

All About Sleep: Interview with Dr. Steven

Feinsilver 12/5/23

VC: Hello, I'm Vanessa Corwin

KK: And, I'm Kathleen Kaan

VC: Sleep: We need it. We want it. But, are we getting enough? What are the consequences of insufficient sleep? With us today to answer these questions and more is Dr. Steven Feinsilver, director of sleep medicine at Lenox Hill Hospital in New York City.

VC: Welcome, doctor, thank you so much for joining us. Our listeners are very interested in this topic so let's start with kind of the basics. How much sleep do we really need?

SF: The average human supposedly needs about 7 ¼ hours of sleep. Actually, the best answer to that is, you need enough sleep to feel good the next day. Period. Whatever that is.

KK: That's pretty simple. I was wondering, is it true, that consistency, like going to bed at the same time every night. Is it more important than the number of hours you sleep?

SF: There's a certain amount of sleep you need. The way to get it, ideally, you do best if you pretty much keep consistent hours. And particularly at the wake time. It's probably the time you wake up that sets your internal body clock. The reason people get jet lag is, you can't change it that much from day to day. You can change it maybe an hour at a time, no problem. But people get jet lag when you try to change many hours at a time and the same thing happens with sleep without getting on a jet. If you try to get up at six o'clock Monday through Friday and sleep till noon on Saturday and Sunday, it's like going to Europe every weekend. A lot of people do that. It does not work. And the hallmark of that fact is, Sunday night insomnia. Sunday night is the insomnia night for everybody. There are several reasons for that, but largely it's because you sleep late on weekends, change your time zone, and also you may be worried about what's going on Monday, and all the other things on your mind. There are other reasons for that too but part of it is circadian.

VC: Wow, well I certainly am a victim of that. So other than being tired and having your concentration a little bit compromised, are there other signs of poor sleep that we should be on the lookout for?

SF: Sure. The most obvious is being sleepy the next day. Again, the only reason to sleep is to not be sleepy during the day. We need sleep for a lot of different reasons. Mostly it's for brain function, mostly so you could be more awake and not get sleepy the next day and concentrate better. Humans actually do pretty well with a single night of sleep deprivation. You may not feel great but probably to the outside world you'll do pretty well. It's when they're all bad...when things really start acting up... again it's both quality and quantity. A certain amount and a certain quality of sleep. There are also effects on the rest of you. We know, for example, and it probably doesn't get enough press, that if you sleep deprive people, they gain weight. Sleep deprivation, even briefly, and this study's been done ages ago, changes some of the hormones that are involved in appetite regulation. Take a normal, healthy person, deprive them of sleep for about a week, and appetite increases. Arguably, it's associated with heart disease, it's associated with mortality, it will probably raise your blood pressure, but when I tell people that they could gain weight if they're sleep deprived, that gets more interest for a lot of people .

VC: So, sleep disorders, what are some common ones?

SF: The main symptom of bad sleep is daytime sleepiness. Again, that's all we really care about. If you're feeling good during the day, you're OK. Now the number one reason to be sleepy during the day is sleep deprivation. Period. I practice sleep medicine in the city that never sleeps. Frank Sinatra was right. If I knew nothing else about you except that you're sleeping a reasonable number of hours and you're sleepy during the day—ask no other questions, sleep apnea is the most likely cause. And it's a purely physical problem. Very common. Sleep apnea is about as common as diabetes or asthma, just to name other common chronic illnesses. Narcolepsy is a fairly rare disease. Not common, but something I see a lot. There are lots of medical reasons why people get poor sleep and feel bad during the day.

KK: Like what?

SF: In my other life I'm also a lung doctor. Pulmonary patients do not sleep well. People with chronic renal failure do not sleep well. People with arthritis may not sleep well. Anything that hurts. It doesn't entirely go away at night. They're likely to sleep badly. Just about every medical illness interferes with sleep. Or can. And bad sleep can worsen just about any medical illness too.

VC: Now, is insomnia considered a sleep disorder?

SF: Sure. But then you're going to ask me what is insomnia? That's a much harder question to answer.

VC: You mean it's not just, "oh, I can't fall asleep?"

SF: Well, it's hard to define insomnia. You could say its difficulty initiating or maintaining sleep, or, for many people, just the perception of poor sleep quality. Which is sometimes not even that accurate, it's hard to figure out. We all do a terrible job of assessing our own sleep.

You remember the time you're awake. You don't remember the time you're asleep. So, most people with poor sleep really underestimate the time they're sleeping. And the time they're awake. And that's a tough problem, trying to figure out what insomnia is in many ways.

