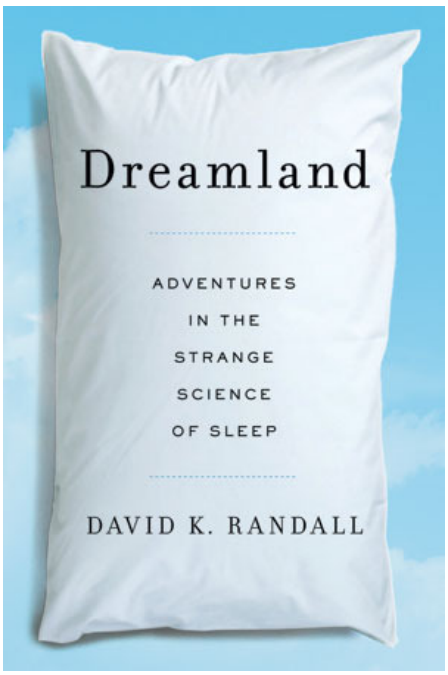

Dreamland: Adventures in the Strange Science of Sleep

David K. Randall

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Dreamland: Adventures in the Strange Science of Sleep David K. Randall
An engrossing examination of the science behind the little-known world of sleep.

Like many of us, journalist David K. Randall never gave sleep much thought. That is, until he began sleepwalking. One midnight crash into a hallway wall sent him on an investigation into the strange science of sleep.

In *Dreamland*, Randall explores the research that is investigating those dark hours that make up nearly a third of our lives. Taking readers from military battlefields to children 's bedrooms, *Dreamland* shows that sleep isn't as simple as it seems. Why did the results of one sleep study change the bookmakers odds for certain Monday Night Football games? Do women sleep differently than men? And if you happen to kill someone while you are sleepwalking, does that count as murder?

This book is a tour of the often odd, sometimes disturbing, and always fascinating things that go on in the peculiar world of sleep. You ll never look at your pillow the same way again.

Dreamland: Adventures in the Strange Science of Sleep Details

Date	:	Published August 13th 2012 by W. W. Norton & Company (first published August 6th 2012)
ISBN	:	9780393080209
Author	:	David K. Randall
Format	:	Hardcover 290 pages
Genre	:	Nonfiction, Science, Psychology, Health

From Reader Review Dreamland: Adventures in the Strange Science of Sleep for online ebook

Aaron Thibeault says

*A full executive summary of this book is now available here: http://newbooksinbrief.com/2012/08/20...

We spend up to a third of our lives sleeping, and yet, unless we are not getting enough of it, and/or are experiencing a sleeping disorder of some kind, most of us hardly ever give our sleep a second thought (other than to rue over how much precious time it takes up). Science too largely neglected sleep for the longest time, treating it mainly as a static condition during which the brain was not doing much of anything interesting. However, ever since rapid eye movement (REM) was discovered in the 1950's the science of sleep has really taken off, and the discoveries that have come out of it go to show that this unconscious period is more interesting than we ever could have imagined. It is these discoveries that writer David K. Randall explores in his new book 'Dreamland: Adventures in the Strange Science of Sleep'.

The book is split into 13 chapters, with each chapter (outside of the introduction and conclusion) exploring a separate topic in the world of sleep. In the book we learn about such basics as REM sleep and the 5 stage sleep cycle, as well as the benefits of sleep and the harmful effects of sleep deprivation. It turns out that sleep is instrumental in such things as muscle regeneration, long-term memory formation, skills acquisition, problem-solving, emotional control, and creativity. Dreaming, we find, plays an important role in many of these benefits, thus making it seem far less likely that Freud was correct in thinking that dreams are actually a manifestation of subconscious wish fulfillment.

We also learn that our natural sleeping pattern is set by our circadian clock, and that many of our routines in the modern world run somewhat against this natural pattern. As it turns out, these routines not only have a negative effect on our sleep, but on our waking lives as well. Fortunately, many organizations are now beginning to take these lessons to heart, and are modifying their policies and practices to help ensure that their members are better-rested, so as to lessen the negative effects of fatigue. For instance, high schools are starting later; businesses are allowing their employees to take naps, and hiring on fatigue management consultants to help eliminate the effects of under-rested employees; sports teams are hiring trainers to ensure that their players are getting enough sleep, and to manage the difficulties of inter time-zone travel; and the military is allowing its soldiers more rest during peace time, and also monitoring and managing sleep during combat.

We also learn about the difficulties of, and the controversy surrounding putting your children to bed, and how the practice of co-sleeping (sleeping in the same bad with your infant) is making a come-back. At the same time, the tradition of sleeping in the same bed as your partner is taking a hit, as more and more couples experiment with sleeping in separate beds—and even in separate bedrooms.

