

Insomnia: Causes, Consequences and Cures

With Dr. Sonia Ancoli-Israel,

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Sharsheret: The Jewish Breast and Ovarian Cancer Community

Jenna Fields:

Hello everybody. Welcome to our webinar. We are so thrilled to have Dr. Sonia Ancoli-Israel back for round two of a webinar sharing her expertise on sleep. So today's topic is going to be insomnia, causes, consequences and cures. We will send out a e-blast in the next week with the transcript, the webinar's recording handouts for this topic today, as well as a link to Dr. Ancoli-Israel's previous webinar she did with us a few weeks ago. So really we want you to sit back, learn, and start asking questions in the chat as soon as you're ready, and we'll collect that for the Q and A towards the end of this program. I'm Jenna Fields. I'm the Chief Regional Officer for Sharsheret based out here in California.

And for those of you who don't know about Sharsheret, we are a national nonprofit organization that supports women and families facing breast cancer, ovarian cancer, and increased genetic risk for cancer. All of our services are completely free, confidential, and personalized for you. We offer psychosocial support through our social workers. And if you are facing any challenges through your cancer experience right now, our social workers are really here for you. So we will be putting information in the chat during this program so that you can contact us and let us know that you're interested in having someone reach out.

And our services are available all across the country because they are virtual. Our programming also includes free health education, virtual programs like the one that you're participating in today. We offer a variety of programs throughout the year, so we encourage you to always look at our calendar for new programs as well as past recordings. And all of that is available in the link that my colleague Bonnie is going to be putting in the chat.

We have two upcoming webinars that I'd love for you to know about. One is next week, Wednesday, April 26th at 6:00 PM Eastern time and it's on navigating a gynecologic cancer diagnosis. If you've been diagnosed with ovarian, cervical, uterine, endometrial cancer, or any other gynecologic cancer and like to learn about helpful resources and becoming a part of a supportive community, we are doing this webinar in partnership with the University of Wisconsin and Bonnie will put that link in the chat. And then in May we also have a wonderful program with American Jewish University's Maven with an interview with Jessica Queller, famed author and breast cancer advocate, and she'll be talking about life, love and the BRCA gene mutation. So please join us for that conversation as well on May 23rd at 3:00 PM Eastern.

Before we begin, a few housekeeping items. This webinar is being recorded so your faces and names will not be in the recording as long as you remain muted, so keep yourself on mute please. And it'll be posted on Sharsheret's website along with the transcript next week. Like I mentioned, we will be emailing it out to you. If you do want to remain private, you can turn off your video and rename yourself or you can call into the webinar and Bonnie is putting those instructions in the chat box right now.

So you are muted currently. Please keep yourself on mute. We are going to be having a Q and A after Dr. Ancoli-Israel's presentation. We also received questions in advance, so we will get to as many questions as we can. We ask that you keep the questions a little bit more general and we will go through them as quickly as we can before the webinar ends in an hour. We want to thank our incredible sponsors, Merck Gilead, and the cooperative agreement DP19-1906 from the Centers for Disease Control and Prevention.

And just a little medical disclaimer for you, Sharsheret is a national not-for-profit cancer organization and does not provide any medical advice or perform any medical procedures. The information provided by Sharsheret and tonight's speaker is not a substitute for medical advice or treatment for specific medical conditions. You should not use this information to diagnose, diagnose, or treat a health problem. Always seek the advice of your physician or qualified health provider with any questions you may have regarding a medical condition.

Sharsheret: The Jewish Breast and Ovarian Cancer Community

Now in a moment I'm going to introduce Dr. Ancoli-Israel. She'll give her presentation followed by the Q and A and we'll end at 3:30 PM Eastern. And at that time, we invite our Embrace community to stay on for a special bonus breakout room. Our embrace community are those people facing metastatic breast or advanced ovarian cancer. Anyone facing advanced disease is invited to stay on for this breakout session where you'll have extra opportunity to speak with Dr. Ancoli-Israel and Bonnie Beckoff, our Director of Support Services.

Now we know that this is a topic that affects so many people going through cancer as well as through their survivorship years. We have heard you that this is something that you really want to hear about and address in your own personal life. That is why we brought Dr. Ancoli-Israel on a month ago and we're so thrilled to welcome her back again today for part two to talk about insomnia. She is a Professor Emeritus and Professor of Research in the Department of Psychiatry and the Center of Circadian Biology at the University of California San Diego School of Medicine.

Her expertise is in the field of sleep disorders and circadian rhythms, particularly in normal aging and neurodegenerative disease and cancer. Her research studies included the longitudinal effect of sleep disorders on aging, therapeutic interventions for sleep problems in dementia, and in the relationship between sleep fatigue and circadian rhythms in cancer. Her full bio is on our website, but now it is my pleasure to introduce Dr. Ancoli-Israel to share her expertise once again.

Dr. Sonia Ancoli-Israel:

Thank you. Thank you so much for having me back. It's really my honor to be here. I'm going to share my screen. All right. You see that all right, great. Okay, so I didn't remember which title I had given you, but it's all the same. So I've got insomnia and really the question to be answered, what can I do? What can you do to sleep better? So what I'm going to be doing is reviewing a lot of this for you. Poor sleep, really, many people have a really hard time sleeping at night, and there are many, many different reasons. The bottom line is all sleep problems can be helped. And one of the best ways to get a better night's sleep is to improve your sleep habits, your behavior around sleep.

And so what I'm going to do for the next 40 minutes-ish is review for you what controls our sleep-wake cycle? What is insomnia? What are the consequences of having insomnia? How do we treat it? And what are the sleep disorders mimic insomnia? Particularly I'm going to just touch briefly on circadian rhythm disorders, restless legs and sleep apnea. And I promise to leave lots of time for questions.

