insomnia, because there are many ways that the thoughts and feelings you experience during the day actually create physical responses in your body that are damaging to your sleep system, reducing the quality of your sleep, and making it harder for you to fall asleep and to stay asleep.

Let's examine these factors in detail now.

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## Stress

It's no secret that modern life can be very demanding. Throughout our daily lives, we are constantly exposed to stressful events. Causes of stress are plentiful and include:

- Pressure to perform at work, school, or sports
- Financial and money worries
- Arguments
- Family conflicts
- The inability to fall asleep
- Divorce
- Unemployment
- Illness
- Negative beliefs and feelings
- High expectations, perfectionism
- Bad habits
- Addiction
- TV, The state of the world, war, violence, crime
- News

The list goes on and on. In fact, studies have shown that an average citizen in a city the size of Boston experiences as many as 60 stressful events during a single day. Other sources estimate the number in a 24-hour period to be in the hundreds.

You should know is that stress is a natural mechanism that is built into the human system. It's perfectly natural – it's how the body was designed in order to survive. We can't eliminate all stress, and we shouldn't – all stress isn't bad. The only way to exclude yourself from stress literally would be to stop living your life, as you know it. Even then, you'd still be stressed because your basic emotional and social needs wouldn't be met. However, there's both good stress and bad stress. Stress is good when there is a natural balance of arousal (stress) and its opposite, (relaxation). This balance often eludes us because we seek out activities that cause stress yet fail to seek out activities that help our bodies wind down

What is important to realize is that stress is not just something that goes on in your mind. Stressful events produce physiological changes in your body. Think about what we just covered in the mind-body section. As we learned, emotional events cause responses in your body. Stress is no exception. Let's examine this more closely.

## **What is Stress? The Stress Response: Fight or Flight**

The human body comes with a built-in “self defense” mechanism. This mechanism is known as the fight or flight response. When this mechanism is triggered by stress, a perceived threat, your body enters into a state of alertness and prepares to deal with the threat at hand, so you are optimally equipped to either flee or fight. This change takes place in your hypothalamus, which is a part of your brain. This system is designed to mobilize you to deal with threatening situations. This is a very primal part of the human make up, and it dates back to our caveman ancestors

Specifically, when this stress response is triggered, your body produces stress hormones. This means that your body moves into an elevated state of readiness. (Blood flows to the large muscles of the arms and legs to prepare to fight – to run for your life!) This aroused state doesn’t just occur and then disappear. It’ll stay with you until the brain sends the all-clear signal, telling the body that it’s now safe to go back to normal. Due to the tremendous number of perceived stressful situations you encounter during a day, if you don’t take measures to counter this reality you will remain in this aroused state not only during most the day but also during the night. It is obvious, of course, that this aroused state (causing higher brain waves) will likely lead to a lighter less rejuvenating sleep.

We will examine your body’s natural counter-mechanism later on.

### **Don’t Knock out Your Boss**

Our ancestors’ survival relied heavily on physical solutions to threatening situations. The stress response was a useful feature when forced to deal with a fellow cave dweller who just ran off with their prey or when suddenly faced with a fierce predator. In such scenarios, this physical response to these very real stressful situations was very helpful to our ancestors, because it helped them to either fight or flee.

As I mentioned earlier, social customs of modern civilization makes this fight or flight response a non-viable reaction to the typical stress we encounter in our daily lives. In today’s world, we rely on communication to resolve stressful conflicts and issues with our spouse, boss etc. We have more options to choose from other than fight or run away.

Furthermore, the stress factors of the modern world also tend to be more chronic in nature (financial problems, divorce etc) and not as transient as in the day of the cave dweller.

Due to the high number and chronic nature of today’s stress factors, our bodies remain in this aroused state of readiness for much longer periods. The stress response is triggered repeatedly, often inappropriately and for significant periods. The stress builds up. The tension from one response to stress builds on tension from previous responses to stress and so on during the course of the day.

What does this mean today? When you are exposed to a typical daily stress factor, the stress response is triggered and your body gets all worked up and ready for action. It isn’t necessary for your body to get juiced up for every little perceived stress. So put one way, your body gets all worked up for nothing. Your body never really winds down before the next perceived stressful incident occurs and more stress hormones are

produced. Your body is getting ready to knock out your boss or run away screaming from your wife or husband, but that's not going to happen. At least I hope not. :) Instead, you are left in a continually aroused state that produces stress hormones non-stop.

### **Stress Response and Sleep**

Lets examine more closely how sleep and stress are related. What we have learned about stress so far will enable you to understand exactly why these stress reactions have a very negative impact on sleep!

Studies have shown that stress not only causes sleep problems but also reduces the amount of your deep sleep. In fact, the more stress you are exposed to, the more stress hormones are released in your body and the less deep sleep you will enjoy. As you recall, deep sleep is the most replenishing and important part of your sleep. Put another way, the stress hormones triggered during the day continue into the night, stimulating the wakefulness system and thereby significantly increasing the likelihood of insomnia, and decreasing deep restful sleep! So if you are extremely stressed (and fail to counter the stress response), your sleep will be less rejuvenating, increasing your fatigue levels during the day. This is exactly how stress can have such a devastating effect on your sleep as well as your daily functioning.

Not only does stress mean that your deep sleep is disturbed, it also leads to trouble falling asleep because the level of stress hormones cause higher brain waves.

Due to these reasons, it is critically important that your learn ways to counter your daily stress. You need a solution that will counter the production of stress hormones so your body isn't left in an aroused state that disturbs your sleep. We will cover this in the next part of this book.

### **Actual vs. Imaginary Stress**

In the beginning of this section, we learned that stress comes in many forms. We can divide these many types of stress factors into two basic categories: Actual stress (external) or imaginary stress (internal). Not only are actual physical stress factors such as a fight, divorce, etc. powerful triggers of your bodies stress response, but so are imaginary threats such as negative, pessimistic thoughts. They are equally disturbing to your serenity, simply because your body can't tell the difference between real and imaginary stress factors.

Let's take divorce as an example. It's a horrible thing, but it is a part of life for many people, but people react very differently to the same situation in their lives. While some may choose a positive optimistic outlook on their post-divorce future, many others will think about it in counterproductive ways:

"I am never going to meet anyone new."

"I always have bad luck."

Another example: You make a mistake at work and you immediately move from thoughts of the mistake to thoughts and worries about getting fired. You've probably

made mistakes before and you didn't get fired, but your negative thoughts about yourself, and what may result from the mistake you've made creates stress, when in reality there is no imminent danger. We all know what it's like to over dramatize a negative event!

These are examples of imaginary stress, and this type of thinking leads to stress response reactions in your body.

This is important because as I stated above your brain can't tell the difference between physical and psychological stress. This means that a stressful reaction doesn't have to be founded in any real external events such as those we have talked about. Imaginary or overblown threats produce the same results. Simply by imagining a threat or a potentially negative event, you can trigger the stress response.

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## **The Way You Think about Sleep**

The previous part may well have clued you in on the fact that you may need to change the way you think about a lot of things, including sleep. We've already seen how immensely powerful thoughts can be; they have the power to change our lives and make us sick, but thoughts can also make us better. Just as negative thoughts cause a negative body response, positive thoughts can cause a positive body response. Thoughts have an impact beyond your immediate feelings.

Insomnia often accompanies habitual negative thinking patterns coupled with worry about not being able to sleep. This serves to worsen the insomnia. Most insomniacs share a very unhealthy fixation on sleep. You may come to realize that you share this obsession. Do you associate sleep with negativity, frustration and worry? Do you dread going to bed? Do you feel an overwhelming sense of panic associated with your inability to fall asleep and stay asleep? Do you worry about not getting enough sleep and not being able to function the next day?

If this sounds familiar to you, it's fair to say that this worrying and negativity is linked to your inner monologue.

"I'll never be able to fall asleep tonight."

"I'll never get any sleep."

We refer to this sort of thinking as negative sleep associations.

You may have noticed how the more you worry about not being able to sleep, and the more you think negatively about sleep, the more insomnia is aggravated. And you may even have thought to yourself that the fact that you can't stop thinking negatively about sleep only makes your problem worse, because the more you think about the problem the more you are preoccupied with it, and the more difficult it is to fall asleep. As you will learn next, this is no coincidence.

## **Negative Sleep Thoughts Affect Your Sleep**

As we learned earlier, your mind and thoughts exert incredible power over the body. Negative sleep associations are no exception. In fact, your negative thoughts have a direct and significant impact on your body and subsequently on sleep.

Negativity about sleep brings on anxiety and frustration. Anxiety and frustration cause physiological changes, which trigger the stress response including increasing the frequency of your brain waves! As we have already learned, fast brain wave activity triggers the body's wakefulness system and inhibits the sleep system.

So, what have we learned here? Negative thinking keeps you awake! It doesn't just keep you awake because you are preoccupied with negative thinking; it keeps you awake because negative thinking leads to involuntary physiological reactions in your body that inhibit sleep.

In fact, what happens is that you enter a vicious cycle—the more worry and frustration that builds up inside you, the more sleep inhibiting processes occur in your body and it will take even longer for you to fall asleep. As it takes longer, frustration grows and you become trapped in a toxic, vicious cycle!

This realization should provide you with both incentive and motivation to stop the negative thinking. That is easier said than done, because even with the realization that you think negatively about sleep, this alone won't do anything to change it. This is because your negative sleep thoughts happen on a habituated level, often unconsciously.

Negative thoughts and feelings are among the underlying causes of insomnia! Therefore, it's essential that you eradicate your negative feelings and thoughts about sleep. A different mind set is pivotal in taking your power back and gaining control over your sleep. What you need now is a strategy to change this habitual way of thinking.

Fortunately, proven techniques have been developed to eradicate your negative thinking and replace it with positive alternatives. We will look at specific techniques later in the book.

Your thoughts have a significant impact on stopping you from attaining your goal of restful, deep sleep. Being motivated to eliminate this toxic belief system is essential to obtaining your goal.

Later in this book, we will look at a concept called Cognitive Restructuring, which is a technique that will enable you to replace your negative, toxic belief system with positive alternatives.

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## **Associating Your Bed with Wakefulness**

### **Are You Spending Too Much Time in Bed?**

Most people would agree that spending time lying awake in bed is a complete waste of time. If you find it particularly difficult to fall asleep at night, it is very likely that negative thinking and negative associations play a significant role.