KK: We wanted to ask you, or particularly I did because it's an important part of my life, about dreaming and how that affects your sleep. Personally, I dream every night, I remember my dreams, I wake up, go back to sleep, but this has been my whole life. How does that affect it?

SF: Let's talk about what normal sleep is. Normal sleep comes in, four different stages. Stage one is light sleep. If you fall asleep briefly in a lecture and somebody called your name you'd probably answer. You wouldn't know what the question was. (VC: Laughter). Stage two is about half of the night, and it's sort of average sleep. Stage three you see more in children. It's the really deep sleep. There is unfortunately less of it as you get older. It doesn't go away entirely. In stage three sleep, if the phone rings in the middle of the night, you can't figure out what the noise is, you're really confused, can't find the phone, you've been awakened out of stage three sleep.

That's the really good stuff. And then there's another totally different kind of sleep called REM sleep. REM sleep is named that way for rapid eye movement. The original name was a better name. It was originally called paradoxical sleep, the paradox being your brain is pretty active.

Your muscles are almost paralyzed. Now this makes sense if you realize that it's dreaming sleep. Pretty much all dreaming is REM sleep. In REM sleep it would be good since you're thinking all these weird things, to have your muscles disconnected. It's common to dream that you're paralyzed, can't move, can't run, can't talk, because in fact during REM sleep you are pretty close to paralyzed. When that doesn't work, so you can act out dreams, you get a total disaster which is REM sleep disorder.

KK: Uh oh. I think I have that.

SF: No, you don't. That's when people actually act out their dreams. There's a cycle to this, every two to two and a half hours, something like that. You go through different stages of sleep, then a REM period, then very frequently, awake for a few minutes and then it happens again. If you're awake briefly you won't remember anything, including being awake. If the dream perhaps is really interesting or exciting and you wake up totally you might remember your dream. But you probably dreamed three times last night and it's unlikely you remember all of them. You'll remember some of it, depends how interesting it is, how good your sleep is, how bad your sleep is. If you have really bad sleep, you may not dream much. If you have really good sleep, go from dreaming sleep back to non-dreaming sleep, you might not remember much. All of this, everything I've said about sleep staging, is very variable. Which is why some nights after 7 ¼ hours sleep you wake up feeling good and sometimes you wake up feeling not as good. It's all how these stages are put together.

VC: Now let's say you see a patient and you think maybe this patient has a sleep disorder of some sort. How do you diagnose these conditions? Do you put them in a sleep lab and do various tests? How does that work?

SF: Sometimes yes. When I see a patient in the office it's a fairly common medical history and physical. I want to know answers to, simple sleep history. Which is, what time do you go to bed, how fast do you fall asleep, do you wake up during the night, what time do you get up. Do you snore? Probably the hardest question is, are you sleeping? You answer those questions, that's a whole lot of what I care about, right there. And maybe other questions like, anything weird happens during sleep? There are a lot of other interesting things. And depending on what we're looking for patients might come into a sleep center. A sleep center, you stick a bunch of wires on you and let you sleep. Obviously, it's got to be comfortable or nobody would sleep. It's usually pretty comfortable. Amazingly, take most people, put them in a strange place, they sleep. And many people will sleep the same or even better. I've run a sleep lab for 35 years or so. And yeah, we do that all the time. However, it's a relatively complicated and for insurance companies an expensive test to do. So increasingly we do a lot of home sleep studies. In fact, now in our center we do more home sleep studies than in-lab sleep studies.

VC: So how does a home sleep study work?

SF: There are various gadgets that we can give you to go home with that will record sleep. i. It depends what you're looking for. We want to make it as simple and unobtrusive as possible so it's easy to put it on yourself so once on, you don't think about it.

KK: What are you looking for when you send somebody home with this?

SF: Mostly breathing. (KK: Breathing?) Yeah. Mostly sleep apnea. Sleep apnea is about ¾ of what every sleep lab deals with. That's the big disease. It's also useful to measure sleep when you're looking for insomnia and other reasons to sleep badly. What we can do at home pretty well is look for sleep apnea. Turns out oxygen level, breathing, that's pretty easy. Some of the other things that happen during sleep require brain waves, EEG, which, you need a trained technician to stick a bunch of wires on you and get good signals for that.

VC: So, for sleep apnea, mostly the treatment for that is wearing one of those masks, is that right? Is that sort of the main treatment for that?