Last but not least, we learn about sleeping disorders such as sleep apnea (continual waking up due to blockage of the windpipe), and the billion dollar business of treating and controlling this very distressing (and potentially deadly) disorder; sleepwalking, and the bizarre phenomenon of crimes committed while sleepwalking (including child molestation, rape, and even murder)—as well as how the justice system is dealing with these very troubling cases; and also insomnia, and the sordid history of sleeping pills—as well as the latest techniques in fighting sleeplessness, including cognitive behavioral therapy.

Fortunately, we also learn that there are several ways to improve our sleep other than with pills or therapy,

such as avoiding coffee, alcohol and bright light before bed; getting some regular exercise; turning down the room temperature before bedtime (and/or taking a cool shower); and practicing some breathing techniques to help us fall asleep (one such exercise has you focus on your breathing by thinking 'in' as you inhale, and 'out' as you breathe out).

Virtually every chapter contains a treasure trove of fascinating information about the topic in question, and the author lays it all out in a very clear and interesting way. If you are curious about the world of sleep, and what science has to say about it, then you can't go wrong. A full executive summary of this book is available here: http://newbooksinbrief.com/2012/08/20...
A podcast discussion of the book is also available.

Cheryl says

Written by a journalist, so it's easy to enjoy, with lots of tidbits of interest, but light on the science. No agenda, just a bunch of essays about the subject. The take-aways are two: 1. Far too many ppl are not getting enough sleep, including toddlers, teens, soldiers (who are, after all, often teens themselves), and athletes, and 2. more research is needed into a variety of aspects of sleep, including dreaming, circadian rhythms, parasomnias, etc.

3.5 stars and a positive recommendation if you're interested, with the caveat that it really is a light read and probably won't enrich your life very much. Also, the hardcover I read is printed on cheap paper, has only bibliographic notes, and has pictures only as decoration - ideal for an e-reader.

Orsolya says

Sleep. It is something that children fight against seemingly viewing it as a punishment; while adults wish they had more of the sweet reward. Just how much do scientists **truly** know about sleep? Honestly: not much. However, David K. Randall shares some of the unique data surrounding the world of sleep in “Dreamland: Adventures in the Strange Science of Sleep”.

“Dreamland” is an instant thought-provoking work as it presents theories and questions surrounding the act of sleeping (for example: we may think that sleep is the result of the body’s need for rest, yet even if you relaxed on a hammock all day; you would still need sleep when the clock struck the late hours). From this introduction on, “Dreamland” moves onto describing various aspects of sleep such as the effects of artificial lights, impact of fatigue on work environments, sleep walking, etc. These subjects are supplemented with research, experiments, and data which are compelling and leave the reader itching for more.

However, for those seeking a deeply scientific work; “Dreamland” will not satisfy. Randall’s writing style is aligned with a journalistic approach and would fit more snugly into the LA Times, Reader’s Digest or even Family Circle than with a science periodical. This makes sense as Randall is a senior reporter for Reuters and is a professor of journalism. Don’t let this deter you, though; Randall clearly procures adamant research from interviews and first-hand participation. Thus, “Dreamland” is accessible for the average reader but quite informative, as well.

The thesis and “point” Randall tries to make can some times be lost. Although undeniably interesting, each

chapter feels like an overview on the topics. Again, much like an article, Randall cuts the text short and doesn’t seem to lead to a main theory except that sleep is strange and scientists don’t know much about it. This results in a slightly chunky feel.

For those readers whom enjoy humor mixed in with science, Randall incorporates comedic relief into the pages and also presents some ideas in a mini-social history format. Although interesting, this method pushes the science further back.

With “Dreamland”’s progression comes an increase in scientific and “heavier” content elevating Randall’s work and offering the reader more substance. However, also noticeable are several cases of repetition in both content and wording which can be frustrating and breaks the focus. Plus, Randall has the habit of straying onto tangents, although he always (eventually) explains the connection.

The ending/conclusion of “Dreamland” was weaker than expected, as it merely wrapped up Randall’s personal thoughts and experiences with sleep, missing what would be a sum-up on the notes mentioned. Also missing are solid reference notes, although the bibliography is extensive.

“Dreamland” is exactly what the title states: an exploration of topics, data, and experiments relating to various facets of sleep (athletic performance, military prowess, sleeping pills, sleep apnea, dreams, etc). Although not 100% scientific, “Dreamland” is creative, gripping, and thought-provoking. One will realize that sleep affects more areas of our daily life than we thought.

Mauoijenn ~ *Mouthy Jenn* ~ says

I get insomnia a lot. So this book was interesting and insightful. I learned a bit and know understand different sleep disorders. A good book.