These negative associations play a major role in the relative ease or difficulty you experience in falling asleep. Whether you are aware of it or not, your mind has been taught through repetition to associate certain activities with other behaviors, feelings or activities that are linked to your ability to fall asleep. Let's look at how this works.

As a typical insomniac, you probably spend a lot of time in bed being unable to fall asleep. From this reality, you have involuntarily taught yourself to associate your bed with frustration, restlessness, wakefulness, and a chronic inability to fall asleep.

You probably have completely different associations attached to your living room couch or easy chair. You may even find yourself dosing off in your favorite living room furniture and then feeling wide awake when you try to go to sleep in your own bed.

The reason for this is simple. You associate your bed with uncomfortable feelings of anxiety, tossing and turning. On the other hand, you associate your couch with winding down, a relaxed state of mind. You don't feel frustrated when you don't fall asleep in your chair or on the couch, because you are not trying to do so. This is why you may find it much easier to fall asleep on your couch; it's a frustration and negative association free environment! Without these feelings of anxiety and frustration, your brain waves won't become elevated and sleep will come much more effortlessly.

How can it be that some people can drink coffee right before bedtime, smoke cigarettes all day long and engage in many kinds of stressful behaviors and still the moment he or she gets into bed are able to fall asleep and stay asleep? How is it fair that some people seem to have this almost magical ability to fall asleep and others do not?

The answer is this powerful mind-body connection we've been discussing. We can reduce the programming these lucky people have subconsciously given themselves to a simple equation: BED = SLEEP!

Insomniacs have undergone a very different learning process: through long periods of lying awake in bed, you have come to associate bed with being awake. For an insomniac, even the mere thought or sight of their bed can trigger wakefulness, due to the increased brain wave activity caused by this negative association.

Before you move on, ask yourself these questions. What are your bed associations? What thoughts do you have when you start to think that it is time for bed, or when you actually get into bed? Are they something like:

"I'm never going to get any sleep!"

"I'll be lying awake for hours."

What are the first things that come to mind when you think about your bed? Do you associate your bed with the frustration of your inability to fall asleep?

When you associate your bed with frustration and sleeplessness, this only reinforces the problem and turns your bed into the very symbol of and your nightly cue for your insomnia! Your bed then serves as a reminder for you to get worked up and start worrying about not being able to fall asleep

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## The Effects of Negative Thinking

Previously we discussed how insomniacs typically have negative associations tied to their bed and bedroom. The insomniac's habit of negative thinking, however, is not limited to negative sleep associations. More generalized negative thinking and associations generate unwanted physical responses in your body.

Are you an optimist or a pessimist? Generally, most people fall into one of these two categories. Some people take comfort in a slightly pessimistic attitude towards life, arguing, "If I don't get my hopes up I won't be disappointed if I fail." The problem is though, that this form of thinking negatively gives you a physiological disadvantage!

We all have an inner voice, our so-called self-talk. This is the running commentary of what we think or say to ourselves. When exposed to a lot of stress our internal monologue has a tendency to run negative, and although this running commentary may seem harmless enough, it is really through your thinking that you label yourself and the world around you. The result is that much of your perception of yourself and your worldview are formed by your self-talk. Needless to say, negative labeling can make the world seem like a dark and gloomy place and it can lead to depression, stress, lowered self-esteem, and much more. Negative thinking definitely affects how well you live, and studies have shown that a pessimistic personality trait can even affect how long you live.

As human beings, we share a universal disposition to attribute certain meaning to certain types of events. We all have a way of making sense of our lives and the events that happen around us. In other words, people have different habits of explanation. Some people have a tendency to place the world and events that occur in their lives in a very negative frame. Others are just the opposite and attribute positive meaning to most anything. Are you a pessimist or an optimist? Do you use a negative or a more positive tone in your general self-communication?

Do you recognize yourself as having any of the following patterns of thought?

**Filtering** - In a given situation, do you dramatize and magnify the negative aspects and filter out the positive ones?

**Personalizing** - Whenever a negative thing happens, do you blame yourself without knowing the facts or the real cause of the event? Do you automatically assume that you are to blame?

**Catastrophizing** - Do you always expect the worst, and do you fear social events because you assume that you will embarrass yourself?

**Polarizing** - Do you feel that unless you are perfect, you are a failure, that there is no in-between?

So how'd you do? Are you more of an optimist or pessimist? Obviously, a pessimist is someone who generally attributes **negative** explanations to all types of events whereas an optimist does just the opposite. The following chart has been very helpful to me:

A **pessimist** typically forms a set of beliefs about a **negative thing**:

- A negative event will have a long lasting effect.

- It will affect my life in several areas.
- It happened due to faults of my own.

Furthermore, a **pessimist** typically attributes certain beliefs to a **positive occurrence**.

- This good thing won't last long.
- This good thing won't be beneficial in other areas of my life.
- It did not happen as a result of my competence; it was probably luck

An **optimist**, on the other, hand has the opposite habit of explanation.

- A negative event won't be around for long.
- A negative event won't affect other areas of my life.
- It did not happen due to faults of my own.

An **optimist** is also likely to interpret a **positive occurrence** in a positive way:

- This good thing is likely to continue.
- It will have a positive impact on other areas of my life.
- It happened due to my own competence.

Because of the power of thought and the mind-body connection we have discussed, we understand that by habituating a pessimistic belief system, failure becomes a self-fulfilling prophecy!

Why is this so important in connection with your sleep problem? Let us repeat a very important lesson we learned earlier in the book.

Your negative thoughts and beliefs cause frustration, anxiety, and worry which mobilizes the stress response. The stress response leads to an increase in your heart rate, blood pressure, breathing rate and brain wave activity. As you recall from earlier in your reading, these responses trigger your brain's wakefulness system and inhibits your sleep system. Furthermore, add in the fact that negative thinking = stress = stress hormone production = disturbed sleep!

The result: in any given situation, a pessimist creates more stress than an optimist creates, and in turn will have more problems falling asleep and get less restful sleep.

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## **The Noises of a Stressed Civilization**

**Noise!** It's all around us. A sudden blast from an exhaust pipe triggers your primal response and in a split second, you are ready to engage in one-on-one combat with a dinosaur (or better yet to run away!). The stress response is not only triggered by relations with people, but it is also triggered when you receive a shock or when you are exposed to loud noises. Both circumstances trigger exactly the same stress response.

We live in an age full of audio input from all kinds of sources: traffic, constant sounds from the radio, television or stereo system, loud noises etc., which, have invaded and impacted our natural ways. The human body wasn't designed to live in an environment full of constant background noise. Sure, there were noises – but the noises, such as the roar of a predator, were usually appropriate triggers for the fight or flight response. In that bygone era, the stress response was triggered when it was needed. Today, it is triggered in many situations where it isn't needed at all: the roar from a car engine, an ambulance rushing by, young punks setting off their firecrackers, etc.

Studies have shown noises do not have to be loud to affect stress levels – low-key background traffic noise affects your system as well.

It would be almost impossible to stop most of these noises at their source. They have been incorporated into the very fabric of our society. Since these noises affect our stress system, they are yet another reason why we need to find ways to relax in order to counter this stress effectively and the production of these harmful stress hormones. We will return to this subject in depth later in this book.

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## Putting Sleep-disruptive Factors into Perspective

Hopefully, this part of the book has shed some light on the factors in your life that are disrupting your sleep and keeping you from restful sleep. In the next part, we will explore a number of specific techniques to help you move from less efficient sleep to restful sleep.

Your health, wellbeing and energy are governed by your inner body clock. You have to acknowledge this fact and start to make changes in your life based upon this fact.

Even ancient cultures acknowledged the existence of “body time,” and yet today thousands of years of evolution later in a very drug-oriented society these basic natural truths still somehow manage to elude us.

Let's recap. Earlier, we learned about how your sleep system and its different components work.

One of the most important things we've learned is the fact that deep sleep is the most important part of your sleep. It is the stage of sleep responsible for keeping you alert and awake during the day.

**During deep sleep**, your brain waves are at their lowest speed. **When your brain waves speed up**, you tend to feel more awake and alert, and you are likely to experience problems falling asleep, staying asleep. Your quality sleep (deep sleep) is suppressed.

Body temperature depends on exposure to sunlight, exercise and general activity levels.

**There you have it. That's how the sleep system works, in a nutshell.**

**We have identified a number of factors or lack of these factors that interfere with the components of the sleep clock:**

- Sunlight

- Exercise
- Melatonin
- Caffeine
- Physical stressors
- Imaginary stressors
- Your own thinking
- Food
- Noise

These are the primary factors that interfere with the different components of your sleep system. They conspire to keep you in a lighter stage of sleep, causing you to feel less rested during the day because your sleep is less rejuvenating. They restrict the blood flow to your muscles to restore their strength.-

When the quality of sleep is low, it is only natural that your body will respond and make you feel tired. In this case, the solution is not more sleep since we already know that you get almost all of your quality during your core sleep. So naturally, the solution is to increase the quality of your sleep, not to sleep more hours! Quantity of sleep has no bearing on quality of sleep! In short, you are wasting time trying to get more sleep, while in reality you should be taking steps to improve the quality of your sleep! We can't say this enough. We know it's counterintuitive, but it's fact.

By making a conscious choice to change the behaviors and thinking that leads to this decrease in sleep quality, you will make a tremendous change in your life!

When your body is telling you that it is tired, it is likely because of a body temperature disruption and heightened melatonin levels.

Do you see now how insomnia is really nothing but a symptom of your behavior and thinking? I hope that you have reached a point where the knowledge you have gained will help you to monitor your activities and thinking consciously.

Now that you have seen the very root of your problem, you realize that you do NOT need sleeping medications. If you are on sleeping medications, DO NOT STOP WITHOUT YOUR DOCTOR'S CONSENT! Your doctor gave them to you, now go and tell him that you no longer want to use them.

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## What is the Next Step?

Research has shown that sleeping less is associated with a longer and healthier life, that the human body wasn't designed for extended periods of sleep and hibernation.

You need a **plan**, of course, that reflects the findings of this research.

You need a plan to help you reduce your sleeping time while increasing your quality of sleep, a plan to help you change your thinking, a plan to suggest activities to include in

your lifestyle to reduce drowsiness during your waking hours and increase your overall quality of life.