So this I know looks like a very complicated slide, but it's really not. Let me make sure you see my pointer. Hold on there. All right. Now you should see the red dot. Yeah, somebody nod. Yeah, Jenna, you see the red dot? Yeah. Okay. So what we have here are these are the factors that control our sleep-wake. Let's start up here. This is what we call our sleep drive or our need to sleep. When you first wake up in the morning, that sleep drive or that need to sleep is really low, right? Because you were just asleep as you go throughout the day, that need to sleep increases until it gets so high, you can't stay awake anymore. You fall asleep and once you're asleep, that need to sleep dissipates until the morning when the whole cycle starts again.

What keeps you from falling asleep in this part of the evening as your sleep drive is increasing? It's the circadian alerting system. Circadian means about 24 hours. Our circadian rhythms are different rhythms in our body. There are many, many, many of them including core body temperature, blood pressure, many hormones, and of course sleep-wake is a 24 hour cycle. So the circadian alerting system also starts very low when you first wake up in the morning because you're already alert. But as you go throughout the day, it increases to help us stay awake until you get to this sort of balance point when you're able to fall asleep and the alerting system decreases again until the next morning when the whole cycle begins again.

You see I have two other curves here. This curve here is our core body temperature. Core body temperature drops at night. That's when we get sleepy. It rises in the morning hours and that's when we wake up. You can see that it also takes a dip here in the afternoon. That's why we get sleepy after lunch. It's not so much what you've eaten. It's the fact that physiologically speaking, this is a very normal time to take a nap. And of course, the whole societies that do that, right? The siesta. But people who sleep routinely in the afternoon tend to have dinner much later than we do. They go to sleep much later than we do. But so in a 24 hour period, they're sleeping the same amount of time, but they do it in two bouts and we tend to do it in one bout.

And then this last curve is our melatonin curve. I'm speaking here about the melatonin that's produced in our brain, not the melatonin you buy over-the-counter. Melatonin is a hormone that helps us sleep. It doesn't induce sleep but it helps us sleep. It's called the hormone of darkness because it's secreted in darkness. And you can see it also has a curve here. The melatonin secretion increases as we go to sleep and then decreases in the morning hours. So it is the balance of this what we call our homeostatic or our sleep drive, sleep need, and our circadian system that determine when we're awake and when we're asleep. And when these get out of sync with each other, that's when many of our sleep problems begin.

So basically during the night, in the first part of the night, we sleep because we've been awake all day. Our homeostatic drive, our need for sleep is really high. In the second part of the night, we stay asleep because our circadian alertness is low. During the day in the first part of the day, we're awake because the sleep drive is low because we were asleep all night. And in the second part we're able to stay awake because the circadian alertness is high. And so you see, it's that balance back and forth that helps determine when we're awake and when we're asleep.

So let's look at insomnia. This is an actual quote from a patient with insomnia. I'm going to read it to you. "My creativity diminishes. My irritability increases. My disposition suffers. My outlook is gloomier. My muscles feel weaker. My energy is kaput." By the way, I put the bold in just to emphasize these things. "Some days I'm too tired to accomplish anything but still unable to nap or sleep. It's an odd sensation I feel as if I've been deprived of sleep and I'm exhausted, but at the same time as if I had drunk five cups of coffee and were overstimulated."

And the reason I like showing this quote is because it points out things that people don't usually associate with insomnia or poor sleep, being irritable, being gloomy or depressed, feeling weak, no energy. And even though you can't sleep but not you're still unable to sleep or nap during the day. People with insomnia are actually it's almost like being hyperactive. Many, many of our systems in our body actually show hyperactivity. So that same thing that keeps you from sleeping at night keeps you from napping during the day. But it's much more than just being sleepy. Clearly there are many other symptoms that go along with insomnia.

The official definition of insomnia is having difficulty either falling asleep or staying asleep and having that poor sleep affect how you feel during the day. And these symptoms have to be present for at least three times a week for at least three months before an official diagnosis is made. But even if you don't meet the official diagnosis, even if you're just having difficulty sleeping, and maybe it's only two times a week or maybe it's only been two months or whatever it is, the things I'm going to tell you about how we deal with it will help your sleep whether you have an official diagnosis of insomnia or not.

I also want to point out that insomnia is not sleep deprivation. The symptoms and the results of insomnia and sleep deprivation are very similar, but they are not the same thing. With insomnia you've got enough time to get the sleep that you want. You just lo have lost the ability to sleep, so you can't get the sleep that you want to get. With sleep deprivation, you have no trouble sleeping, you're just not spending enough time in bed and therefore you can't get enough sleep. And I didn't put the slide in, but adults should be getting seven to eight hours of sleep. So if you're not in bed eight hours, you're not

going to sleep enough. If you're only in bed five, you can't get eight hours of sleep. So that's one of the differences, the main differences between insomnia and sleep deprivation.

So what happens if you don't get enough sleep? You start having problems with memory, with concentration. Your pain if you have pain may get worse. Health in general may get worse. You have a harder time at school or at work mostly because of that lack of concentration and memory problems. And you're just generally have a lower quality of life. You're just not feeling as good about yourself.

There are many reasons people have insomnia. And notice when I talk about these things like medical and psychiatric illnesses, all the medications that we tend to take, changes in circadian rhythms and primary sleep disorders, notice I say that they're co-morbid with insomnia. What that means is we don't talk about insomnia as being primary or secondary to these conditions. It's not that you have pain and the pain causes the insomnia, although pain will make insomnia worse and insomnia will make pain worse, but they're separate conditions that happen to come along hand in hand, and each can make the other worse. And the reason that's really important is that means when we talk about treatment, we want to treat these conditions simultaneously. If you're having pain and you're having trouble sleeping, you want to get both the pain and the sleep treated at the same time. Don't assume that if you treat the pain, the sleep will automatically get better.

So I'm going to touch now a little bit on each of these four bullet points. So let's start with medical conditions. Pretty much anything that causes discomfort is going to be associated with poor sleep. So whether it's the pain of headaches, the pain associated with cancer, arthritis pain, the neurodegenerative processes like Alzheimer's, Parkinson's disease, COPD, difficulty with breathing, heart disease, nocturia, you get up too often to pee during the night, obviously that's going to disturb your sleep. So any of these conditions, and of course many others, can be associated with poor sleep, but as I just mentioned, you want to treat these conditions at the same time that you also treat the sleep problem.