Caren says

This was a moderately interesting look at current research into sleep. There were a few things I hadn't read before, such as that the type of mattress you choose doesn't affect the quality of your sleep; you sleep best on the sort of mattress most familiar to you. I had already known that light affects your Circadian rhythm. While it is helpful to be exposed to natural light in the morning, shun blue screen light (TV, laptop, cell phone) at least an hour before bed. In fact, it is best to have soft light in your home in the evening. After 10 pm, melatonin is released in your body, causing your core body temperature to drop, so it is helpful to sleep in a cool (60-66 degrees Fahrenheit) room. Exercise promotes better sleep, but it doesn't have to be strenuous exercise. In fact, it is more important that your body thinks you have had a good workout than that you have run a marathon. The brain is also tricky when it comes to sleeping pills. They may work largely because they inhibit memory formation of any restless sleep; you may think you have slept better than you actually have, and that matters. The length of sleep gained is apparently not remarkable.
The author makes the provocative statement that people actually sleep better in separate beds. It is probably best to have a little canoodle, then toddle off to individual sleeping quarters for the best quality sleep. He also explores the sleep disruptions brought by a baby in the family. Should you let the infant cry it out, or is the family bed the answer?

We all know that teens prefer to stay up late and sleep in. The world probably functions to the level of people in their prime. At age forty, REM sleep begins to decline. This become noticeable at fifty and is set at age sixty-five. Anthropologists speculate that this was a survival mechanism left from ancient times. When people slept in groups, it was helpful to have someone sleeping lightly or awake, to guard against danger. Older people tend to fall asleep around 9 pm, waking in the wee hours, with less time spent in REM sleep. It makes sense that, as someone ages and slows down, he should sleep lightly in order to be better able to wake up quickly and escape danger.
There is also a sort of afternoon slump, at around 2 pm, conducive to napping. Some cultures have a long (usually two hour) lunch break to accommodate this natural rest cycle.
The author also looks at the dangers of sleep deprivation. For some professions, such as for soldiers or airline pilots, the issue of sleep is of life and death importance, but has only recently been recognized as such.
The author became interested in this topic as a result of his own sleep walking episode. He delves into examples of bizarre sleep walking behavior, such as murder. Is a person responsible for a murder committed while he was asleep? The responses of juries to that question are uneven.
My biggest problems with this book were the lack of an index and the quality of the editing/proofreading. Despite the fact that, in his acknowledgements, he credits two editors and a copyeditor, I found some really glaring errors. For example, on page 111: "Albert Szent-Gyorgyi, a Hungarian scientist who won a Noble Prize in 1937..." and on page 64: "But out of the more than thirty thousand studies he found that looked at human sleep, couples, or marriage, only nine breached the topic of sharing a mattress." These are shortcomings I attribute to the publisher, not the author.

Melissa Prange says

I wanted to like this book, but I ended up finding it incredibly boring. At times, there was interesting information (like the bit about first and second sleep), but too many of the stories felt like repeats. On and on, the author shows how sleep is important. And I wanted to say: Yes, I understand that, but is there anything else you have to say?

Crystal Starr Light says

Bullet Reviews:

I've always been fascinated with the brain and sleep so when I saw this book, I snapped it up. Unfortunately, I found most of the information dry or stuff I already knew, and what I was really interested in - the brain and dreams - was a small chunk, squeezed next to soldiers and athletes' sleeping patterns. You know, two areas I didn't really give an origami fish about.

For someone looking for the sleep basics, this is a great book. Nice research, covers all the bases with good writing (though oddly enough I wish the author had told more personal anecdotes of his time investigating sleep). I just think I was the wrong person for the book.

Emily Mishler says

I won a copy of this book in a goodreads giveaway.

Randall does an excellent job in keeping his book well grounded in research while also keeping in mind that sleep is still a very new and therefore uncertain science. The book is a summary of much of what is currently known and has been theorized about sleep and how it affects the mind and body. A surprisingly engaging read and very easy to understand as Randall writes in a style that accommodates the layman. While a lot of the information is fairly common sense (if one were to actually spend time thinking about a subject like sleep), Randall does bring to light (pardon the pun) a few interesting studies on things like the correlation between artificial light and cancer. Definitely a worthwhile read if you've ever had problems sleeping or just want to know more about that mysterious eight hours when the world spins on while we are oblivious to all that goes on around us.

Robyn says

I can't stop sharing all the info I learned from this book!

Melora says

I enjoyed this. It gets a little repetitive, though it's not all that long, but for the most part it kept my interest.

Randall decides to research “sleep” after he walks into a wall, hard, during a sleepwalking incident and, after a night in a sleep lab, is told by his doctor,

> ”'I'm going to be honest with you. There's a lot that we know about sleep, but there's a lot we don't know. If the sleepwalking continues, let's try some sedatives. But I don't want you to start taking drugs that you don't need. Try to cut down on your stress and see what happens.'”