This is very doable, because by making changes in your life that will increase the quality of your sleep!-Yes, Dorothy, there is a rainbow at the end of the line.



# PART IV—Getting Back on Track the Natural Way

As we have discovered, our lifestyle choices, behaviors and thinking have a tremendous impact on sleep and daily energy levels. In this part, we look at tips, techniques, and strategies to help you make a change in your life. Don't worry: you won't need to change your entire life around, and it won't take up hours of your time. Little changes, properly targeted, can lead to dramatic results.

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## Sunlight Strategies

As you know by now, sunlight is a vital cue for your body to reset its circadian rhythm and for you to feel alert and awake.

Today, with our 21<sup>st</sup> century lifestyle, modern technology and urban living, we are moving towards a reality where we aren't required to spend much time directly exposed to sunlight. Many of us work from cubicles, often nowhere near a window, we order food in rather than eating out, we buy things online rather than visit an actual store. Many people work from home, and some work at night and sleep during the day. More and more factors make it increasingly unnecessary, strictly in a practical sense, for us to expose ourselves to natural light. In this modern rat race, we provide ourselves with fewer and fewer reasons to expose ourselves to natural light. In addition, health practitioners have drilled it into our heads to avoid the sun at all costs.

In this part, we will start by looking at some specific steps you can take to include more time exposed to natural light into your daily routines. As you recall, ordinary indoor lighting produces too few luxes and is in reality, the equivalent of darkness.

### Steps to Increasing Exposure to Sunlight

You should expose yourself to natural sunlight as soon as possible after you get up in the morning. This will cause your inner clock system to “reset” and indicate to your body that a new day has begun.

- Open the blinds or curtains in your bedroom immediately after you wake up in the morning.
- Eat breakfast near a window, or outside if possible.
- Plan outdoor activities as often as possible.

- If you work in an office, move your desk near a window if possible.
- Limit use of sunglasses, especially in the morning.

Look at your options during the day and get creative. Are there any activities that you could just as easily do outside or near a window? Do have any daily activities where it would be obvious to include time near a window or outside? When you're on the phone? Or, maybe you have the option to have lunch outside.

In general, move as many activities as possible outside or near a window.

### **Where Do You Live?**

If you live on the sunny side of the globe, it makes sense to recommend spending more time outdoors. Anyone living in sunny California is likely to be capable of finding ways to incorporate an hour's outdoor activities a day. If you live in an Arctic area such as Finland or Alaska or another area with an equally harsh climate, this may not be quite as simple during the winter months. Also, if you work long hours continuously, and your job doesn't offer the convenience of spending time outdoors or of being near natural light, getting more sunlight may take a concerted effort.

In such cases changing room lighting to full-spectrum light or getting an artificial light box are two good alternatives. An artificial light box produces light at very high intensities, 5000 luxes and upwards. If your workplace offers extremely limited access to natural light, talk to your boss and give him the story. Tell your boss how important high intensity light is, and how much it will increase the energy levels and productivity of you and your co-workers. (Hint: emphasis on productivity!) You may also want to consider getting a hand-held artificial light device that you can take with you anywhere.

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## **Get Up and Get Active**

There is a strong correlation between exercise and physical activity and sleep. With regular exercise, you will reap extraordinary rewards beyond improved sleep.

In the previous part, we examined why being physically active and doing exercise is not only vital to your health and well-being, but also how lack of exercise could be an important sleep disruptor. In this part, I will suggest ways you can include a level of activity that will help you fall asleep. Regular exercise leads to fewer episodes of sleeplessness and it improves sleep quality.

### **Specific Exercise Tips**

- Any workout sessions that make vigorous use of your legs are conducive to sleep.
- You will find that aerobic exercises such as jogging, swimming, riding a moving or stationary bicycle, dancing, walking, or using a treadmill 20 minutes per day, four days per week will yield improvements. Increasing the amount and frequency of your exercise over time will yield increasingly satisfying results.

- The best time to exercise is late afternoon or early evening. This is so the drop in body temperature will coincide with your designated bedtime.
- You may also find a light walk, while listening to gentle music, and breathing deeply has merit. If possible, take a walk when it is still light outside, so you get the added benefit of sunlight.

Stanford University School of Medicine conducted a study that found exercise produced a reduction in the amount of time needed to fall asleep and an increase in the amount of sleep for those studied. See, exercise does help us sleep.

### **Keep Moving and Stay Active**

Remember the connection between stress and your circadian rhythm? Exercise is good on so many levels! Exercising in the late afternoon or early evening is perfect. When you exercise, you create a rise in body temperature. This will help you stay awake during the evening. The drop in temperature around four to six hours later will help you fall asleep. Exercise is also beneficial to sleep because it helps you get rid of stress that has built up throughout the day. We have seen how stress has a negative influence not only on your sleep but also on your life in general. Further, when you are practicing sleep restriction therapy (another concept we'll introduce later on), it will help you stay awake.

### **Exercise doesn't have to be Unpleasant—it can be FUN!**

Many people dislike exercise because they think it is too tough. There are plenty of ways to exercise, and one of them will work with your lifestyle, your personality and your limitations, real or imagined. You don't need to pump away in your local gym for hours on end. Get a bicycle if you don't already have one. Take a long walk or take up jogging. Gardening anyone? Just get moving, even if you start with a leisurely stroll.

### **The Bottom Line on Sunlight and Activity Levels**

The human body was not designed to be inactive all day or to live almost exclusively under fluorescent lights. We were designed to live in harmony with natural light, and our bodies were built for activity, not to sit quietly at a desk all day. It's so easy to forget these simple truths and when we do – well there's trouble ahead – because when we don't get enough sunlight and exercise we are disrupting our sleep system and increasing the likelihood of poor sleep. Worse, we are diminishing the quality of our lives.

To summarize what we've learned so far: by getting sunlight and exercise, you increase your energy levels. Why? Because you increase body temperature, which enables you to stay awake and feel more energetic during the day. In turn, this creates the foundation for you to be more active and stay awake longer, which increases prior wakefulness and the pressure for sleep at night, which translates into more deep sleep. All of that leads us back again to a more productive, enjoyable life!

On the other hand if you don't incorporate activity and sunlight into your life your body temperature curve will be more flat, and you will experience less deep sleep.

Consequently, you are much more likely to feel drowsy during the day because your sleep was less rejuvenating and because your body did not receive a clear differentiation of day and night from the variations in your body temperature.

You can clearly see how two counterintuitive trends come into play:

1. More sleep is not the answer – the answer is more activity.
2. Sensible exposure to natural sunlight (we're not talking baking in the sun and getting a scorching sunburn) can normalize your body clock, which also leads to better, high-quality sleep.

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## **Exercise Your Brain**

Studies indicate that an active mind that is constantly learning new things offers the added benefit of better, deeper sleep. This has been established through research with two test groups. One group was assigned a task that required some brain activity, whereas the other group was assigned a task that required practically no brain activity. Scientists measured their brain wave activity, and the first group showed lower brain wave activity during sleep, indicating a deeper sleep than the second group.

Do things that you enjoy – read books, solve puzzles, play educational games – that also stimulate your mind.

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## **Take a Hot Bath!**

Exercise is by far the most effective approach, but in case you don't have the time or inclination to exercise, try taking a steaming hot bath for around 20-30 minutes. Taking a hot bath will provide a quick rise in body temperature followed by a drop. You should take a bath around two hours before bedtime so the drop in body temperature will coincide with your designated bedtime (you will learn more about scheduling your sleep next). Taking a bath more than two hours before bedtime may only make it more difficult to fall asleep since body temperature may still be too high.

### **Take Action NOW!**

Getting sunlight and being active are the cornerstones of restful sleep. Do not underestimate this. Act **now** to implement these changes into your lifestyle while they're still fresh in your mind.

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## **Positive Thinking Strategies**

As we learned earlier, a pessimistic belief system naturally creates more stress. If you are a typical negative thinker, you need to learn to identify when a situation occurs that triggers a negative thought.

In these situations, you need to consciously stop your inner voice and exchange the tired, old irrational, programmed response with a new, rational, positive thought. You need to learn to catch yourself in these negative thought patterns, and turn them around

as soon as you catch yourself. Soon, it will become second nature to you, and the old negative scripts will wither away, replaced by fresh positive ones. It may feel awkward at first, but in time, you'll feel uncomfortable when you let yourself feel an unfounded negative thought.

Replacing negative programming will help you overcome more than insomnia. It will help you in every aspect of your life and daily social encounters and generally make your life more enjoyable.

At first, you will need be very alert to pinpoint your negative self-talk. We spend so much time in negative self-talk, that often we don't even realize that we're doing it. As soon as you catch yourself, revise the negative statement. Practice doing this until it becomes second nature. For example, you may catch yourself thinking something like:

"I didn't get the job because the guy who interviewed me thought I was not very clever."

Stop yourself right there and rationalize and revise. You have no way of knowing what he thought of you. It is an irrational belief. You might replace the negative statement with something like this:

"I learned (fill-in-the-blank) from this interview and the next one will be better. I am on the road to finding the right job for me. Each interview brings me closer to the right job."

Some people find it helpful to say, "Cancel, cancel," every time they catch themselves in negative self-talk before substituting a positive statement.

It is very important that you don't just try out these techniques a few times and then forget about practicing them. Most people, myself included, quickly slip back into old, familiar habits. When we slip back into our old habits, we inhibit our progress. Left unchecked, we can completely halt and reverse any progress. Do whatever you have to do to make sure that you remember to practice regularly. Leave little notes around your home where you are sure you will notice them – on the bathroom mirror, on the refrigerator, etc.

### **Practicing Cognitive Restructuring Every Day**

Cognitive restructuring is a process whereby you replace negative, irrational thoughts with positive, rational thoughts. In order for you to replace your negative thinking patterns with positive ones successfully, experts recommend that you keep a journal. I'm going to tell you why it is important that you make a note of negative sleep thoughts in your journal. As you've seen, negative thinking most often occurs automatically and unconsciously. By identifying these particular patterns, making a note of them in your journal and noting healthy alternatives as well you have something you can easily return to and review on a regular basis for historical perspective and for encouragement. It's also helpful to note what time of day and under what circumstance these negative thoughts occur. You might find a pattern to the time of day or some circumstance that repeatedly triggers negative thoughts. As you read your journal and go over your negative thoughts, you also read, remember and program your positive alternatives. The

more you repeat this process, the more you will start to automatically think the positive alternative whenever a negative sleep thought occurs.