SF: Yeah, it is, it's not the only treatment and not everybody needs to be treated. Many people have mild apnea and it's really unclear how much mild apnea should be treated. When it's severe, yes. C-PAP is a life

changer. C-PAP is what this device is called. I tell people as soon as you see it you know it must really work. Because no one would sleep with that stupid looking thing unless it really works.

KK: I've heard, I have a friend who has sleep apnea and he does fine, his wife, who also had it, did not. She pulled this mask out constantly. But I was telling her that I saw on television something you can insert in your arm? That's the same thing without the mask. Do you... what is that called:

SF: That's different. Well, C-PAP is a really simple idea. What snoring and apnea have in common, it's all about the back of the throat. Basically, when you partially block off the back of the throat you make a lot of noise. That's snoring. It's not a medical illness. No one's ever shown snoring is bad for you. But some people who snore also completely block off the throat again and again and again and that's apnea. And that, when it's bad, is clearly bad for you. Now the simplest way to treat that, is a little pressure delivered by some sort of a mask that you wear over the nose or the mouth. By pushing a little bit of air, it keeps the back of your throat from blocking off. Just really simple and brilliant idea. Lately it's changed. The basic idea hasn't changed. The technology has changed enormously. First of all, we don't call them masks any more. Most people have a small thing, it looks more like an oxygen hose you see in a hospital, it goes under the nose, doesn't usually block the mouth, and the air is delivered by a machine that is so smart that it's actually regulating the air pressure based on your breathing. It's monitoring your breathing. (VC: Wow) And about every ten minutes or so it will increase or decrease the pressure to keep your breathing good. It also keeps score. So, in the morning it'll say, okay you wore this thing for 7 1/2 hours and your apnea hypopnea index is two. Meaning how many times you stopped breathing. (Oh, wow.)

KK: That's what it is? They stop breathing?

SF: Yes, stop, or, well, slowing down. Irregular breathing during the night. Now breathing is irregular for everybody during sleep so it's a matter of degree. And that's why it's hard to know exactly when it becomes a disease. When it's mild it may not be a disease, it's probably not

important. When it's severe it clearly is bad. It's associated with heart disease, increased chance of stroke, elevated blood pressure, basically dying earlier.

VC: Lots of bad stuff. I was going to ask you about chronic disease, people who are diabetic, or people with heart conditions, obesity, this kind of thing. How does lack of sleep affect these conditions?

SF: The literature is not all that great. Some of it is hard to prove. And really that's because we don't measure sleep that much. It's relatively difficult and expensive to do big studies on sleep. There's a lot of stuff we don't know. Which makes it more interesting. Almost everything that makes you uncomfortable makes sleep worse. Particularly arthritis, for example. Sure. If you're not resting well everything is going to ache more. If everything aches more you're not going to sleep very well. Sleep apnea is a little easier of the diseases we know a lot about, that's the number one sleep disease we really understand, and that's clearly associated with heart disease, increased chances of stroke, increased blood pressure and there's pretty good evidence that when we treat it the risk of all those things gets better. (VC: wow, KK: that's amazing)

VC: What about having the right mattress, and the right pillow, how important is that?

SF: Humans were designed to sleep in caves. Dark, cold, quiet. That's really important. We sleep better when it's a little cooler and badly when it's warmer. As far as sleeping surface, I really don't know. There's stuff that's been written about that but not at all convincing, I think. There is no best mattress, as far as I can tell. It's completely idiosyncratic. There are certainly some positions that are

harder to sleep in. Humans were designed to sleep lying down. People who sleep in a chair don't sleep very well. Although, for some medical conditions people will have a hard time lying down. I don't think there's any best mattress, I don't think anybody has figured that out. I doubt it.

KK: Now, what do you feel about over-the-counter sleep aids? Like melatonin, or just b flat sleep aids. Does it harm you?

SF: Well, read the labels. Melatonin is probably okay. There are some problems with it. Melatonin is a natural substance. It's what your brain makes briefly when sleep starts. It's not really there all night to keep you asleep. So, if it does anything it might help you fall asleep. The only place it's really been... well, there are two times that we use it. It's probably useful for jet lag, when you're trying to change your time zone. It's also used for reasons it seems to work for REM behavior disorder, this peculiar disease where people can act out dreams. It's much rarer. Turns out melatonin works and nobody knows why. Other than that, it's unclear and the problem with melatonin—the study's been done twice—unfortunately, if you go to a drugstore and buy a lot of different samples of melatonin, the FDA does not approve melatonin and people try to see how much is really in the pills, the literature is very disturbing. I'd be happier if it were regulated in some way. Is it useful for insomnia? Probably not. A lot of that is probably placebo. Now, over-the-counter sleeping pills I actually have more of a problem with in many ways. Almost everything over-the-counter is antihistamine, diphenhydramine, something or other PM. the- counter sleeping pill. The problem with that is two things. If you take enough Benadryl to fall asleep—you will, it's sedating—people wake up feeling terrible. It does not cause normal sleep. Again, there are stages of sleep. Other problems with Benadryl, it's an anti-cholinergic drug, it actually speeds up your heart a little bit, you might have problems with the prostate, it's not totally benign. You can make an argument if it were a rational universe, if it were coming out now, I'm not so sure it would be over-the-counter. You could probably make a better case for zolpidem, which is Ambien, being over-the-counter.