So the next bullet point was all the medications that we use. I use this slide a lot when I talk about sleep and aging, but I like it in general. So Marvin's sitting with his little cousin and he says, "How come grandpa never goes to a job like other big people?" "Because he works at home silly. See? He runs a drugstore." And many patients with cancer as well as many other conditions are taking a lot of medications. And those medications themselves might be associated with poor sleep. So certainly of the prescription medications, antidepressants, corticosteroids, decongestants, beta agonists and antagonists, statins, and I'm not even listing all the drugs that are associated with treating cancer and cancer survivors, but many of these drugs can have an effect on sleep. Basically if a drug is stimulating, it should be taken early in the morning. If a drug is sedating, it should be taken in the evening.

And sometimes by just adjusting the dose and the time of day that you take these medications, you can have a tremendous positive impact on sleep. So that is something you need to speak to your oncologist, to your primary care physicians about to see if changing the weight and the amount of medications you're taking might benefit your sleep. I want to say a few words about alcohol, caffeine, and nicotine as well. Well, nicotine is easy. Nicotine is going to make it harder to sleep. So if by any chance you're still smoking, another reason to stop. Caffeine, you've all heard the caffeine affects sleep. I have patients tell me all the time, "Oh, I can have a cup of espresso at bedtime. It doesn't bother me." Well, you may not think it does, but it does. Caffeine affects sleep and caffeine has a very long half-life.

We'll talk about caffeine a little bit later as well on the timing of caffeine. But I want you to also remember that caffeine is not just coffee. Green tea has loads of caffeine. Sodas of course, and a soda doesn't have to be brown to have caffeine. Mountain Dew has more caffeine than Coke. And diet sodas have more caffeine in them than the non-diet equivalent. So Diet Coke has more caffeine than regular Coke, so you have to think about that.

But alcohol, many people will use alcohol to help them fall asleep at night. And alcohol does make you sleepy initially. But several hours later when the alcohol leaves your bloodstream, it wakes you right back up again. Alcohol causes insomnia. So if you have a few glasses of wine with dinner, you might be sleepy right after dinner, but several hours later when it's time to go to sleep, you might be wide awake. Or for those people that use alcohol to help them fall asleep, it will help you fall asleep faster. But 1:00, 2:00 in the morning, it's going to wake you right back up again. So alcohol causes insomnia.

Okay, so the next thing was the circadian rhythm changes that occur. So we already mentioned circadian rhythms, right? I told you that there are many systems in our body that have a circadian rhythm and sleep-wake is one of them. And the standard phase for most adults is we get sleepy somewhere around 10:00 or 11:00. That's when our core body temperature drops. We sleep for seven to eight hours, core body temperature starts rising, and then we wake up around 6:00, 7:00 in the morning.

But at different times in our life, this pattern shifts. So if we look at adolescents, teenagers, young adults, they have what we call a delayed sleep phase. Their core body temperature doesn't drop till maybe midnight, 1:00, 2:00 in the morning. If they try to go to sleep at 10:00 or 11:00, they will think they have insomnia. They'll say, "My God, it takes me hours to fall asleep." And it does because their body's not ready to go to sleep yet. Adolescents actually need nine to 10 hours of sleep. So if they're not going to fall asleep till 1:00, 2:00 in the morning, if you do the math, that means they're not going to wake up till 9:00, 10:00, 11:00, right? What do we always tell our teenagers? Stop being so lazy. Stop sleeping the day awake. But that's a normal pattern for them. That's why high school start times are so critical because for them to go to school at 7:00 in the morning is like the rest of us trying to sit in a math class at 3:00 in the morning.

So this is called a delayed sleep phase. Now most young adults outgrow this as they grow into adulthood. This shifts back to the standard phase. But some people stay delayed their whole life, which is why I talk about this to you because most of you are probably not teenagers or adolescents, but you may still have delayed sleep phase. These are the people who consider themselves owls. If I was doing this in person, I'd ask for a show of hands of how many of you are owls. When you're an owl, you know you're an owl because you are a night person. You like going to bed late. And if your lifestyle allows you to do this, it's not a problem. You listen to your body. You don't go to bed at 10:00 or 11:00 if you're not sleepy. You wait till you're feeling sleepy and then you should sleep your full night even though you might not be waking up until 9:00 or 10:00 in the morning.

But if you're trying to still go to work or if you need to get up to take care of your family or whatever, then it becomes a problem because now you are not getting enough sleep because your body timing is different than that in the environment. And I'll tell you in a minute how one can deal with this. But I want to point out that once we hit the standard phase, as we continue to get older, our circadian rhythm continues to advance. So us older adults get sleepy earlier in the evening, maybe 7:00, 8:00, 9:00 at night. And if we went to bed at that hour, we would get our seven to eight hours of sleep. But again, if you do the math, that means we're waking up 4:00, 5:00 in the morning.

And that's what older adults mostly complain about. "I'm waking up in the middle of the night, here it is, and I can't get back to sleep." But the reason they can't get back to sleep is because physiologically speaking, their night is done. Core body temperature is rising here. It doesn't matter that the sun hasn't come up yet. They are done sleeping. And there are two scenarios that happen here with people with this advanced sleep phase. And by the way, just like the delayed sleep phase are owls, we call the people with advanced sleep phase morning larks. They tend to be morning people.

But here's what happens. First of all, even though you might get sleepy earlier in the evening, you feel like 8:00 is just too early to go to bed. So you sort of force yourself to stay up. You go to bed at maybe 10:00 or 11:00, but you're still going to wake up at 4:00 in the morning because that's when your poor

body temperatures is rising. So now you can't get a full night's sleep because again, if you're in bed for only five hours, you can't sleep eight. So during the day, you're tired. Maybe you take a nap in the afternoon. That nap allows us to stay alert later in the evening. That's that homeo step that we called talked about earlier. So you're able to stay up, but you still wake up early and now you get into this pattern of not sleeping enough at night and needing to nap during the day.