Since your current sleep habits are deeply engrained and wired deep into your mind, your mind requires repetition in order to successfully unlearn/overwrite the old habit and replace it with a new habit of thought. Nothing new here – there’s no quick fix for replacing habits, I’m afraid. It requires time, patience and practice to reap the rewards.

Cognitive restructuring is not just an intellectual concept that you can read and absorb into your life through osmosis or intellectual reasoning. It is something that you must practice actively, experientially. Practice is crucial. It is only through practice that you can form a healthy new belief in place of a dysfunctional, irrational one.

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## **Changing What You Put into Your Body**

The more I study health and nutrition, the more it baffles me the kinds of things we choose to put in our irreplaceable bodies day after day. In the previous part, we saw how caffeine, nicotine, alcohol and bad foods are not only something that is harmful to our health but also to our sleep. I can easily recommend other and healthier foods to eat (and I will). I can also tell you to stop smoking and reduce coffee drinking, but you have to take the initiative yourself to change bad habits into good, healthy ones.

### **Alcohol**

Limit alcohol consumption, and don’t drink around bedtime. It’s as simple as that-. If you are having problems with alcohol, you should contact a professional.

### **Nicotine**

Your best bet is to stop entirely. The benefits that you will receive from stopping by far outweigh the “benefits” of smoking, and I’m telling you that as an ex-smoker. As an ex-smoker, I also realize that the motivation to stop has to come from within. Again, I’m not an expert in this area, I can’t just tell you to quit smoking. I hope that I can provide you with motivation to beat this addiction finally, once and for all.

### **Top 10 Reasons to Quit Smoking**

1. I will reduce my chances of having a heart attack or stroke.
2. I will reduce my chances of getting lung cancer, emphysema and other lung diseases.
3. I will have better smelling clothes, hair, breath, home and car.
4. I will climb stairs and walk without getting out of breath.
5. I will have fewer wrinkles.
6. I will be free of my morning cough.
7. I will reduce the number of coughs, colds and earaches my child will have.

8. I will have more energy to pursue physical activities I enjoy.
9. I will treat myself to new books or music with the money I save from not buying cigarettes.
10. I will have more control over my life.

In other words, by removing one bad habit, I will easily clear the way to form a host of new, healthy habits.

Nicotine is an organic-based alkaloid derived from the same family as cocaine, morphine, and strychnine! In fact, the lethal dosage of nicotine for an average sized adult is 60 mg. The lethal dosage of strychnine is 75 mg and for arsenic, it's 200 mg.

(Source: Poisoning/Toxicology, Third Edition, Jay M. Arena, B.S., M.D)

## **Reduce Intake of Caffeinated Beverages**

### **Coffee**

We saw earlier how caffeine could disturb sleep. Here are a few common-sense guidelines to govern your use of caffeine: At the latest, use coffee to counteract fatigue no later than noon. Don't use caffeine to overcome afternoon or evening drowsiness. Get up and take a short walk instead.

If you drink coffee primarily because it has a "pick me up" effect, you shouldn't be drinking coffee at all. Sunlight is a much more powerful energy boost than coffee, and so is exercise!

If you absolutely must drink coffee, do it as early in the day as possible. A few cups in the morning are likely not to interfere with sleep. If you drink coffee later than that, you should stop at least six hours before your designated bedtime.

### **Get off Soft Drinks.**

Most soft drinks contain caffeine – the bottom line is that you should moderate soft drink consumption, or stop it completely. If the incentive to improve your sleep is not enough, I will provide you with motivation to find an alternative to soft drinks:

### **Top 9 Reasons To Consume Water Instead of Soft Drinks!**

Soft drinks steal water from the body. They work very much like a diuretic, which removes more water than it provides to the body. Just to process the high levels of sugar in soft drinks requires a considerable amount of water from the body. To replace the water stolen by soft drinks, you need to drink 8-12 glasses of water for every **ONE** glass of soft drink that you consume!

1. Soft drinks never quench your thirst, certainly not your body's need for water. Constantly denying your body an adequate amount of water can lead to Chronic Cellular Dehydration, a condition that weakens your body at the cellular level. This, in turn, can lead to a weakened immune system and a plethora of diseases.

2. The elevated levels of phosphates in soft drinks leach vital minerals from your body. Soft drinks are made with purified water that also leaches vital minerals from your body. A severe lack of minerals can lead to heart disease (lack of magnesium), osteoporosis (lack of calcium) and many other diseases. Most vitamins cannot perform their function in the body without the presence of minerals.
3. Soft drinks can remove rust from a car bumper or other metal surfaces. Imagine what it's doing to your digestive tract as well as the rest of your body.
4. The high amounts of sugar in soft drinks cause your pancreas to produce an abundance of insulin, which leads to a "sugar crash". Chronic elevation and depletion of sugar and insulin can lead to diabetes and other imbalance related diseases. This is particularly disruptive to growing children and it can set the stage for life-long health problems.
5. Soft drinks severely interfere with digestion. Caffeine and high amounts of sugar virtually shut down the digestive process. That means your body is essentially taking in NO nutrients from the food you may have just eaten, even when eaten hours earlier than consuming soft drinks.

Consumed with french-fries, which can take WEEKS to digest, there is arguably nothing worse a person can put in their body than a soft drink.

6. Diet soft drinks contain Aspartame, which has been linked to depression, insomnia, neurological disease and a plethora of other illness. The FDA has received more than 10,000 consumer complaints about Aspartame (even though they deem it safe). Aspartame complaints account for 80% of all complaints about food additives.
7. Soft drinks are EXTREMELY acidic, so much so that they can eat through the liner of an aluminum can and leach aluminum from the can if it sits on the shelf too long. Autopsied Alzheimer patients ALL have high levels of aluminum in their brains. Heavy metals in the body can lead to many neurological and other diseases.
8. The human body naturally exists at a pH of about 7.0. Soft Drinks have a pH of about 2.5, which means you are putting something into your body that is hundreds of thousands of times more acidic that your body is!

Diseases flourish in an acidic environment. Soft drinks and other acidic food deposit acid waste in the body, which accumulates over time in the joints and around the organs.

For example, the Body pH of cancer or arthritis patients is always low. In general, the sicker the person, the lower the body pH.

9. Soft Drinks are the WORST THING you can possibly put in your body. Don't even think of taking a sip of a soft drink when you are sick with a cold, flu or

something worse. It will only make it that much harder for your body to fight the illness.

### **The Essential Alternative: Water**

Water is one of the essential building blocks of life. We are made of it, and we couldn't exist without it. Still, many people have replaced this vital element with substitutes that are downright damaging to our health, and sleep such as soft drinks, coffee and other drinks with zero nutritional value. The top 10 reasons you must increase your water intake are:

1. Water is the substance of life. Life cannot exist without water. We must constantly add fresh water to our body in order to keep it properly hydrated. Water can be a miracle cure for many common ailments such as headaches, fatigue, joint pain, and much more. We can go for weeks without food, but only 3 days without water!
2. The body is comprised of 80 percent water. Water makes up nearly 85 percent of your brain, about 80 percent of your blood and about 70 percent of your lean muscle.
3. It is difficult for the body to get water from any other source than water itself. Soft drinks and alcohol steal tremendous amounts of water from the body. Other beverages such as coffee and tea are diuretics, also robbing the body of precious water.
4. Water plays a vital role in nearly every bodily function. Lack of water is the #1 trigger of daytime fatigue. A mere 2% drop in body water can trigger fuzzy short-term memory, trouble with basic math, and difficulty focusing on the computer screen or on a printed page.
5. Water is essential for proper digestion, nutrient absorption and chemical reactions. Our body metabolizes carbohydrates and proteins and uses them as fuel, transporting them by water in the bloodstream. No less important is the ability of water to transport waste material out of our bodies.
6. Water is essential for proper circulation in the body. Oxygen levels in the bloodstream are higher when the body is well hydrated. The more oxygen the body has readily available, the more fat it will burn for energy. Without the presence of oxygen, the body cannot utilize stored fat for energy efficiently. Not only will the body burn more fat when well hydrated, but the increased oxygen levels will also give you more energy.
7. Water helps remove toxins from the body, in particular from the digestive tract. Water suppresses the appetite naturally and helps the body metabolize stored fat. Studies have shown that a decrease in water intake will cause fat deposits to increase, while an increase in water intake can actually reduce fat deposits.

In 37% of Americans, the thirst mechanism is so weak that it is often mistaken for hunger. One glass of water shut down midnight hunger

pangs for almost 100% of the dieters studied in a University of Washington study.

8. Water regulates the body's cooling system. Sports drinks are useful when consumed after or during vigorous and prolonged exercise in high heat. Most experts agree that water works better than beverages high in carbohydrates or sugar for moderate exercise.

For instance, if you drink 12 ounces of plain water, your body will absorb 8 ounces of it within 15 minutes. If you drink 12 ounces of a 10% sugar solution, less than 1 ounce will be absorbed in the same period. The typical soft drink is a 10 to 12% sugar solution.

9. Consistent failure to drink enough water can lead to chronic cellular dehydration. The condition where the body's cells are never completely hydrated leaves them in a weakened state and vulnerable to attack from disease. It weakens the body's overall immune system and leads to chemical, nutritional and pH imbalances that can cause a host of diseases.

Dehydration can occur at any time of the year, not only during the summer months when it is hot. The dryness that occurs during winter can dehydrate the body even quicker than when it is hot and humid during the summer. When you are dehydrated, you tend to eat more.

As you see, there's no shortage of health reasons to support drinking plenty of water every day. Pay particular attention to number 8 on the list above. It is especially important as an insomniac to stay hydrated. Water is an integral part of your internal cooling and temperature system. As you have already learned, insomnia is closely coupled with your body temperature rhythm.