VC: Oh, really? And even though with Ambien some people, like they get up, and they do things, they're like sleepwalking and they don't recall doing this? That's why I would never take that because I'd be afraid of, oh my God, what am I going to do, you know?

KK: You know, you just brought out a point that's interesting, what does it mean when people sleepwalk?

SF: First of all, as far as zolpidem goes, which is Ambien. That's different, when we sedate people but they're not completely asleep, they can do some weird things. And it's not unique to that, you could say that with any.... When you sedate people for a procedure in the hospital sometimes, people will kind of act out, get really strange. They're not asleep yet but they're not thinking very well. So, there's nothing unique about zolpidem. It's a known thing, it's known with a lot of hypnotics and it's pretty rare. Zolpidem has the benefit, it's been studied a lot, for causing pretty normal sleep architecture. It's the word we use for the way the stages of sleep are put together. And it wears off in about the right amount of time to get an average night's sleep. So, it makes a certain amount of sense. And it's pretty clear it's not habit-forming physically. Now that does not mean I'm advocating for that at all. In fact, I very rarely prescribe a true hypnotic. That's not the answer to most sleep problems. It's not just taking pills. But some pills make more sense than others. Now sleepwalking, outside of that, is very different. When it's caused by a medication it's different. But there is a certain amount of sleepwalking. Some of the most interesting patients I've seen have sleepwalking. Sleepwalking means being able to do something physical while you are actually asleep. It's pretty strange, actually. Most sleepwalking occurs in kids. The reason for that is, children have more of that stage 3 really deep sleep. It turns out that most sleepwalking is a deep sleep phenomenon. If I look at your brain waves during really deep sleep it's totally different, they're big, slow waves, it just looks like your brain

is turned off. If that's true, how do you get up and walk around if the brain is turned off? Not exactly clear. It's mostly things that turn out to be pretty benign. You don't do anything terrible typically. It tends to be earlier in the night because that's when you have deeper sleep. If sleepwalking starts before about age ten it probably means nothing and it will probably go away, although there are some adults who will do this all their life, and I don't know why. It's a deep sleep phenomenon. Anybody who comes in and says "I was sleepwalking" wasn't sleepwalking if they remember it. Usually it's, somebody else wakes you up and you realize you did something really weird, or in the morning you realize you must have done something strange. That's mostly, that's what we call non-REM parasomnia. Parasomnia just means that something weird happens during sleep, and this is non-REM. REM parasomnia is a very different animal, very much worse. We worry about that a lot. If you have the ability to act out dreams you could do some really weird and possibly dangerous stuff. And that's one of the more interesting diseases I've ever seen. It's called REM sleep behavior disorder where people can act out their dreams and that's a big problem.

VC: Now at what point should we consult a sleep doctor?

SF: Well sure, I mean, I mentioned sleepwalking... sleepwalking if you start as an adult is disturbing. Something's wrong. The main symptom that I see is daytime sleepiness. That's a little hard to figure out sometimes. Daytime sleepiness is different from just being tired, fatigued. Just a bit. Daytime sleepiness we assess by saying, "how likely is it that you get drowsy right now if you're doing blank." There's actually a standard series of eight questions called the Epworth questionnaire. That's the way you figure it out. Sleepiness is the propensity to fall asleep. Now how likely is it that you fall asleep if you were reading a book right now. If you were watching television. If you are a passenger in a car. If you were driving. Again, they have different significance. But that's sleepiness, as opposed to being tired. At the end of the day, I'm tired. I'm not likely to fall asleep driving. True sleepiness, if you're getting enough sleep, is one thing we very often investigate. Other important symptoms, really, are disorders initiating and maintaining sleep. That's insomnia, one way or another. Difficulty falling asleep has a little different significance from difficulty staying asleep. Difficulty falling asleep is probably more related to anxiety, or behavior, or hours. Maintaining sleep is a little more interesting, there's some medical reasons for that. Medication is not the primary way we treat it. The primary way to treat insomnia is behavior. That's been looked at a lot.