The second scenario, which is much more common is you're home in the evening, you have dinner, you sit down to watch TV, and what happens? You fall asleep. And you sleep for maybe half an hour, maybe even an hour in front of the TV. Then you wake up and you get ready for bed and suddenly you're wide awake because again, you just slept. That's that homeo step that we talked about, right? You have to be awake a certain amount of time before you're going to be sleepy enough to fall asleep. If you just slept for half an hour and an hour, you have decreased your sleep drive and now it's harder to fall asleep and you're still going to wake up at 4:00 or 5:00 in the morning.

And these people come in to see us and say, "God, I have horrible insomnia. I can't fall asleep and I'm waking up early in the morning." But it's not insomnia. It's an advanced sleep phase combined with that poor habit of napping in front of the TV or while reading in the early evening. And the key here again, is you have to listen to your body. If you're getting sleepy earlier in the evening, go to bed. It doesn't matter if it's 8:00 or 9:00 and everyone says, "Oh, that's too early." Your body is telling you that that's when it wants to sleep. And if you do that, you will get your full night's sleep.

I have to tell you. I'm in my early seventies now and I've learned that all this stuff that I've been teaching is actually true. I now can't keep my eyes open after 9:30 and I wake up about 5:30, 6:00 in the morning. So I have also, I've advanced, but I'm getting my full night's sleep.

So what do you do if you want to shift, if this is not fitting in with your lifestyle? For those owls, the best way to shift that rhythm is morning light. Remember those of you that listened to my talk about light and fatigue and cancer, remember that I said morning light is so important for us and for our circadian rhythm and for our sleep. And what the morning light helps do is it helps push that rhythm so that you get sleepy earlier and can wake up earlier.

You see, I have a picture of pills here. This represents melatonin and this time I'm talking, excuse me, about the melatonin you buy over-the-counter. We have been told by oncologists that melatonin is safe in patients with cancer. It's safe whether you're a survivor or are going through chemotherapy, but it's always a good idea to review this with your oncologist before you start taking any new medication, whether over-the-counter or not.

But the key with the melatonin here is you need to take a very, very low dose. People tend to take too high a dose of melatonin. We recommend 0.5 milligrams or one milligram at the most. You can't even buy a 0.5. You have to buy a low dose and just cut the pills in half. And you want to take it at around six o'clock in the evening. You're not taking it to help you fall asleep. You're taking it to help shift your rhythms, and that melatonin will pull the rhythm earlier while the light pushes it earlier. And that combination helps you get to get sleepy earlier and wake up earlier in the morning.

Melatonin is not a very good sleeping pill. I know that's one of the questions that came up. We'll talk about this a little more later. If it works for you, great. If not, we don't usually recommend it. But it can be a little sedating. So if you're going to take it at around 6:00 in the evening when you're first trying it out, make sure you don't have to drive. Make sure you're home so if you do get sleepy, it doesn't present any dangers.

For our morning larks, if you want to try to stay alert later into the evening and sleep later in the morning, we recommend evening light. I've got a light bulb instead of the sun because the sun isn't always out in the evening. This time of year as we head into summer, there's light later into the day. Or I

just go out for a walk as late in the day in as possible or sit in your backyard as late in the day as possible, your balcony, so you can get that evening light and that will help. We don't recommend melatonin for our morning larks because you would have to take it in the morning. And because it can be sedating, you never take melatonin in the morning.

The key of getting this light, whether in the morning and the evening, is to make sure you do it without sunglasses because the mechanism of the light working is through the eyes. And if you wear sunglasses, it blocks all that great light. Wear sunscreen if you're going out. You can wear hats but no sunglasses. I think this is very important because there are many people in different age groups that do experience these very common and normal patterns, but think that they have a sleep disorder when in fact it's just a very normal circadian rhythm change.

All right. Just a couple words about some other primary sleep disorders that can mimic the symptoms of insomnia. Restless leg syndrome is a condition where you get creepy crawly feelings in your legs, which are only relieved by moving. So people with restless legs are often shaking them. I'm sitting here shaking my leg under the table, realize you can't see it, but shaking legs or getting up and needing to walk. And it's very common whenever you sit down quietly or if when you first lie down to go to sleep, you suddenly get this terrible urge to move your legs.

The way you make the diagnosis is by answering these four questions. If you answer yes to all four of these, that means you have restless legs and it is treatable. It's usually with medications. But if you think you have them and I'm not going to read these to you now, you're going to get a copy. You can read it while I'm speaking, but you have to answer yes to all four of these. And if you do that, then talk to your physician. Your oncologist probably won't be the right person to treat this. Your primary care, a neurologist or a sleep expert can treat restless legs for you. And by the way, I'll say one of the things that causes restless legs is low iron, low ferritin. And sometimes if that's the case, by just increasing iron supplements that will help treat this disorder. So it's important to talk to your healthcare professional if you think you have restless legs.

And then the last one I want to mention is sleep apnea. This is a photograph here of Brahms. I took this photograph many, many years ago when I was in Vienna, and I am 100% sure that Brahms must have had sleep apnea. Sleep apnea is a condition where people stop breathing in their sleep. If this is your airway, I hope you are looking at me and not the slide right now. If this is your airway, when you fall asleep the airway collapses. You're still trying to breathe, but the air can't get through it. In order to start breathing and you have to wake up. You wake up, you start breathing, you go back to sleep, you stop breathing. And these awakenings are so brief that you may not even realize that you've got them.

Some of the things that predispose you to sleep apnea are being older. Brahms is clearly older here. Being overweight, which he is, having a thick neck, which I'm sure he's got under this white beard, and being excessively sleepy during the day. And here he is sound asleep. Who has the statue done of them when they're sound asleep, right? So I'm pretty sure Brahms had sleep apnea, which is sort of ironic since he, Brahms Lullaby, right? So maybe that's why he wrote it.