You should eat foods high in complex carbohydrates (as opposed to simple carbohydrates). Complex carbohydrates increase serotonin, which is a brain neurotransmitter that promotes sleep. Avoid high-protein foods such as meat in the hours before bed since they inhibit serotonin production. Instead, good alternatives in the evening include turkey, bananas, figs, dates, yogurt, milk, tuna, nut butter, and whole grain crackers. These foods are high in tryptophan, which promotes sleep

Avoid bacon, cheese, chocolate, eggplant, ham, potatoes, sauerkraut, sugar, sausage, spinach, tomatoes, and wine close to bedtime. These foods contain tyramine, which increases the release of norepinephrine, a brain stimulant.

As you know, your digestive system slows down during the night, so your system will use a lot of energy digesting late meals—energy that should have been used to rejuvenate your body! So, avoid heavy eating before bedtime.

## Good Foods

You already know that your body needs fruits, vegetable, grains and protein to function. Some foods are especially helpful in counteracting insomnia:

- Eat chlorophyll-rich foods, such as leafy, green vegetables, lightly steamed or boiled. Fresh is always better than frozen or canned. Local is better than imported.
- Microalgae, such as chlorella and spirulina, are considered superfoods, because they provide so many vitamins and minerals. You can purchase these and oyster shell as nutritional supplements in a health foods store.
- Carbohydrates boost serotonin, which promotes better sleep. Whole grains such as whole wheat, brown rice, and oats have a calming and soothing effect on the nervous system and the mind.
- Mushrooms support the immune system.
- Fruit, especially mulberries and lemons, calm the mind.
- Seeds: jujube seeds calm the spirit and support the heart. Chia seeds also have a sedative effect.

Use dill, basil and other herbs, particularly organic herbs, to spruce up your dishes.

## Bad Foods

It's easy to know a bad food. You already know what they are. If they're bad for your overall health, you can bet that they also contribute to inefficient sleep.

In short, any food that provides empty calories with no nutritional value is a bad food. Sugar and refined flour top the list. Greasy, fried foods can be hard on the digestive track when not eaten in moderation.

When in doubt, one guideline that you'll find easier to comprehend than to follow is that pre-packaged foods are always inferior to homemade foods prepared with fresh ingredients.

Remember to restrict your food intake close to bedtime can help you to get a good night's sleep.

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## Sleep Environment and Pre-sleep Routines

Altering your sleep environment and pre-sleep routines can dramatically increase the quality of your sleep.

### Room Temperature

Bedroom temperature is also important. Since we already know that a drop in body temperature is important in regards to falling asleep, it is obvious that it will be harder for your body temperature to drop if your bedroom is too warm. Make sure that your

bedroom is relatively cool. Of course, it should not be so cold that you are freezing, since that will make you unable to relax and fall asleep. A few degrees below your daytime environment will set the stage for quality sleep.

### **Blocking Noise**

To block out unwanted and disturbing noises some people find a constant “white noise” very soothing and an effective remedy to achieve a serene, calm mindset. White noise masks other noises that may be keeping you awake.

If you live in an area with a lot of nightly background noise, becoming a natural sleeper can be extremely difficult. No matter how successfully you implement the techniques described in this book, noise can make it impossible to go to sleep no matter how much you’ve learned or what other steps you’ve taken.

Many insomniacs who were bothered by nighttime noises have found that a white noise machine is a good solution. These quiet, monotonous sounds screen out traffic noise, appliance motors, bumps in the night, and even snoring roommates. They’re ideal for apartments, dorm rooms, and homes with noisy neighbors. White noise machines are also among the best solutions for tinnitus, another condition that can make it very difficult to fall asleep – their sounds mask the irritating inner ear ringing associated with this condition.

Some machines simply create a single sound, such as “whooshing air” or a light rainfall. Machines that are more sophisticated provide a choice of a variety of sounds, some of them musical, or background tracks you can customize. Some travel alarm clocks feature a built-in white noise function, such as those available from The Sharper Image catalog or online store.

White noise machines intended for babies, sometimes called “sound conditioners,” generally only produce a single track, though there may be a number of different individual sounds. Their scores are designed to lull the baby to sleep gradually, and their volume typically lowers gradually. Many of the baby white noise machines feature sounds that mimic the beating of a mother’s heart, a sound known to calm babies.

White noise makers designed for adults come with a wide array of bells and whistles and can produce wildly imaginative soundscapes, such as Coastal Harbor (foghorns and lapping waves) and Steam Train. Usually, however, they’ll produce one non-specific, generic white noise sound plus a number of other sounds intended to take the listener away. Popular themes include the rain forest, the seashore, thunderstorms, waterfalls, crackling fires, wind chimes, and even the cacophony of city traffic.

Other types provide a set of 8 to 10 background themes, and allow the user to program specific secondary sounds over one of these. For instance, the user can overlay an owl’s hoot against a babbling brook backdrop.

Some machines allow the user to set a “fade-out” time, so the sounds will lessen and stop within an hour or two. Headphone jacks are useful when sleeping with a partner who prefers the sounds of the night, or when concentrating in your office.

In models that feature actual soundtracks, it's important to verify the quality of the speakers – you don't want a tinny, digitized rainfall surrounding you as you sleep. Most of the cylindrical machines feature multi-directional speakers, and emit sound in a 360-degree circle. If you purchase online, look for a 30-day trial period, and all machines should come with at least a year's warranty.

### **Keep Your Bedroom Dark**

Conversely, you don't only need to expose yourself to daylight in the morning and throughout the day. The same way that bright daylight signals to your body that it is time to wake up, darkness has the opposite effect.

It's important to understand that we not only need light, but that we also need darkness. Portions of both light and darkness provide a necessary contrast for the body to make the distinction (=cycle) to promote healthy sleep cycles. Complete darkness aids the body in the production of melatonin that you recall is required in order to sleep.

### **Develop Good Pre-sleep Routines**

An hour or so prior to sleep, it is important that you start to wind down and allow your mind and body to become susceptible to slipping into sleep.

We have already looked at different methods of relaxation, which you may want to include in a sleep conducive pre-sleep routine.

During this hour before sleep, you should avoid any stimulating activities such as discussing finances with your spouse or watching an action packed programs on TV. This, of course, includes the news!

Lie down on your couch and do some light reading. Do anything you know that will help you free yourself from distracting thoughts. Find something that works for you.

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## **Calculating Your Effective Sleep Ratio (ESR)**

Your Effective Sleep Ratio will give you an indication of how efficiently you sleep. You can calculate your ESR simply by dividing the total number of hours you actually sleep by the total number of hours spent in bed and multiply by 100.

$$\text{Sleep (hours) / Time in Bed (hours) * 100}$$

The number you get is your effective sleep ratio as a percentage.

You are probably used to evaluating your sleep by the total amount of hours you spend in bed. In fact, ESR is a much better indication. The reason for this is quite simple. Being a good, natural sleeper is not a function of how many hours you spend in bed, but it is a result of how efficiently you sleep – how much sleep you are actually getting compared to the time you spend in bed. The trademark of a good sleeper is a high ESR – good sleepers sleep most of the time they spend in bed. A poor sleeper may sleep just as many hours as a good sleeper, yet have a low ESR simply because bad sleepers stay in bed much longer.

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## Sleep Restriction Therapy

You now know many of the things you do that reduce the quality of your sleep. You have also learned several techniques with which to increase your sleep quality. How much you actually change depends, of course, on your motivation to do so. I hope you choose to make as many changes as needed so that you achieve deep, restful sleep.

This process toward achieving quality sleep needn't take up much of your time, as a little exercise and sunlight will take you a long way toward reaching your goal.

Now that you've begun making positive changes in your lifestyle and belief system and they have begun to take hold, you are ready to take the next step. You are ready to figure out the exact amount of sleep, which is right for you and you are ready to look at ways to increase your sleep efficiency. Because of the changes you've already made, your sleep efficiency is probably much higher than before. Still, it's important to remember that everyone has his or her own personal sleep requirements and that the key is to discover exactly how much sleep **you** need. For this, I recommend Sleep Restriction Therapy.

**Sleep Restriction Therapy (SRT)** is an effective way to increase the efficiency of your sleep. This means you'll learn to sleep less and awaken feeling more fully rested. SRT is also a technique that will help you identify the number of hours that **you** need to sleep—without disturbing your circadian rhythm. The foundation of sleep restriction is the constant of always getting up at the same time each morning, which then leads to your circadian rhythm **starting** at the same time every day.

The goal of SRT is for you to spend less time in bed while at the same time actually getting the right amount of sleep for optimal functioning the next day. Paradoxical, you say! Well maybe but let's look a little closer at the technique.

SRT is a form of intentional sleep deprivation. Often people who suffer from poor sleep choose to spend more time in bed to increase actual sleep time. This strategy backfires as the bed becomes associated with frustration, worry and anxiety! I'm not suggesting that long-term sleep deprivation is the solution. In the short term, however, slight sleep deprivation will help to get you back in harmony with your natural rhythm by increasing the pressure for sleep when you are supposed to sleep. It will also help you increase prior wakefulness (the amount of time you are awake before attempting to sleep) which in turn will strengthen your sleep system.

So how does Sleep Restriction Therapy work?

### Set a Regular Wake-up Time

The very first step is to designate a specific time to get out of bed every morning—a time to get out of bed that you will stick with. Think of this time as your anchor. This is the variable that you should not change, at most only very little. Think of your designated get up time as the time that your entire sleep cycle revolves around.

It's not important if you have slept poorly or very little or not at all! You need to get out of bed at the same time every morning. By getting out of bed and exposing yourself to sunlight and getting physically active, you are telling your body to start its natural

rhythm (circadian rhythm) and getting yourself physically active will eventually help you fall asleep the following night. It is important to bring some consistency into this process. If you get up at different times every day, you are essentially putting your body through jet lag every single day! If, for instance, you get out of bed three hours later than usual, your sleep system starts your circadian rhythm three hours later – this means your sleep system swings out of balance, because you also delay the drop in body temperature needed to fall asleep by three hours at night. This leads to sleeplessness!

### **To Calculate Your ESR**

The next step is to calculate your *effective sleep ratio* or ESR.

1. Keep a sleep diary for two weeks. Keep close track of how many hours you spend in bed per night and how many actual hours of sleep you enjoy each night.
2. Find the average number of hours you spend in bed each night and the average number of hours you actually sleep each night.
3. Divide actual average nightly sleep time by hours in bed and multiply by 100. The answer, given as a percentage, is your effective sleep ratio. If you spend an average of eight hours in bed but only sleep five of those hours, your ESR would be 62.5%.
4. Your goal is to achieve an effective sleep ratio of between 85% and 90%, which means that you only spend 10% to 15% of your time in bed awake.