KK: How do you change that behavior? How do you change the behavior?

SF: It's not easy. Well, it's easy for me to give advice. (laughter) OK, if you want to sleep better, the rules for sleep are number one, keep a consistent waking up time. I mentioned before, circadian rhythm is set more by the time you wake up than anything else so let me start there and work backwards. So, if you want to get good sleep I would ask you, what time do you want to wake up, what's the most natural time for you to wake up? If somebody says seven o'clock, I say OK, from now on set an alarm for seven o'clock no matter how rotten the night is, get out of bed. Ideally you get exposed to sunlight which naturally wakes people up, exercise, if possible, and food. Those are all the things that tell your body what time it is. This is circadian physiology; this is the way we can entrain you—that's the word used—into the environment. So, you start with the wake-up time, you've got to have an alarm clock. People say, "I don't need an alarm clock, I wake up anyway." No. Bad sleepers need alarm clocks more than good sleepers. One of the reasons is, you set it and it's set for seven, don't even look at it. You're going to wake up during the night. Everybody does. I don't care. Doesn't matter. If the alarm hasn't gone off, you don't get up. And if the alarm has gone off, get up. No matter how rotten the night is you start with the wakeup time. Question number two is how much sleep do you think you need? A reasonable answer is, a little over seven hours. If you're a bad sleeper I might err on the low side. Whatever it is, you say okay, seven hours sounds great. From now on you're not allowed to go to bed, get into bed, any earlier than midnight. From 11 to 12, ideally, people do well if they have about

an hour to relax. So, from 11-12, you're not allowed to be in bed but you have to relax. You're not allowed to use the phone, personal electronics, computer, nothing for work. Read if it's for pleasure. Watch television if you want, that's pretty mindless, NOT in bed. Don't get into bed until midnight. Going back further, I'm still going backwards, from about 10:30 to 11 I want you to worry. Make a list of all the things you have to do the next day, whatever's on your mind, all the things you're going to think about when you're trying to sleep at 3 in the morning. And it's a pre-emptive strike. The idea is if you wake up at four in the morning, which you will, I'll get back to that, you don't have to think about that. It's all written down.

VC: Right, like we get that out of our system.

SF: Yeah, it's like, I have it written down, I'll think about that tomorrow, the end line from *Gone With the Wind*, I'll think about it tomorrow. (VC: Right, right) The essence of what is called cognitive behavioral therapy. You're going to wake up in the middle of the night. Everybody does. Nobody sleeps through the night. Sleep does not come in a seven- or eight-hour chunk. It comes in, again, a two- or two-and-a-half-hour cycle. Waking up briefly is perfectly okay. It doesn't mean the night's over. You don't need seven hours in a row to feel good the next day. It's more like seven hours total. It's relatively easy for me to give those rules to people. It's hard to do.

KK: It is hard to do but those are great tips for us.

SF: But you realize what's going to happen here. Actually, the fifth rule is any time you're wide awake get out of bed. Now if you do that what this means is at seven o'clock in the morning you wake up. You have to keep yourself awake until midnight no matter how rotten your night was. This is really tough to do for a few days. Then it gets better. You're really trying to use your body clock to get back to where you should be. It is hard to do. Maybe. But it really does work for a majority of people who are willing to do it. Sometimes we'll use a hypnotic, sleeping pill with it, usually we don't

VC: The mind is very powerful, in that way.

SF: Sleep is a powerful biological drive. Even if you mess it up. It's hard to mess it up that much. You're going to sleep (KK: No matter what).

VC: This is excellent information, wow. I'm going to try to sort of organize my life a little bit, see if that works for me. It makes a lot of sense (KK: It certainly does). Lastly, but not least, can you recommend any resources that people can consult, websites, or...

SF: Yeah. There's some good information out there. I guess my favorite resource I do refer patients to is the American Academy of Sleep Medicine. It's an organization I'm a member of. The AASM produces sleepeducation.org, [sleepeducation one word dot org](http://sleepeducation.org) is a website written by people like me, sleep doctors, aimed at patients and usually very reliable. In fact, I use that a lot given to patients. It's organized by disease. You can read about sleep apnea, you can read about insomnia, narcolepsy, it's all in there, it's I think well-vetted.

VC: Yeah, this is great. Well, thank you so much for your time with us. This is most informative.

SF: I actually like talking about it.

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