But the other symptom of sleep apnea is very loud snoring. So if you snore or if your bed partner snores loudly, and when I say loud, I'm talking about where it can be heard, not just in your room but several rooms away or your neighbors can hear it. I'm talking about a very, very loud snoring. Now, here's the thing about sleep apnea. It is more common in men than women, but it is very common in women as well. And most physicians sort of ignore sleep apnea in women. Not only that, as we go through menopause, the prevalence of sleep apnea in women becomes much higher. And for many of you who have gone through chemotherapy, you are forced into menopause often at an earlier age, and there's a higher probability that you may then develop sleep apnea.

So again, if you're having difficulty sleeping, whether you snore or not, and so one of the things you need to talk about with your healthcare professional, and you may want to get a sleep recording. We don't do sleep recordings for insomnia, but we would do it to rule out sleep apnea if you're having great difficulty sleeping. So you may want to talk to your oncologist, your primary care physician about being evaluated for sleep apnea. Because if that's what's causing your sleep problem, that is a whole different kind of treatment than the way we treat insomnia, and it would be important for you to get treatment.

So speaking of treatment of insomnia, let's move to that. And the question is, what can you do to improve your sleep and how is insomnia best treated? And the most effective and long-lasting treatment for insomnia is changing your behavior. Unfortunately when we have difficulty sleeping, we tend to develop habits that actually make our sleep worse. And so it's important to get into the routine of having good sleep habits. That's why just like you floss or brush your teeth at night, you need to have good sleep habits.

So what are the poor sleep habits that make your sleep even worse? Well, first, having a very irregular sleep schedule. Going to bed and getting up at different times every day is actually going to make your sleep worse. Excessive napping. If you nap too much in the afternoon when it's time to go to bed or again, that's our homeostatic. You're not going to be sleepy enough to fall asleep. So excessive napping can be a poor sleep habit. We already talked about the problem of caffeine, alcohol, nicotine. Doing something too stimulating too close to bedtime. And just reading or doing something that's going to have negative sleep associations. All these things would be poor sleep habits.

So what are the rules for our good sleep habits? Well, first of all, not spending too much time in bed. Here this guy's in bed and he thinks, "Man, if a little sleep will cure little problems, then a lot of sleep must cure a lot of problems. Wake me up in four months." Well it turns out that the longer you spend in bed, the more fragmented and disturbed your sleep becomes. The less time you spend in bed, the more consolidated sleep. So eight hours of sleep out of eight and a half hours in bed is much more efficient than eight hours of sleep out of nine or 10 hours in bed. What does a patient with insomnia do? "Oh, I didn't sleep a wink last night. I'm going to go to bed two hours earlier just to try to get more sleep." And by doing that, you're actually making your sleep worse.

So again, you listen to your body, you go to sleep when you're feeling sleepy, but you have to get up at the same time every day, same time every day, seven days a week. People always talk about sleeping in on Sunday mornings, and what they're trying to do is catch up on all the sleep they've missed. But that actually can make sleep worse. So same time every day. And that's part of establishing a regular sleep schedule. Here's a Hagar's. He says, "Helga has been hinting that she doesn't like me to sleep in on weekends. This morning while I was in the bathroom, she sold the bed." So the reason we want to get up at the same time every day is our circadian rhythm needs one stable point around which you can fluctuate. You can't control what time you fall asleep. You can only control what time you wake up in the morning. So that's one of the main reasons you want to get up at the same time every day.

Napping, we already talked about this. Here's Blondie. Mr. Bumstead, "Don't naps interfere with your sleep at night?" "Not really. In fact, it's the other way around. A good night's sleep often interferes with my naps." So as we already said, napping could make it harder to fall asleep at night. If you have no trouble sleeping, I don't care if you nap. If you do have trouble falling asleep, then napping is a problem. Having said that, if you find you're really sleepy during the day and you can't keep your eyes open, then go ahead and nap, but do it as early in the afternoon as possible and try to limit it to 30 minutes. You might have to set an alarm to actually limit it to 30 minutes.

You know how sometimes you nap and you wake up and you feel worse than you did before your nap? That's because your naps are too long. Has to do with our circadian rhythms. It has to do with our

different sleep stages. But if you limit it to 30 minutes, you'll wake up feeling refreshed and hopefully 30 minutes if it's early in the afternoon, won't interfere too much with your falling asleep at night.

Exercise, in general, being the more physically fit you can be, the better you will sleep. Exercise doesn't mean you have to go run a marathon. It's whatever you are able to do, take a short walk if you're able to, whatever you are able to do. But the key is the timing. In the ideal world, you would exercise about six hours before bedtime because when you exercise, core body temperature goes up and it takes about six hours for it to start falling again. And remember we said when core body temperature drops, that's when you get sleepy. It doesn't always fit in with our schedules, but the key is you don't want to exercise too close to bedtime.

All right? May ask you then, maybe somebody, I don't know, unmute and yell out to me, when you wake up during the night, what's the first thing you do? Jenna? You do it. What's the first thing you do when you wake up in the middle of the night?

Speaker 3:

Turn on the television.

Speaker 5:

Go to the bathroom. Go to the bathroom.

Dr. Sonia Ancoli-Isreal:

Go to the bathroom. That's what I wanted hear [inaudible 00:39:43].

Speaker 6:

Go to the bathroom. Everyone says go to the bathroom. Go to the bathroom.

Dr. Sonia Ancoli-Isreal:

Okay, mute up again, mute, mute, mute. I bet even before you go to the bathroom, the first thing you do is you'll look at the clock. That's what happens.

Dr. Sonia Ancoli-Isreal:

And that's one of the worst things you can do. So what happens? When you first wake up? You are in what we call transitional or N1 sleep. In order to look at the clock, you have to take yourself to full awakening. You got to lift your head, maybe even turn it. You got to pick up your phone. No one uses a clock like in the picture here. Everybody has their phone. But you're taking yourself to full awakening. Now remember our homeostatic? Once you're fully awake, it's going to be much harder to fall back to sleep because your sleep drive is quite low because you were just sleeping.