### **To Increase Your ESR**

Now that you have your starting point and your goal firmly in mind, you're ready to take the next steps:

1. Begin going to bed 15 minutes later than usual the first week.
2. If you don't reach 85% effective sleep ratio by the end of the week, add another 15 minutes before bedtime.
3. Limit time in bed even when you're tired.
4. Once your efficiency reaches 90% or more (for example 8 hours in bed yields more than 7 hours sleep), you can increase your time in bed by 15 minutes per week.

### **Increasing time spent in bed does not increase ESR!**

By trying to compensate for your low sleep efficiency by going to bed early, you actually weaken your sleep system in two ways:

1. By decreasing prior wakefulness
2. By programming bed to become a stronger cue for wakefulness

If you have calculated your Effective Sleep Ratio (ESR), you have probably found that it is low, which means that you are spending a lot of time in bed, but a lot less time

actually sleeping. You may have made a conscious decision to spend nine hours in bed, because you know from experience that out of those nine hours you only sleep around five hours. In a way, this probably makes sense to you. You realize you are playing a numbers game and since your percentage is low, the apparent solution is to stay in bed as long as it takes to get the required amount of sleep. In fact, this is a very common strategy among problem sleepers: to go to bed extra early to increase the chances of getting to sleep at a certain time and sleeping a sufficient amount of time. This is absolutely and entirely the wrong way to go, even if it seems intuitive. By spending more time in bed, not only do you further establish your bed a symbol of wakefulness, you reduce prior wakefulness thereby weaken your sleep system.

### **Earmark a Specific Time Period for Sleep**

Once you choose a specific time to get out of bed every morning the next step is to make a conscious choice to spend less time in bed. What you need to do is designate a specific number of hours that you spend in bed every night. Let us start out by figuring out the amount of hours you should spend in bed.

To set a fixed amount of time that you spend in bed, make the number of hours equal to the amount of time that you actually sleep. Do not prolong the total time spent in bed because your ESR is low. That's not the way to compensate.

You will find the number of hours that you sleep in your journal. Consult your journal and review how many hours on average you actually spend sleeping each night. This is the number of hours you should spend in bed.

The purpose of having a designated sleep period that does not exceed the number of hours you actually sleep is to increase your Effective Sleep Ratio (ESR). This may, at first glance, seem illogical, but in reality there is very good reason why it works. We'll delve into this more later.

### **Designate a Go-to-bed Time**

Apart from setting a specific time to get up, you set the time you go to sleep based on the total hours of sleep needed.

Now that you have set a specific time that you will get out of bed, and you have calculated the amount of time you should spend in bed based on the amount of actual sleep you get (according to your journal), you are ready for the final step: calculating the time you should go to bed. This is very simple: simply subtract the number of hours that you should spend in bed from your designated wake up time and you have your designated go-to-bed time.

For instance, let's assume your designated wake up time is 6:00 a.m. Your journal shows that you average six hours of sleep per night. (despite the fact that you may be spending 10 hours in bed to achieve the six hours of sleep)

Designated wake up time - 6:00 a.m.

Average sleep time: 6 hours

These figures tell us that your designated go to bedtime is midnight. Going to bed before your designated bedtime is a definite no-no. If you choose to go to bed any later than midnight, you must still adhere to your designated wake up time to avoid interfering with your circadian rhythm.

### **Reverse Logic?**

You may think this is a reverse logic and that the only thing you'll accomplish by spending less time in bed is that you'll get less sleep. This is not the case, so don't believe it. It's just a negative sleep thought, a preconceived notion, and as I've already said, you should get rid of those!

This is very simple, but immensely powerful. By decreasing time spent in bed, you are gradually conditioning your body to spend more of the time that you actually spend in bed sleeping rather than being awake. By reducing time in bed, you are increasing prior wakefulness and thereby strengthening your sleep system and increasing your ESR - while at the same time learning to disassociate your bed with thoughts of wakefulness.

The whole idea here is to "stretch" prior wakefulness to a point where the pressure for sleep is at its peak. This in turn leads to quickly falling asleep and thereby increasing your sleep efficiency ratio!

As you increase prior wakefulness by going to bed later, you are actually conditioning your body to spend more of the time in bed sleeping rather than staying awake. Without any additional work on your part, you are increasing the quality of your sleep as well.

### **Overcoming the Challenge of Sleep Restriction Therapy**

Practicing sleep restriction can present a challenge. You have to get out of bed at a certain time, you can only spend so much time in bed, and despite being extremely tired you have to force yourself to stay up until your designated bedtime. It's worth the effort, because **it works!**

When practicing sleep restriction it is important that you utilize this strategy in conjunction with the other strategies you have learned so far. Do not engage in other practices that will be counterproductive to obtaining the sleep you need! By leading a passive lifestyle and not getting the sunlight you need, you set yourself up for failure. If you practice sleep restriction therapy alone and think that it is going to be enough, while leading a very sedentary lifestyle, you are setting yourself up for disappointment.

You need to energize yourself through exercise and sunlight during the day in order to get the most out of this strategy.

The ultimate goal of sleep restriction is to find out how much sleep you should aim to get every night. More specifically, we want to find out how **little** you can sleep without reducing your daily energy levels.

You will need to experiment in order to find the amount of sleep that works best for you. As you already know, you shouldn't change the time you get up, instead you should gradually decrease time spent in bed by postponing your bedtime.

View sleep restriction therapy as a way to experiment your way to finding the amount of sleep that is right for you. Experiment only after you have implemented the techniques we've outlined so far in the book: exposure to sunlight, exercise, eliminating drugs, etc.

You must first optimize your sleep system so your sleep is as energizing as possible. Then you can go ahead and experiment.

If you don't implement any changes in your lifestyle, you won't raise the quality of your sleep and consequently you will still feel tired and drowsy during the day.

### **Sleep Scheduling Summary**

The bottom line on sleep scheduling:

- Get out of bed the same time every day
- Match the number of hours you spend in bed with the time you actually spend sleeping
- Do not go to bed until your designated bedtime.
- Exercise and get sunlight to counter daily drowsiness

The first thing you should do is designate a fixed number of hours that you spend in bed.

Then, put this number of hours into a fixed timeframe, for instance you may decide to sleep from 1:00 a.m.-7:00 a.m., to the extent that it is possible.

At all cost, do not stray from this schedule. If, for some reason, you stray from your designated schedule for more than a night or two, move the entire "block" of sleep.

If you choose to go to bed later, you must still get out of bed at your regular designated wake up time. This will help your body stay on track and won't upset its rhythm. As we've already learned, you can perform even with a few hours or less sleep because your body will make up for sleep deprivation by increasing the amount of deep sleep.

By getting up later because you went to bed later than your designated bedtime, you will create a shift in your circadian rhythm thereby delaying the decrease in body temperature that is required to fall asleep.

I can't stress enough that you need to keep the most important concept in mind: at all cost do not prolong your designated amount of sleep.

By setting a regular time that you get up every morning, you accomplish many things at once:

1. It's easier to fall asleep at night
2. You get more deep sleep
3. You wake up less during the night and spend less time awake

4. You improve ESR (effective sleep ratio)
5. Bed becomes a stronger cue for sleep

### **Weekend Insomnia**

Weekend insomnia is often what happens when you decide to catch up on some of that lost sleep on Sunday mornings. By sleeping in, you are interrupting/ interfering with your natural cycle, creating a kind of artificial jetlag. Even if you sleep in on a Sunday morning by accident, you must delay your bedtime accordingly at night. If you try to go to sleep at your normal time after sleeping in, you reduce the amount of prior wakefulness that your body is used to - and the rise and fall in body temperature is minimized. As a result, your sleep system becomes weakened and you will have difficulties both falling asleep and staying asleep.

In the event that you absolutely must sleep in, limit this to one hour or less - and get active and expose yourself to daylight from the moment you get up.

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### **Stimulus Control**

This approach to preventing the bed as a cue for wakefulness was pioneered by Dr. R. Bootzin.

#### **Stimulus Control Steps**

The technique involves a six-step procedure:

1. Don't go to bed unless you feel tired.

You should only try to sleep when you are sleepy. Let your body tell you when it is time for bed. Frustration is most often the effect of a failed attempt to go to sleep. With increased frustration, you are left in a state of arousal that further inhibits sleep. In addition, as you continue to lie awake, you reinforce the association between your bed and wakefulness.

2. Restrict activities in your bed to sleep and sexual activity only.

Keep all arousing activities out of your sleep environment. Leave heated debates and arguments with your spouse out of the bedroom and away from the bed.

3. Get out of bed if you are unable to fall asleep.

To break the association between bed and wakefulness even further, get out of bed if you find yourself unable to fall asleep. Engage in activities that are non-stimulating and do not return to bed until you feel tired.

4. Repeat step 3 for all incidents of waking up.

If at any time during your sleep, you wake up and are unable to get back to sleep, repeat step 3. Do this every time you wake up throughout the night.

5. Get up at the same time every day.

Adhere to a designated get-out-of-bed time every morning. It doesn't matter if you haven't slept well or slept very much.

6. Avoid napping.

Napping is not recommended, but if you absolutely must take a nap, keep it short.

The section on napping offers specific guidelines.

You should never actively pursue sleep. If you stress because you feel that you must be asleep by a certain time or simply put too much effort into focusing on falling asleep, you will actually decrease the likelihood of your falling asleep.

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## Laugh More

You've probably heard the term "laughter is the best medicine" before, and it may be exactly that. Further, recommending that you laugh is a silly suggestion. If you feel stressed or negative, just trying to laugh won't do anything for you.

That's why I recommend that you try to incorporate amusing and fun activities into your life, and do things specifically geared to making you laugh. People have different ideas about what is funny. I have a technique that I use with great success. Over the past few years, I have collected a library of funny movies on my computer. I have a special folder with hundreds of what are, in my opinion, the funniest film clips available. I have so many in fact that I can always find one that I haven't seen in a while that is guaranteed to make me laugh.

If you find that this is a silly suggestion, consider the following: laughter releases endorphins in your body. Endorphins are not only stress reducing but also in some cases lead to a feeling of euphoria.