Unsatisfied with this, Randall says...

> ”If my doctor couldn't tell me more about sleep, I reasoned, then I would go out and search for the solution myself....
> So began my adventures in the strange science of sleep. I set out to discover everything I could about a period of time that we can only conceive of as an abstraction, a bodily state that we know about but never really experience because, well, we are asleep. Once I started really thinking about sleep for the first time, the questions came in waves. Do men sleep differently than women? Why do we dream? Why is getting children to fall asleep one of the hardest parts of becoming a new parent, and is it this hard for everyone around the world? How come some people snore and others don't? And what makes my body start sleepwalking, and why can't I tell it to stop?”

Randall explores these topics, and others, such as the interplay between science and the legal system when people claim to have been asleep when they committed crimes, and the efforts of coaches and school administrators to improve athletic and academic performances through manipulation of athletes' and students' circadian rhythms. As with many pop- science books, he relies heavily on anecdotes, and I enjoyed the

stories. To illustrate the devastating results of sleep deprivation he talks about various military accidents, he gives the story of Jack Nicklaus's golfclub grip “crisis” to show how the mind can solve problems during sleep, and he tells about Colin Sullivan and his sleep mask machine for the treatment of sleep apnea in a chapter on various sorts of sleeping problems.

One issue which makes Randall's topic a challenging one is that his doctor was not kidding when he said that much is still not understood about sleep. We know it's really important for mental and physical health. We know that sometimes the mind manages to solve problems during sleep which it couldn't seem to solve while awake. We know that dreams replay bits of memories and create mash-ups which sometimes reflect our current preoccupations. But there's also much we don't know. Not only details of the “whys” and “hows” of the things we *do* know, but whole areas, such as why many people wake up around 2 a.m. (and Randall goes into how this was, historically, a time when people would wake after their “first sleep” to read or snuggle or whatever for a while before going on to the “second sleep”), why men and women sleep differently, what causes insomnia, etc. So, for instance, while we know that Randall's sleepwalking problem was probably caused by a brain malfunction where the “paralyzing” hormones were *not* sent out to his arms and legs before REM sleep began, so that he got up and walked around in response to his dream, we don't know how to fix it, beyond sedatives or physical restraint. As the wife of a calm, gentle man who sometimes gets into loud, angry fights in his dreams, I would have loved for science to have made a bit more progress with this one!

Another thing, and this is minor, but it did annoy me, is that the editing of the book was quite sloppy. Most annoying were “lay” vs “lie” issues, which occurred throughout. For instance, “As subjects *laid* on their *back* with their eyes closed each night...” (p 259) and “early humans were at their most defenseless when they *laid* down on the ground for several hours in the middle of the night” p 244. “Lay,” for which “laid” is a past form, requires an object. There were some other sorts of errors, but this one, given the subject, with people lying down to sleep, or to try to sleep, on a regular basis, was particularly unfortunate. W.W. Norton is a big enough publisher to do better.

Still, an enjoyable look at a subject in which we all have an interest! Randall is an engaging storyteller, and this is an entertaining book. 4 stars.

Sergei_kalinin says

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Atila Iamarino says

Achei que fosse ler mais sobre sonhos e como/porque sonhamos, mas encontrei um livro sobre como e porque dormimos. Muito legal de qualquer forma. Discute o sono em duas metades que tínhamos até bem pouco tempo atrás e vários outros hábitos em relação ao sono e ao dormir que estão mudando. Também descobri que mulheres em geral tem o sono mais leve e mais perturbado pelo marido do que o inverso.

Nandakishore Varma says

> Sleep that knits up the raveled sleave of care,
> The death of each day’s life, sore labor’s bath,
> Balm of hurt minds, great nature’s second course,
> Chief nourisher in life’s feast.
>
> - *Macbeth, Act 2, Scene 2*
>
> To die, to sleep,
> To sleep, perchance to Dream; aye, there's the rub,
> For in that sleep of death, what dreams may come,
> When we have shuffled off this mortal coil,
> Must give us pause.
>
> - *Hamlet, Act 3, Scene 1*

The Bard has said it all.

Of late, I am having bouts of anxiety which is preventing me from getting a full night's sleep on weekends. I

wake up early in the morning, then toss and turn trying to go back under. Not getting enough sleep makes me anxious, which again contributes to my insomnia, thus creating a negative feedback loop. (Maybe my weekend drink also contributes to the problem - but I'll never admit that!)

I approached this book with the idea that it will enlighten me about sleep. It did – but not in the way I expected.