If when you first wake up, you don't even open your eyes, you just sort of rearrange yourself. Get comfortable again, stay in that transitional stage of sleep, you have a much greater probability of being able to fall right back to sleep. So if you need an alarm, set your clock, your phone, but put it under the bed. Put it somewhere where you're not tempted to look at it. Because if it's right there by your bed, it's very hard not to look. The second reason you don't want to look at the time is it puts extra pressure on you. "Oh my God, it's 1:00 in the morning." "Oh my God, it's 1:02 in the morning." "Oh my God, it's 1:05 in the morning and I still haven't fallen asleep." So you get rid of your clock.

And I have to tell you that the majority of the time, that alone will help you fall back to sleep and improve your sleep during the night. But you're going to say to me now as many as you did, but then I

have to go to the bathroom. Well, first of all, going to the bathroom doesn't usually wake you up. Usually you wake up first and then you realize there's some pressure and you need to go to the bathroom. So if you can fall right back to sleep, you might not need to go to the bathroom. If you do decide you need to go to the bathroom, the key is not to turn on a lot of light.

You may recall I said that melatonin is secreted in darkness. And when you turn on the light at night, it's like saying to your brain, time to wake up. Stop secreting melatonin. Now, I don't want you to fall, so use a nightlight or something, but you want to try not to turn on a lot of lights. This is a picture I cut out of an airplane magazine in days when they still had magazines, and I wish I'd actually bought a pair of these. These were for sale. But these are brilliant because you can see where you're going and you don't have to turn on a lot of lights. I have no idea if they're still available anywhere in the world, but the key is not too much light.

All right. Along with that, you want to keep your bedroom as dark as possible for that same reason so that your melatonin can get secreted and it'll help you sleep. Blackout curtains, whatever it takes to make a dark bedroom. If you can't do that, you can wear an eye mask, but you want to block all that light at night. Obviously, you also want a quiet environment and a comfortable temperature. And temperatures, that's an individual preference. But we find slightly on the cooler side will help you sleep better than on the warmer side.

Should also say when we talk about temperature in our core body temperature, we said it drops at night, we get sleepy. Core body temperatures is the opposite of our peripheral temperature. So if you could warm your feet or your hands, that that will then help your core body temperature drop and help you get sleepy. So they've been very cute studies where people wear socks to bed and that actually helps them fall asleep faster because they're warming their feet, which decreases core temperature. Or taking a warm bath, not too hot because that really hot bath will actually raise your core temperature. But taking a warm bath, anything to warm your hands and feet might actually help you fall asleep.

All right, we talked about caffeine. I love this cartoon. Mrs. Bear says to Mr. Bear, "How many times have I told you no coffee after September?" Well, we're not talking about after September, but we are talking about after lunch. So we talked about the problems with caffeine, the long half-life. So if you are going to drink something with caffeine, no caffeine after lunch because that will interfere with your sleep.

Eating a light snack before bed. Don't go to bed hungry. And something, whether it has tryptophan in it, tryptophan is a naturally occurring amino acid, but it's also found in milk, in cheese. So that might help you fall asleep if you have a glass of warm milk before bedtime. Doesn't have to be warm, but warm tends to be more soothing. I'll let you read the cartoon yourselves. I won't read it to you. Other things that have tryptophan in it include fish and turkey, but I don't know that you want to eat turkey or a trout right before you go to bed, but that's why we often get sleepy after Thanksgiving dinner. It's all that turkey that we're eating.

And then dealing with your worries. You can read the cartoon here yourselves. In our busy lives, the first time we have to sit down and think is often when we get into bed at night. And that is the wrong time to start thinking. So we suggest, and this is going to sound silly, but it works for many people, find 10, 15 minutes earlier in the day when you sit down, you turn off your phone and you sit and you worry. That's your time to think about all those things that you tend to think about in the middle of the night or when you first get into bed at night.

And if you do that every single day at the same time, your brain will get used to dealing with it at 10:00 to 10:15 in the morning, for example, rather than when you get into bed at night. And if you do start thinking about things at night, you can sort of stop yourself and say, "Wait a minute, I have time to do this tomorrow. I don't need to do this right now in bed." It's very effective, as I say for a lot of people.

So this all gets summarized into these four cardinal rules of behavioral treatment. Reduce the amount of time that you're spending in bed. You should only be in bed for about 30 minutes more than your total sleep time. Get up at the same time every day, no matter how much you slept the night or didn't sleep the night before. Don't go to bed unless you're feeling sleepy because otherwise I'll just toss and turn and have difficulty falling asleep. And if you're not asleep in a reasonable amount of time, whether in the beginning of the night or in the middle of the night, you get out of bed.

So this is what we call, I'm going to go one more, this is what we call stimulus control therapy. When you do things in bed that aren't associated with sleep, like tossing and turning, or reading, or watching TV, or paying bills, or playing Candy Crush on your phone, you start associating the bed with all these other things. And we want you to associate the bed with sleep, not with worrying or being awake or anxiety. And so what we have you do is if you find yourself just starting to get tense or anxious about not sleeping, get out of bed. Go into another room and do something that's quiet and relaxing and calming for you. It might be reading a book, it might be watching TV, it might be knitting, whatever it is that you find calming.

If it's going to be TV or a book though, make sure it's not something that sucks you in. You know you're reading or watching TV and you're starting to get sleepy and you go, "Oh, just one more chapter. I just want to see what's going to happen at the end of the show." That's a no-no. Because as soon as your eyes start closing, you want to put down whatever you're doing and get back into bed so you fall asleep in bed. And you do this, if low and behold you get back into bed and you start getting 20 minutes or so and you're still not asleep and you're starting to get tense again, you get out of bed again.

And you do this all night long if necessary until you can get into bed and fall asleep. And what starts happening is you start associating the bed with sleep rather than with the anxiety or the tension or the not sleeping. With that, you still have to get up at that same time every day. The next night you're going to be much sleepier or your sleep drive's going to be much higher because you didn't sleep well because you kept getting out of bed the night before. And over time, you actually will start sleeping better because you will start associating that bed with sleep and you'll know that you are able to sleep in bed. It is a very, very effective behavioral treatment. It is actually one of the best treatments for insomnia.