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## The Relaxation Response

Earlier we saw how the stress response exerts a devastating influence on sleep. We are so fortunate though, that our bodies come with a built-in internal mechanism to counter the stress response. This mechanism was discovered in the 1970s by a Harvard-trained cardiologist named Herbert Benson who named it the Relaxation Response.

The Relaxation Response is built into our bodies to negate the harming effects of stress. It lowers muscle tension, brain wave frequency, heart rate, blood pressure and brings about a deeper breathing pattern. While the stress response is triggered whenever you are exposed to a stressful event, you must purposely seek the Relaxation Response. You might ask why our bodies are designed this way. Again, we find the answer in our human heritage. A relaxation reaction would occur quite naturally if, for instance, you were to enjoy a beautiful sunset on the beach or if you were lying peacefully in a garden listening only to the carefree flutter of birds from afar.

This would pretty much be a typical day in the life of our ancestors: Stress would inevitably occur, but in most cases, it would be followed by natural relaxation in

nature's own elements. However, in today's busy world, only few people get a chance to sneak away like this every day. Today, stress is more chronic in nature as we've previously learned. Stress is literally thrown at us with very short intervening periods of respite – one stressful event right after the other, which causes a significant and very unhealthy imbalance in our stress/relaxation system.

It would be ideal if you could find such natural ways to incorporate relaxation, outdoor activities into your lifestyle, as did our ancestors. It would do wonders to help remove the barrier that separates you from better sleep and a happier, healthier life. Whenever this is not possible, you can use various relaxation techniques (muscular relaxation, mental focus and breathing) to help you elicit the relaxation response in other ways. We will explore these in detail a little later.

### **Eliciting the Relaxation Response**

Practicing Relaxation Response techniques can safely, inexpensively and effectively treat a multitude of symptoms and ailments. Some of the basic and immediate benefits include mental calmness and slower brain wave activity, muscle relaxation, decreased release of stress hormones, and the possibility of lowered blood pressure and heart rate. You can trigger the Relaxation Response by performing simple exercises.

To successfully leave the turmoil of the world behind and trigger the Relaxation Response, you'll need to find a quiet, private place to practice – preferably, a place that is dark or dimly lit. Find a comfortable sitting or lying position, close your eyes and simply disregard the common, nagging thoughts that frequently drift into your consciousness. Don't try to focus on invasive thoughts, just disregard them and let them drift away.

It's often helpful to focus on a single image or word, such as calm or rest. Personally, I have found the image of a coconut in a very tranquil, tropical setting very relaxing. If other thoughts invade, disregard them and re-focus on your chosen word or image. This might take some time to master but it will become markedly easier once you've practiced the Relaxation Response for a week or two.

Remember to choose a word or image that makes you feel safe and comfortable. A scene from your favorite movie or a beautiful picture spread from a travel magazine can transport you away from the many stresses inherent, and incessant, in everyday life. Some people like to light a scented candle or incense – olfactory elements can be strong mental triggers. If you light a jasmine incense cone each time you practice, you'll soon become more relaxed simply by smelling jasmine.

Ideally, you should practice the Relaxation Response techniques daily, for about 15 minutes per session. The more you practice, the faster you'll progress, but a missed day or two won't set you back too far, either. It takes a commitment to release stress and to take the time to hone your ability to relax, but if you can devote a few minutes each day to practicing relaxation, the benefits will be extraordinary.

Try to schedule a set time each day when you can be alone and quiet – you're more likely to practice consistently if the sessions are part of your ingrained daily routine. If you can practice in the same spot each day, you'll soon begin to associate that area with

calmness and relaxation, increasing your ability to trigger the Relaxation Response quickly and consistently. Practicing immediately prior to bedtime can considerably increase the likelihood that you'll quickly drift into a deep, restful sleep. However, be careful of practicing in the evenings when the risk of drifting off into sleep is the greatest, because sleeping for an hour or two at that time can make falling asleep at your usual bedtime more difficult. When practicing in the evening, try doing the exercises sitting in an upright position.

Just as the stress response is effective for disrupting sleep, the Relaxation Response is conducive to inducing sleep. Learning to elicit the Relaxation Response will be one of your most effective tools in helping you to become a natural sleeper. The simple fact is that learning to elicit the Relaxation Response will reverse the effects of the stress response and cause the changes on a physiological level that will help you to fall asleep and obtain more of that all important deep sleep.

You can also practice the Relaxation Response at any point during the day to counter any stressful incident that you may encounter along the way.

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## **Abdominal Breathing**

Another technique that is an effective counter to stress is abdominal or deep breathing. Many of us have a tendency towards shallow, chest breathing, which increases both heart and breathing rates. Deep abdominal breathing has the opposite effect. It slows the heart and breathing rates allowing for a much more relaxed state of mind and body! You can achieve this slow, even rise and fall of abdominal breathing by concentrating on your inhaling and exhaling and by practicing the following exercise while lying down.

Lie back and rest one hand on your stomach, the other on your upper chest.

To ensure that you are breathing abdominally, the hand placed on the abdomen (stomach) should rise and fall with your breath, not the hand placed on the upper chest.

Now continue with this exercise.

Each time you inhale, hold your breath for a count of four seconds, pause, and then exhale for another count of four. In your mind, chant "Inhale, two, three, four, pause, Exhale, two, three, four," and complete this cycle ten or fifteen times.

Inhale through your nose and exhale through your mouth until abdominal breathing becomes automatic. If you're uncomfortable, light-headed (your body gets more oxygen this way), or can't hold a four count, begin with a couple of sessions using a three count. Make time each day to inhale abdominally ten or twenty times consciously, making sure only the hand on your stomach moves.

Once you've mastered abdominal breathing, you can move on to an actual Relaxation Response script, which is a program to help you relax slowly, effectively, and completely each time you practice it. How your body is positioned while you practice

your Relaxation Response is important; it's best to recline, but if you must sit, follow these guidelines: Sit straight, aligning your spine with a chair back that's perpendicular to the floor. Keep your legs at a ninety-degree angle, and leave your arms or legs uncrossed. Avoid using armrests, which can create tension in the shoulders and neck. Rest your hands loosely in your lap instead.

Find a quiet, comfortable spot and try this relaxation script (it's best to loosely memorize this or record it onto a cassette or disc so you don't interrupt yourself):

Lie back in a chair, couch or bed. Exhale and become comfortable, closing your eyes.

Focus on your feet, and the weight and warmth of your feet. Feel your feet relax and sink into the bed. As they relax, you may feel a heaviness, a lightness, or a tingle run through them. Perhaps you only feel them relax.

Focus on your breathing, your chest rising and falling rhythmically as you breathe abdominally. If you use a relaxation word, speak it each time you exhale. Rid your mind of wandering thoughts and focus solely on your relaxation.

Now the warmth and relaxation is spreading up your calves, loosening the muscles and letting them sink into your surroundings. The relaxation spreads through your knees, through your thighs and upper legs, all the way to your lower back.

The sensation of relaxation continues through your stomach, chest, and upper back, branching out to your shoulders and lacing down your arms to your hands, which unclench completely. Maintain focus on your breathing and chanting to the exclusion of all distractions.

Finally, the relaxation reaches your neck, releasing pent-up tension. It surges along your face, relaxing your lips, your cheeks, your eyes and forehead. Focus on the weight of your head and your breathing.

Hold this state of relaxation for several minutes. When you feel refreshed and calm, slowly exhale and open your eyes.

Alternatively, some people prefer to imagine the relaxation emanating from their head and stretching down into their toes. Whatever works for you is fine.

Beyond just priming your body for a restful night of sleep, the Relaxation Response offers other basic health benefits. Those suffering from cardiovascular and tension ailments – particularly headaches, arthritis, and high cholesterol and blood pressure – can see significant improvement after following a few weeks of Relaxation Response therapy. The Relaxation Response also alleviates chronic pain conditions, muscle tension, many gastrointestinal problems, and pre-menstrual syndrome. Even those who

suffer from anxiety, panic attacks, and depression often see improvement in their conditions.

In terms of emotional relaxation, your Relaxation Response can lessen feelings of anger, frustration, and uneasiness. Studies show that once you feel you can control stress, your self-esteem and general health improve. Practicing your Relaxation Response alleviates detrimental physical and mental conditions without the need for professional hypnosis or possibly dangerous medications.

Even if you're normally in perfect health and a sound sleeper, stressful events or periods in your life can set off insomnia and other infirmities. If you're recovering from the loss of a loved one, a divorce, loss of employment, or other stressful circumstance, Relaxation Response therapy can help you through your troubled period.

In case you don't have time to practice a full Relaxation Response script or you're overcome suddenly with stress, but unable to relax fully in your surroundings, try a condensed version of your favorite Relaxation Response script. Even if you're riding in a taxi stuck in traffic late for a flight, you can benefit from a minute or two of guided relaxation. If you're driving and can't close your eyes, you can benefit from abdominal breathing.

Begin breathing abdominally and close your eyes if possible. Relax your feet, your legs, your torso, and your arms. Spend a few more seconds on your shoulders, neck, and face. Focus on clearing your mind and murmur your chosen mantra word each time you exhale. Feel the stress leaving your body, the calmness flooding in, exhale and open your eyes.

While these short sessions aren't a substitute for a complete Relaxation Response script, they're very helpful in sudden instances of elevated stress, such as before you're about to deliver a speech or meet a powerful new client.

After a month or so of practicing full Relaxation Response scripts and the occasional mini-Relaxation Response (the more frequently you practice the better), you should have improved your ability to recognize and combat stress. Your concentration will improve, you'll feel more refreshed and able to tackle challenges and overcome obstacles. Your mind will be clear and focused, your body relaxed and healthy.

People who are both happy and healthy will often practice the Relaxation Response techniques to increase their mental acuity, their ability to concentrate, their ability to combat stress, and to boost the overall condition of their immune system. You shouldn't wait for stress to overwhelm you before using the Relaxation Response techniques you've learned. They're vital tools for to help in daily management of your mind and body. To be effective, you must practice them frequently.

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## **Find the Relaxation Method that Suits You**

You will probably find that some relaxation methods suit you better than others will. These are just a few that have worked well for me. You may find that you need to take a completely different approach in order to trigger the relaxation response and attain that

relaxed state of mind. What works to relax some people, doesn't work as well for others. The key is to find one or more methods that you are comfortable with and that work for you.