This is a book written by a journalist: intensely readable, terrifically informative and covering a lot of areas – but it's not your scholarly tome. It will give you a lot of info on the field of sleep research, all fascinating and new, but largely superficial. It's a fun-to-read primer on sleep, and will give you pointers for further study.

Fun Facts I Learned

1.People did not sleep for one continuous stretch at night in the past. They went to sleep not long after sunset and woke up in the middle of the night for an hour or two: then again went to sleep and slept till dawn. These were called the "first sleep" and "second sleep". The time in-between was used for reading, praying or having sex (and from all reports, it was awesome – I should have learned this two decades ago, dash it!).

2.Sleeping alone will guarantee a better night's rest than sleeping with your partner (my wife adds: "especially when your partner sounds like a sawmill in operation").

3.There are two schools of thought whether infants should be given a separate bed or whether they should sleep with on their parents' bed. There are huge cultural differences involved here. (I don't know what's good for the kids, but can say from personal experience that children sleeping alone will do wonders for dad's sleep).

4.Forget Freud and Jung. There is no symbolism in dreams – it's all rather straightforward. (I don't fully agree.)

5.Sleeping on a problem will clear the mind of clutter and allow you to go to the heart of the matter (old hat, that).

6.Lack of sleep is one of the reasons many mistakes committed by the military (could be true). Lack of sleep is one of the reasons for invading soldiers misbehaving with the "natives", especially American GIs in Iraq (a load of bovine excrement).

7.There are cases of murder being committed while a person is sleepwalking, and *it has proved a valid defense in many cases of homicide* (this was totally new for me – and somewhat frightening).

8.Teenagers will perform better by going to sleep late at night and waking up late (hopefully, my son won't read this review!)

9.The best cure for insomnia is relaxation, not pills. Don't think of sleep at all (easier said than done).

Riku Sayuj says

Wishing Yourself A Good Night

What do you do when you really don't have much to tell on a subject, especially when you care a lot about it? You tell anecdotes and try to keep it interesting. Most neuroscience books these days tend to be packed with anecdotes that are weird, but on which there is no scientific consensus. The reader is left to his/her own devices on what to make of all the stories. This book is not much different. It starts with an admission that we know next to nothing about sleep - the activity that occupies 1/3 rd of our lives.

The author sets off an a quest to discover more about his own sleep conditions and finds that he has fallen into a strange rabbit hole that exists just on the other side the pillow, and which most of are never aware of.

Once I started really thinking about sleep for the first time, the questions came in waves. Do men sleep differently than women? Why do we dream? Why is getting children to fall asleep one of the hardest parts of becoming a new parent, and is it this hard for everyone around the world? How come some people snore and others don't? And what makes my body start sleepwalking, and why can't I tell it to stop? Asking friends and family about sleep elicited a long string of "I don't knows," followed by looks of consternation, like the expressions you see on students who don't know the answers to a pop quiz. Sleep, the universal element of our lives, was the great unknown. And frankly, that makes no sense.

A few take aways:

1. The Need for sleep:

Most of us will spend a full third of our lives asleep, and yet we don't have the faintest idea of what it does for our bodies and our brains. Research labs offer surprisingly few answers. Sleep is one of the dirty little secrets of science. We don't know about sleep, and the book opens with the most obvious question of all—why we, and every other animal, need to sleep in the first place.

Here we hear many horror stories of sleep-deprivation: Within the first twenty-four hours of sleep deprivation, the blood pressure starts to increase. Not long afterward, the metabolism levels go haywire, giving a person an uncontrollable craving for carbohydrates. The body temperature drops and the immune system gets weaker. If this goes on for too long, there is a good chance that the mind will turn against itself, making a person experience visions and hear phantom sounds akin to a bad acid trip. At the same time, the ability to make simple decisions or recall obvious facts drops off severely. It is bound to end in severe consequences - including death. It is a bizarre downward spiral that is all the more peculiar because it can be stopped completely, and all of its effects will vanish, simply by sleeping for a couple of hours.

2. The Amount of sleep:

Humans need roughly one hour of sleep for every two hours they are awake, and the body innately knows when this ratio becomes out of whack. Each hour of missed sleep one night will result in deeper sleep the next, until the body's sleep debt is wiped clean.