Having said that, there are times when a sleeping pill is appropriate. We already talked about the problems with alcohol. There are many physicians that will give you an antidepressant, not because you're depressed, but because they happen to be sedating. And so they try to figure out what is the right dose of the antidepressant to make you just sleepy enough. It's a tricky process and it's not something we generally recommend. Trazodone is used a lot to treat sleep, even though it is an antidepressant. If you are taking Trazodone and it works for you, great, keep taking it. If you're taking Trazodone and you're still having trouble sleeping, then it is not the right treatment and you need to talk to your doctor about something else.

Antihistamines, these are all the PM drugs, Tylenol PM, Advil PM, et cetera, et cetera. I am not a fan of these drugs. Again, if you're taking it and you have no side effects and it's helping you, okay. I wouldn't recommend starting them. They have a lot of side effects, especially for older people. They're quite contraindicated in older adults. So again, talk to your doctor if that's something you're using. But there are a lot of sleeping aids that are approved by the FDA. And if you're going to take a pill, you're actually better off taking one of these than you are over-the-counter.

Some of these newer ones, and you'll get a copy of this in the handout. These are all the drugs that have been approved by the FDA for sleep. And you can see they're two very important questions your doctor should be asking you before he or she prescribes these, though I'm sure they don't. The first is, do you have difficulty falling asleep or staying asleep? See some of them, many of them are approved for falling asleep. Only some are approved for staying asleep. So if you're not taking one that helps you stay asleep,

it's not going to help you. The other question that needs to be asked is how long are you going to be in bed? Because for many of these you can see you're supposed to be in bed for seven to eight hours. Otherwise when you wake up in the morning, you might get hungover. You'll have that side effect of still being sleepy.

The newest drugs are these three down here. They have a whole different mechanism than the older drugs like Ambien, et cetera. These work on the wake system rather than on the sleep system. And they tend to be a little safer with fewer side effects than some of the older sleeping pills. But again, I'm not going to tell you what you should be doing. Talk to your doctors about this and see what might be the right sleeping pill for you if you are still having difficulty sleeping.

So the bottom line is insomnia is a disorder. It often coexists with other medical psychiatric and sleep problems. It is associated with significant consequences. But there are treatments and the behavioral treatments are the best treatments we have out there. They're actually recommended by everyone as they should be the first line of treatment. Think about what behaviors you might be doing that might be making your sleep worse and see if you can sort of change those. And if needed, there are FDA approved drugs for your insomnia. So the bottom line is one night of insomnia isn't the end of the world, but if you're having multiple nights, then absolutely get your insomnia looked into and treated.

And I just, oh, where's my last slide? Oh dear. Hold on. I'm going to pull up. I didn't put it in here. Hold on one sec please. Because there's a research study that's going on that I think you would very much want to know about. So let me share my screen again. Okay. Can you see that?

Dr. Sonia Ancoli-Isreal:

Okay. So is, it's a study called REFRESH. It's based, but one of my colleagues in Arizona is doing it, and it's primarily for survivors of gynecologic cancer. This will be in your handout. If you are having any difficulty sleeping and you're between the age of 18 and 74, you will be eligible for this study most likely. So this information will be there. And they're looking at treatments of disturbed sleep for these survivors. So if you have difficulty sleeping, this might be something that you're interested in looking into. And as I said, you will get a copy of this when you get the handout. So with that, I'm going to stop sharing. And-

Jenna Fields:

Thank you so much. I appreciate that. And I do ask everybody to stay on mute if you can so we can get through as many questions as possible. Thank you so much, Dr. Ancoli-Israel for this incredible presentation. We're all so grateful. We've received wonderful comments in the chat already about how helpful this-

Dr. Sonia Ancoli-Isreal:

I'm looking at them briefly. Maybe if you can just tell me, give me the questions because it will take me a while to go through and read them.

Jenna Fields:

So I will tell you the questions and we'll go through this and we'll end a few minutes late as well. First of all, a lot of people have been asking about handouts, getting your slides, recordings. We will be sending that out probably a week from now. So look for it in your inbox. So everyone will be receiving this information, including information about that gynecologic cancer study happening out of Arizona. We did get a question if there was one that includes breast cancer patients. Doesn't sound like it.

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Dr. Sonia Ancoli-Isreal:

There were some that were going on. We're actually waiting, hoping to get funded for one, but right now I don't know of any going on in breast cancer.

Jenna Fields:

And I told Dr. Ancoli-Israel, we'll stay connected as Sharsheret with her after this and hopefully we can continue to provide education around sleep on an annual basis to our Sharsheret community. So please continue to look out for that. Okay, lots of questions. More clarification around melatonin. I think that some people wanted just to hear again, .05 is your recommended dose, which is difficult to find.

Dr. Sonia Ancoli-Isreal:

Okay, so let me just review it. Yes, I'll stop you.

Jenna Fields:

Right.

Dr. Sonia Ancoli-Isreal:

Let me just review it. So if you are an owl, if you are not falling asleep until 1:00, 2:00, you're not getting sleepy until 1:00, 2:00 in the morning and you sleep late into the morning hours and you want to start try to get sleepy earlier in the evening and wake up earlier in the morning, then you would do a low dose of melatonin at about 6:00 PM and we recommend 0.5 to one milligram. I think you can buy the one milligrams. For the 0.5, you have to buy the one and then just cut it in half. Test it out and see what'll work for you. But you don't want to go too much higher than that. If you are trying to use melatonin as a sleeping pill, then might do up to three milligrams at bedtime. That's a very different way of using it. The data suggests melatonin is not one of the better sleeping pills, but if you are taking it and it works, then it's okay to keep taking it. It is a fairly safe drug. And it is a drug even though it's over-the-counter.

Jenna Fields:

We actually got a question about someone was told that it actually helps fight the cancer. Can you please clarify that?