### **Relaxing for the Right Reasons**

We have learned that a very powerful way to deal with external daily stress is through relaxation, by eliciting the Relaxation Response. It is important to realize that you should only apply this method to actual stress. These are the real stressful situations in life that you can avoid. Unnecessary and imaginary stress that we learned about previously, such as negative bed associations or negative thinking in general, shouldn't be countered with the Relaxation Response; they should be avoided altogether! There are powerful techniques with which to do this:

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## **Altering Your Mindset**

### **Changing the Way You Think about Sleep**

We have seen how the way you think about sleep can lead to feelings of frustration, anxiety and worry, and how these negative emotions lead to physiological changes in your body that can cause insomnia. This should be proof that the mind has tremendous power over the body (and your emotions).

Not only can the way you think improve your sleep, it can also give you a greater sense of self-esteem and self-control. This is because you are choosing to go through a process where you are in control of rather than being controlled by external factors such as sleeping pills. The solution to thought problems comes from within, not from an outside source.

### **Practical Examples of Cognitive Restructuring for Reframing Negative Beliefs**

The goal of cognitive restructuring is simply to replace the negative thoughts you have about sleep with other more sleep promoting beliefs and thoughts.

Cognitive restructuring may sound dreadfully complicated, but in reality it is very straightforward. It is simply a way of rearranging habitual patterns of thought in your mind.

Developing new positive habits of thought by using cognitive restructuring can reverse a lifetime of negative thinking and negative self-talk.

You can use cognitive restructuring to reverse the concerns and anxieties that you have about sleep, which trigger the stress response and cause wakefulness.

In order to replace these negative and often unconscious beliefs, you need to first identify and become aware of them. Once you have pinpointed these exact sleep-inhibiting thoughts, you will need to replace them with sleep promoting alternatives.

One crucial step is to eliminate **worry**. The more importance you place on getting a good night's sleep, the less you will actually sleep. The more important sleep is, the more worry it generates - this is a primal human response.

Rather than labeling the potential lack of sleep as disastrous, you must teach yourself to attach new, more positive and more accepting meaning to the possibility of being unable to sleep:

“I will get all the sleep I need to be happy, alert and fully functional.”

“I fall quickly and easily asleep and sleep the whole night through.”

“It’s not the end of the world whether I sleep well or not.”

“Sleep or no sleep, I will pull through tomorrow.”

Similarly, trying to force sleep is not only ineffective, it is downright counterproductive.

Identifying your negative sleep thoughts as you read this and finding more positive alternative sleep thoughts to take their place, will be a good start - but it won’t be enough!

These new positive alternative sleep thoughts and beliefs must become an integrated part of your belief system. This only occurs with practicing awareness and actively monitoring your thoughts in order to pinpoint your exact negative thoughts and their underlying beliefs. Once aware of the exact nature of these thoughts and beliefs, it’ll be of great help to note them in a journal, along side writing the positive alternate sleep thought with which you choose to counter it.

“I never sleep well,” becomes “I sleep deeply and restfully all night long.”

“I know I’m going to feel horribly tomorrow,” is countered with “I know I’ll feel sharp, rested, and alert tomorrow.”

This may sound somewhat bothersome, but in reality, it is very straightforward and simple. Most people have only a few standard negative sleep thoughts, but they can have a tremendously negative effect.

I used to have a typical one that I would always repeat to myself whenever I would feel particularly alert at bedtime: “I’m never going to fall asleep tonight”.

I replaced it with the positive affirmation,

“I will fall asleep quickly and easily tonight”

After consciously identifying this negative sleep thought, it still persisted every night for a while, but having identified it, I would immediately put my mind at ease by reaffirming that “tonight I will easily fall asleep,” and “no matter what, it’s not the end of the world,” and “I will certainly be able to function at a high level tomorrow.” I developed the habit of calming myself every time a thought about my ability to sleep would pop up.

It didn’t take very long before the original negative thoughts no longer appeared!

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## Final Thoughts

Now that you have come this far, it is important that you don't just put this book down and slip into your old routines. Practice what you have learned and stay vigilant, don't allow yourself to slip into old habits and routines. The only way you can finally start to sleep well and make profound changes in your life is by staying committed. Just imagine how much more joy and wellbeing this will bring into your life.

### Commitment

An effective way to stay committed is to tell your friends and family about the adversities you are facing. Tell them openly about your problems and feelings to encourage an open dialogue. By telling your friends that you are about to make a change in your life, they will be a valuable source of encouragement and support which will help you stay focused. Don't neglect these obvious sources of motivation! Your loved ones will be a welcomed support team and they'll help you stay on track! If, for some reason, family and friends aren't supportive, ignore them! In the end, you and you alone, control the degree to which you enhance your sleep patterns.

### Take Advantage of Spare Moments

When you first begin, you may find that making changes in your life – practicing new habits, exercising etc., – may be time consuming. You may be asking yourself, "How will I ever find the time to make these changes?" Now that you are already becoming a better sleeper and increasing the effectiveness of your sleep, you have automatically freed up additional time.

Chances are that you are wasting a lot of precious minutes every day that you could spend much more beneficial ways. We all do it, consciously or unconsciously.

Today's world offers a plentiful array of conveniences, but sometimes our fancy gadgets leave us hanging while we waste precious time! For example, I switched to DVDs a long time ago but I still have a lot of old Seinfeld episodes on VHS cassette that I often watch because I like the show and I find that the familiarity of the show soothing and relaxing. I pop in the tape, and I often find myself just standing there like a clown waiting for the tape to rewind. On a similar note, when I wait for my computer to boot up I just sit there and watch it each step of the way while I gain no pleasure or advantage during those moments.

Why not use those times to get some natural light from a window or by moving around or doing some light exercise, or even a little "active" relaxation?

You can probably identify a number of such small periods in your daily life that you could spend in ways that are more constructive. Try to identify these spare wasted moments and replace inactivity with activity.

Learn time management skills. It may cost you hours to read the book, but you'll make up for it 1000 fold or more in the years to come. On my resource website [www.sleepresources.org](http://www.sleepresources.org), I will point you to a very good book I recently read on time management.

If possible, read it near a window or outside rather than by the light bulb at your desk or in bed! In general, identify activities such as reading at your desk, talking on the phone and other activities where a simple change of environment can benefit your sleep program without costing you any additional time.

### **The Human Factor**

Are we forgetting that we are human? Are human beings even compatible with a fast-paced, modern world? Often, no, but there are ways to lead a more balanced lifestyle-

Ok, we are getting near the end of this book. I know you are probably sick and tired of my endless caveman analogies by now, but I do hope it has been a pleasant journey for you anyway. I'm afraid I will have to conclude on a similar note! I can only imagine the picture you must have of me by now: I imagine you must be picturing me, sitting in a flamboyant vest, long hair and small round glasses typing away about the devastations of the modern world! Far from it – actually, this book came to life because I was exactly the opposite! I lived completely out of sync with nature.

I embrace modern technology and all the conveniences that modern society has to offer, and yet, my body was sending me signals that something wasn't quite right. I had to find out why my body wasn't allowing me to sleep properly since the lack of sleep was messing up my entire life. I suffered an almost total lack of energy and motivation.

I came to realize that over the years I had more or less come to view my body as merely a functional shell. My body initially seemed to work just fine no matter what I did to it. I used to think that as long as I supplied food and drink it would continue to work just fine- This was sort of my underlying thinking process that justified the lifestyle I had at the time. This **was** my thinking until I realized that it was wrong and set about to change it, which changed my life.

In modern times, it really *is* easy to forget that we are part of a biological interplay between our human bodies and the forces of nature. Most of us are unaware that an affliction such as insomnia is our body's way of reminding us that we are only human, and that there's something wrong with the way we are living.

In the larger scheme of things, insomnia and lack of energy are merely a symptom of the way the people have maladjusted the beliefs and behaviors to a degree that many of us live completely out of sync with our natural habitat, the very earth!

Through the ages, our bodies evolved to follow the environmental daylight/darkness cycle. Our ancestors were never aware of the inner workings of the human body including the delicate workings of the inner human sleep cycle; they didn't need to be either - nature made them live in harmony naturally. They didn't have the multitude of lifestyle options we do today- And still today, people in the civilized world are unaware of the delicate features of the inner biological clock. Today it matters, because it is very easy to do any number of things to mess up your sleep. If you mess up your sleep, you mess up your life. It's that simple.

By choosing a lifestyle by default, you can severely disrupt your natural body rhythm, which causes you to lie awake at night. Back then, the choices were limited. Days were

spent outside. Physical activity was required to survive. Nighttime activities were difficult due to the absence of light. Awakening as the sun rose was natural. Relaxing in a peaceful natural setting was inevitable after a bout with a predator, and there was no boss singing praise to the modern dogma of workplace efficiency, hence no incessant manmade source of stressors.

Getting caught up in the hustle bustle of modern life, we tend to forget that we are living, breathing, biological creatures, designed to live in direct “sync” with nature. I’m not suggesting that you should move to a primitive cottage in the forest or give up modern conveniences, I’m simply reminding you that the modern world is not designed to take into consideration the many sensitivities and realities of the human mind and body. Further, the lifestyles that are essentially forced upon us or that we have chosen are often not conducive to a natural, healthy life.

Is it no wonder that millions of people suffer from health problems and have symptoms such as those of insomnia? Fortunately, there are ways we can consider our biological heredity and compensate for the rigors of modern life at the same time. The solution is to continuously educate yourself and learn about the inner workings of the human mind and body, and realize that pills and medication aren’t always the answer – that you can avoid pharmaceutical treatment for illnesses and conditions by natural means.

I hope that this book has enlightened you, helped you to think about the everyday choices that you make and how they can positively affect your life, if you treat your body with respect. I read an interesting thought recently: why is it that we fuss about a \$20,000 car, and yet we wreak havoc on our priceless and irreplaceable bodies?

**Change your behavior. Change your life.** Only you hold the key.

Wishing you many restful nights!

Questions, comments? I am only an email away!

Martin Brock

P.S. This is my first attempt at writing a book – and I am very eager for your feedback! Please send me your comments and thoughts. Did you like it? Did I get the message across? How can I improve it? What did it do for you?