3. The Stages of Sleep:

Researchers now say that sleep is made up of five distinct stages that the body cycles through over roughly ninety-minute periods. The first is so light that if you wake up from it, you might not realize that you have been sleeping. The second is marked by the appearance of sleep-specific brain waves that last only a few seconds at a time. If you reach this point in the cycle, you will know you have been sleeping when you wake

up. This stage marks the last stop before your brain takes a long ride away from consciousness. Stages three and four are considered deep sleep. In three, the brain sends out long, rhythmic bursts called delta waves. Stage four is known as slow-wave sleep for the speed of its accompanying brain waves. The deepest form of sleep, this is the farthest that your brain travels from conscious thought. If you are woken up while in stage four, you will be disoriented, unable to answer basic questions, and want nothing more than to go back to sleep, a condition that researchers call sleep drunkenness. The final stage is REM sleep, so named because of the rapid movements of your eyes dancing against your eyelids. In this type of sleep, the brain is as active as it is when it is awake. This is when most dreams occur.

4. The Ideal Pattern of Sleep (that you are not following):

Natural light is the way to go. Artificial light messes up your sleep patterns and the body pays for it in the long run. Post-Edison world has come close to banishing the night, but our bodies still live in a world where sun is the only source of light, and have all sorts of troubles processing artificial light induced sleep patters. More and more health problems are being tied to unnatural sleep patterns and Light Pollution.

Example: *Electric light at night disrupts your circadian clock, the name given to the natural rhythms that the human body developed over time. When you see enough bright light at night, your brain interprets this as sunlight because it doesn't know any better. The lux scale, a measure of the brightness of light, illustrates this point. One lux is equal to the light from a candle ten feet away. A standard 100-watt lightbulb shines at 190 lux, while the lighting in an average office building is 300 lux. The body's clock can be reset by any lights stronger than 180 lux, meaning that the hours you spend in your office directly impact your body's ability to fall asleep later. That's because your body reacts to bright light the same way it does to sunshine, sending out signals to try to keep itself awake and delay the nightly maintenance of cleanup and rebuilding of cells that it does while you are asleep. Too much artificial light can stop the body from releasing melatonin, a hormone that helps regulate sleep.*

Poor sleep is just one symptom of an unwound body clock. Circadian rhythms are thought to control as many as 15 percent of our genes. When those genes don't function as they should because of the by-products of artificial light, the effects are a rogue's gallery of health disorders. Studies have linked depression, cardiovascular disease, diabetes, obesity, and even cancer to overexposure to light at night. Researchers know this, in part, from studying nurses who have spent years working the graveyard shift. One study of 120,000 nurses found that those who worked night shifts were the most likely to develop breast cancer. Another found that nurses who worked at least three night shifts a month for fifteen years had a 35 percent greater chance of developing colon cancer. The increased disease rates could not be explained as a by-product of working in a hospital.

In one of the most intriguing studies, researchers in Israel used satellite photos to chart the level of electric light at night in 147 communities. Then, they placed the satellite photos over maps that showed the distribution of breast cancer cases. Even after controlling for population density, affluence, and other factors that can influence health, there was a significant correlation between exposure to artificial light at night and the number of women who developed the disease. If a woman lived in a place where it was bright enough outside to read a book at midnight, she had a 73 percent higher risk of developing breast cancer than a peer who lived in a neighborhood that remained dark after the sun went down. Researchers think that the increased risk is a result of lower levels of melatonin, which may affect the body's production of estrogen.

There could be more discoveries on the horizon that show detrimental health effects caused by artificial light. Researchers are interested in how lights have made us less connected to the changing of the seasons. "We've deseasonalized ourselves," Wehr, the sleep researcher, said. "We are living in an experiment that is

finding out what happens if you expose humans to constant summer day lengths."

5. What Should Be Your Sleep Schedule?

In the Canterbury Tales, one of the characters in "The Squire's Tale" wakes up in the early morning following her "first sleep" and then goes back to bed. A fifteenth-century medical book, meanwhile, advised readers to spend the "first sleep" on the right side and after that to lie on their left. And a scholar in England wrote that the time between the "first sleep" and the "second sleep" was the best time for serious study. Sleep, it seems, wasn't always the one long block that we consider it today.

This natural mode of sleep sounds weird to the post-Edison world of artificial lights and 6 hour sleep cycles. But it was a fact of life that was once as common as eating breakfast.

For most of human history, every night, people fell asleep not long after the sun went down and stayed that way until sometime after midnight. This was the "first sleep" that kept popping up in the old tales. Once a person woke up, he or she would stay that way for an hour or so before going back to sleep until morning—the so-called second sleep. The time between the two bouts of sleep was a natural and expected part of the night and, depending on your needs, was spent praying, reading, contemplating your dreams, urinating, or having sex. The last one was perhaps the most popular.