Dr. Sonia Ancoli-Isreal:

Yeah, I've heard that too. I have not seen those data, so I don't know.

Jenna Fields:

Okay. So question around the number of hours for sleep a day. Does nap time plus evening get you to that eight or does it have to be...

Dr. Sonia Ancoli-Isreal:

Yeah. No, it's seven to eight hours in a 24-hour period. So if you find that you're napping for an hour and sleeping six hours at night, that's still getting you to your seven hours, so that's okay.

Jenna Fields:

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For someone who has been using a drug for sleep aid like Ambien for years, who my understanding from this question is they don't want to take Ambien anymore, how do they start these behaviors?

Dr. Sonia Ancoli-Isreal:

So the best thing to do is contact your local sleep clinic and let them help you because it's hard to do this by yourself. You're going to want to slowly wean yourself off the Ambien. If you've been taking it for a really long time and you got to very slowly decrease over time. But as you're doing that, they can start doing some of these behavioral treatments with you. So the best thing to do is almost everybody, every city now has a sleep clinic. Contact them and see that they can help you with that.

Jenna Fields:

Great. A lot of questions came in around reading before bed. I think that was a surprising one for people to hear. Can you provide a little bit more insight because we've all been told that reading is good for falling asleep.

Dr. Sonia Ancoli-Isreal:

So again, if you have no trouble sleeping and you read for a little bit and it helps you fall asleep, that's fine. My concern is those people that have real insomnia, that have difficulty falling asleep, and you're reading in bed and you're reading and you're reading and you're not falling asleep, that's the person that shouldn't be reading in bed because you've now associated the bed with reading rather than with sleeping. So read outside of bed. Read as long as you want outside of bed. And again, when you feel your eyes closing, that's when you get into bed. So all the things that I said are for people with difficulty sleeping. You don't have difficulty sleeping, you can do whatever you want.

Jenna Fields:

I'm assuming everybody on this call joined because they have difficulties sleeping.

Dr. Sonia Ancoli-Isreal:

Probably.

Jenna Fields:

So we could all benefit from that recommendation. So cell phones, computers, and their impact on sleep and insomnia. Can you touch on that?

Dr. Sonia Ancoli-Isreal:

Yeah. And that's a terrible impact which is why they don't belong in the bedroom. So first there's the question of the light. Even your phone has a lot of light, and that light at night, remember I said, is telling your brain to not secrete any melatonin and it makes it harder to sleep. That's why you don't want a lot of light. And it also has to do with the frequency of the light, the blue spectrum, et cetera. So I'm not going to get into that. It's going to take too much time. But the point is, you don't want a lot of light. If you are going to read on an iPad or your phone, you can reverse it. So it's a black background with white letters. That has much more light going into your eyes than the white background with the black letters.

But again, it's best not to do it in bed. Do it somewhere outside of the bedroom. Computers, it's a lot of light. It's a lot of blue light, which at night, blue light at night is the wrong time for our circadian rhythms, et cetera, et cetera. So it's best not to spend a lot of time. The thing is, with the computers and iPads

and phones, you're very close. Like I'm sitting maybe a foot and a half or two feet from my computer. That's very different than when you're watching TV and you're much farther away from it. So when you are this close to the screen, that's just way too much light at night and it's going to make it harder for you to sleep.

Jenna Fields:

So we have about two minutes left. I'm going to ask Bonnie to put our evaluation in the chat now. This is just our evaluation for today's webinar so people have time to click on it before we end. So I'm going to get to a few more questions. One of those questions is that I wanted to touch on was sort of this past recommendations around sleep. For example, Dr. Oz has put out a lot of information around sleep, saying one and a half hour increments is really what you need. So six hours, seven and a half hours, nine hours, is that those kinds of recommendations that are out there?

Dr. Sonia Ancoli-Isreal:

No data for that, absolutely. No. Yeah, what he's talking about is our sleep cycles change every 90 minutes. Our sleep cycles are 90 minutes cycles. But no, get your sleep at night. Yeah.

Jenna Fields:

Got it. And for people who do have to wake up really early on weekdays and want a later sleep on the weekends, how does that impact this?

Dr. Sonia Ancoli-Isreal:

So again, if you have trouble sleeping, if you don't have trouble sleeping, sleeping in is less of a problem. Although the truth is you can't catch up on your sleep in just one or two late mornings. It takes longer than that to catch up. So I'd say if you're going to sleep in, sleep in, if you're getting up at 6:00 during the week and you want to get a little more sleep, go to 6:30. But you don't want to sleep too late because again, it's going to throw off your rhythms. It's also you won't be awake as long during the day for going to sleep at night. So then if you start going to sleep even later, everything starts getting out of whack. So the more regular your schedule can be, the better it is. If you have to get up early, think about are you going to sleep too late? Are you sleepy earlier than you're actually going to bed? So again, it's back to that listening to your body because maybe you can get enough sleep during the week even though you're waking up early.

Jenna Fields:

And can you touch on, for our final question, we got a few of these in advance around meditation and self-talk. Any recommendations for people who are facing insomnia that would help?

Dr. Sonia Ancoli-Isreal:

Yeah, so if you find meditation, calming and quieting for your brain, it's a wonderful thing. And not everybody likes to do it. But yes, anything that you can do that you find relaxing and calming, do it because absolutely, that will help you fall asleep and stay asleep better.

Jenna Fields:

Well, I'm sorry we can't get through all of our questions today because there's so-

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Dr. Sonia Ancoli-Isreal:

My apologies. I went on too long and it was important information.

Jenna Fields:

Your presentation was wonderful. Your presentation was wonderful. Thank you so much, Dr. Ancoli-Israel, and to everybody who joined today. And please if you could fill out our evaluation and let us know about this program and your interest in future programs. I do want to thank our sponsors for today's program, Merck Gilead, and the Centers for Disease Control and Prevention. We have two upcoming webinars that I mentioned earlier that Bonnie will put the registration for in the chat one more time. And of course, Sharsheret is always here for you-