Experiments confirm this tendency: *Thomas Wehr, who worked for the National Institute of Mental Health in Bethesda, Maryland, was struck by the idea that the ubiquitous artificial light we see every day could have some unknown effect on our sleep habits. On a whim, he deprived subjects of artificial light for up to fourteen hours a day in hopes of re-creating the lighting conditions common to early humans. Without lightbulbs, televisions, or street lamps, the subjects in his study initially did little more at night than sleep. They spent the first few weeks of the experiment like kids in a candy store, making up for all of the lost sleep that had accumulated from staying out late at night or showing up at work early in the morning. After a few weeks, the subjects were better rested than perhaps at any other time in their lives.*

That was when the experiment took a strange turn. Soon, the subjects began to stir a little after midnight, lie awake in bed for an hour or so, and then fall back asleep again. It was the same sort of segmented sleep that Ekirch found in the historical records. While sequestered from artificial light, subjects were shedding the sleep habits they had formed over a lifetime. It was as if their bodies were exercising a muscle they never knew they had. The experiment revealed the innate wiring in the brain, unearthed only after the body was sheltered from modern life. Not long after Wehr published a paper about the study, Ekirch contacted him and revealed his own research findings.

Numerous other studies have shown that splitting sleep into two roughly equal halves is something that our bodies will do if we give them a chance. In places of the world where there isn't artificial light—and all the things that go with it, like computers, movies, and bad reality TV shows—people still sleep this way. In the mid-1960s, anthropologists studying the Tiv culture in central Nigeria found that group members not only practiced segmented sleep, but also used roughly the same terms of first sleep and second sleep.

6. Sleep & Performance

The places where most of the cutting edge research happens and great places to understand the importance of sleep is the Military and Sports fields - areas where human excellence, endurance and performance is pushed to the limits. It stands to reason that these fields notice the effects of sleep problems first. Many sports teams no take great trouble to make sure Light is adjusted to natural cycles, athletes get the full quota of sleep, etc.

It s only a matter of time before rest of popular culture catches on - just like many health ides, diets, exercises etc.

7. Sleep Timings Change with Age:

The three basic stages of adulthood—teenage, middle age, old age—have drastically different sleep structures. Teenagers going through puberty find it impossible to fall asleep early and would naturally sleep past ten in the morning if given the choice. Their grandparents often fall asleep early in the night, but then find that they can't stay that way for more than three or four hours at a time. Middle-aged adults typically fall between the middle of these two extremes, content to fall asleep early when circumstances allow it, yet able to pull an all-nighter when a work project calls for it. These overlapping shifts could be a way to ensure that someone in the family is always awake and keeping watch, or at least close to it. In this ancient system, it makes sense that older adults who are unable to move as fast as the rest of the family are naturally jumpy, never staying in deep sleep for long, simply because they were the most vulnerable to the unknown.

The other stage - babyhood is a time with no sleep structure at all. They sleep and wake up independent of the light/circadian rhythms. To the eternal consternation of all parents!

So human society is biologically designed to live in different time zones?!

Biology's cruel joke goes something like this: As a teenage body goes through puberty, its circadian rhythm essentially shifts three hours backward. Suddenly, going to bed at nine or ten o'clock at night isn't just a drag, but close to a biological impossibility. Studies of teenagers around the globe have found that adolescent brains do not start releasing melatonin until around eleven o'clock at night and keep pumping out the hormone well past sunrise. Adults, meanwhile, have little-to-no melatonin in their bodies when they wake up. With all that melatonin surging through their bloodstream, teenagers who are forced to be awake before eight in the morning are often barely alert and want nothing more than to give in to their body's demands and fall back asleep. Because of the shift in their circadian rhythm, asking a teenager to perform well in a classroom during the early morning is like asking him or her to fly across the country and instantly adjust to the new time zone—and then do the same thing every night, for four years. If professional football players had to do that, they would be lucky to win one game.

8. What Sort of Bed Should You Choose?

The biggest question—whether a bed should be hard or soft—has a long and confusing history. In 2008, the medical journal Spine seemed to settle the question of firmness. It found that there was little difference in back pain between those who slept on hard mattresses and those who slept on softer ones. How hard a person likes his or her bed is a personal preference and nothing more.

In fact, the bed that you find the most comfortable will most likely be the one that you are already sleeping on.

9. Forget The Bed - Sleep Hygiene Is What You Need

While a comfortable mattress may have little impact when it comes to sleep quality, there are several other aspects of the bedroom that do. Taken together, they form what specialists call sleep hygiene. Most are common sense.

- No coffee before bed / in the evening

- Nor is drinking alcohol before bedtime a smart move. Alcohol may help speed the onset of sleep, but it begins to take its toll during the second half of the night. As the body breaks down the liquid, the alcohol in the bloodstream often leads to an increase in the number of times a person briefly wakes up. This continues until the blood alcohol level returns to zero, thereby preventing the body from getting a full, deep, restorative sleep.

- Developing a few habits with the circadian rhythm in mind will most likely make sleep easier. Adequate exposure to natural light, for instance, will help keep the body's clock in sync with the day-night cycle and prime the brain to increase the level of melatonin in the bloodstream, which will then bring on sleepiness around ten o'clock each night.

- By the same token, bright lights—including the blue-and-white light that comes from a computer monitor or a television screen—can deceive the brain, which registers it as daylight. Lying in bed watching a movie on an iPad may be relaxing, but the constant bright light from the screen can make it more difficult for some people to fall asleep afterward.

- Walk around your house and switch off all bright lights half an hour before you sleep, including the TV, the iPad and the laptop.

- Recent studies have shown that body temperature also plays an outsized role in getting decent sleep. Takes steps to have a comfortable temperature: Take a cold shower, etc.

- Even a small increase in the amount of exercise a person gets leads to measurable improvements in the time that it takes to fall asleep and stay that way. This is particularly true for older adults.

10. The Effort Is Worth Your Time

But, though its effects were subtle, devoting extra time and attention to this most basic of human needs impacted nearly every minute of my day. Because I was improving my sleep, I was improving my life. And all it took was treating sleep with the same respect that I already gave other aspects of my health. Just as I wouldn't eat a plate of chili-cheese fries every day and expect to continue to fit into my pants, I structured my life around the idea that I couldn't get only a few hours of sleep and expect to function properly. If there was one thing that I took away from my talks with experts more than any other, it is that getting a good night's sleep takes work.

And that work is worth it. Health, sex, relationships, creativity, memories—all of these things that make us who we are depend on the hours we spend each night with our heads on the pillow. By ignoring something that every animal requires, we are left turning to pills that we may not need, experiencing health problems that could be tamed, and pushing our children into sleep-deprived lives that make the already tough years of adolescence more difficult. And yet sleep continues to be forgotten, overlooked, and postponed. Any step—whether it comes in the form of exercise, therapy, or simply reading a book like this one—that helps us to realize the importance of sleep inevitably pushes us toward a better, stronger, and more creative life.

Sleep, in short, makes us the people we want to be. All you have to do is close your eyes.

In addition to all the sleep advice, the best part of the book was the full-fledged dissing of poor Freud: Far from being full of hidden symbols, most dreams were remarkably straightforward and predictable. Dream plots were consistent enough that, just by knowing the cast of characters in a dream, scientists could forecast what would happen with surprising accuracy. - *"None of Freud's claims are true by any of our standards*

today," Domhoff said, dipping his spoon into his yogurt. "If you look at dreams—if you really look at them like we have—then you see that it's all there, out in the open. You don't need any of these symbols." He went on. "Freudians got all caught up in the idea that there were hidden meanings to our dreams. But their interpretations only worked because we share a system of figurative language and metaphor."

Too Lengthy for your tastes? Would reading such a big review eat into your sleep quota for today? Find the Quick Summary Here: https://www.goodreads.com/review/show...

Zahir says

David Randall takes us into the mysterious and fascinating world of sleep. He takes us through a journey that starts with his personal account of waking up after hitting his leg while sleepwalking, into some of the biology that occurs when we go to sleep, and what effect that sleep and rest has on our ability to function. What Randall does exceptionally well is he writes for the layman, and does not lose a non-scientific reader like myself by including too many scientific details or explanations. Instead, this book is a good combination of the science behind sleep, and commentary on how it affects our lives.

The strongest part of this book is that Randall gives us a good background into sleep science, as well as the way society views sleep. Some of the history is fascinating.. up until a little over a century ago, normal human sleep was divided into two phases: first sleep occurred when people went to bed around sundown, woke up around midnight or a little later and stayed up for an hour just thinking or doing whatever, then slept again until sunrise. When human beings are removed from artificial lights, we normally resume this type of divided sleep pattern.

Randall then takes us into several different areas, talking about what happens in the brain during sleep, what is sleepwalking and other sleeping disorders, and how lack of sleep very seriously affects our ability to function at peak levels. The discussion on sleepwalking, and how people have done very bizarre things in their sleep (including killing people) is fascinating. The discussion on how the law sees people who allegedly commit crimes in their sleep is the most interesting part of the book. His later analysis and commentary on how the profound effects of sleep deprivation is largely overlooked and ignored by society is excellent.

Randall then goes into concept of dreaming, and how Freudian theories on the interpretations of dreams has pretty much been debunked. He goes into modern theories of dreams, and how it's our brain's way of sifting through raw data from our senses, and discarding the useless, but then properly storing away the useful stuff. He includes some very interesting research and discussion.

The latter parts of the book get a little slow, as he goes into certain types of sleeping disorders, and how scientists came up with treatments for sleep apnea using CPAP machines. Despite the slowdown at the end, the book is a quick and pretty interesting read.
