COPE Webinar Transcript

Sleep and Weight Management: Findings from Patients, Implications for Providers

Presented by: Robin Tucker, PhD

10/27/22

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Lisa Diewald: Good afternoon. Welcome to our October COPE Feeding the Need, Developing Solutions webinar. As always, we are so grateful you decided to spend the next hour with us. Each month during our webinar series and seasonal conferences, we highlight projects, concepts, research and interventions that identify a need and present practical solutions

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Lisa Diewald: addressing that need. And today's Webinar is no exception. I think you'll leave today with several practical tips to an age old problem for which we can all identify. Sleep difficulties and how poor sleep can impact the health of our patients and clients that we serve.

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Lisa Diewald: Our Webinar today is entitled Sleep and Weight Management: Theory and Practice for Healthcare Providers, which will be presented by Robin Tucker, PhD, RD. Who I will introduce shortly.

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Lisa Diewald: Dr. Tucker will walk us through the relationship between sleep quality and quantity and health, and provide us with some excellent research and tips. We can apply with our patients and clients, and even take away some practical applications, perhaps for our own personal health.

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Lisa Diewald: We have about one hundred and fifty health professionals registered for today's webinar, and we're thrilled to welcome you. Whether it's your first COPE webinar, or whether you regularly attend our monthly webinars. My name is Lisa Diewald, and I am the program manager for the MacDonald's Center for Obesity Prevention and Education at Villanova University's Fitzpatrick College of Nursing.

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Lisa Diewald: I have the pleasure of being the moderator for today's program.

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00:01:49.630 --> 00:01:57.919

Lisa Diewald: Before we begin the presentation. I would just like to remind you that PDFs of today's slides are posted on the COPE website

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00:01:57.930 --> 00:02:09.680

Lisa Diewald: at Villanova.edu/COPE. After going to COPE's website, look for Webinar on the Menu bar and follow to this Month's Webinar presented by Robin Tucker.

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00:02:10.090 --> 00:02:28.700

Lisa Diewald: The Q& A Box will be open throughout the presentation for you to ask questions. We'll address as many questions as possible at the end of the presentation. The expected length of the Webinar is one hour. The session, along with the transcript will be recorded and placed on the COPE website within the next week.

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00:02:29.830 --> 00:02:42.780

Lisa Diewald: If you used your phone to call into the Webinar today and want CE credit for attending. Please just take a moment afterwards and email us and provide your name so that we can send you your CE Certificate.

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Lisa Diewald: Villanova University Fitzpatrick College of Nursing is accredited as a provider of nursing continuing professional development by the American Nurses Credentialing Centers Commission on Accreditation.

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Lisa Diewald: Villanova University College of Nursing Continuing Education, COPE, is also a continuing professional education CPE accredited provider with the Commission on Dietetic registration.

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Lisa Diewald: Our Webinar this month awards one contact hour for nurses and one CPEU for Dietitians and DTRs. The suggested CDR performance indicators are listed on the slide and the CDR level of this Webinar is two.

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00:03:25.810 --> 00:03:39.169

Lisa Diewald: You must attend the entire Webinar to receive continuing education credits, and while everyone is encouraged to complete a post program evaluation to receive contact hours, all nurses must complete the evaluation.

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00:03:40.840 --> 00:03:57.450

Lisa Diewald: And now I have the privilege of introducing today's speaker, Robin Tucker, PhD, RD, is Associate Professor of Food Science and Human Nutrition at Michigan State University, and a Fellow of the American Academy of Nutrition and Dietetics.

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00:03:57.460 --> 00:04:16.860

Lisa Diewald: Dr. Tucker is an author on numerous peer-reviewed journal articles addressing research interests such as sleep dysregulation and its relationship to hunger, cravings, appetite, intake and weight and the impact of resilience on perceived stress, anxiety, and sleep quality.

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00:04:18.140 --> 00:04:35.340

Lisa Diewald: In addition to other grant awards, Dr. Tucker recently received grand funding to test the effectiveness of medical nutrition therapy and sleep education on long term glucose control. Dr. Tucker is a sought after speaker on the impact of sleep habits on body weight,

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00:04:35.350 --> 00:04:42.229

Lisa Diewald: and is a recipient of the Teacher Scholar Award from Michigan State University's Department of Food Science and Human Nutrition.

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00:04:43.590 --> 00:05:03.040

Lisa Diewald: While we are preparing for the presentation to begin, I just wanted to provide the following disclosure prior to getting started. Dr. Tucker will also provide disclosures as part of her presentation. There are no relevant financial relationships with ineligible companies for those involved in the ability to control content of the activity.

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00:05:03.050 --> 00:05:12.099

Lisa Diewald: The planners will review participant feedback to evaluate for real or perceived commercial bias in any activity.

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00:05:12.180 --> 00:05:24.549

Lisa Diewald: Accredited status does not imply endorsement by Villanova University, COPE, or the American Nurses Credentialing Center of any commercial products or medical nutrition advice displayed in conjunction with an activity.

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00:05:25.220 --> 00:05:27.270

Lisa Diewald: And now

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00:05:27.330 --> 00:05:36.830

Lisa Diewald: I'm pleased to welcome Robin Tucker to our Webinar Series today, and Dr. Tucker, I want to invite you to go ahead and share your screen with us.

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00:05:43.330 --> 00:06:00.760

Robin Tucker, PhD, RD, FAND: Hopefully that is transmitting as we we hope and planned. Thank you, everybody so much for being here today. I'm really excited to share and talk about a topic that I'm really passionate about. And that's the idea of how sleep impacts our health.

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00:06:00.770 --> 00:06:16.630

Robin Tucker, PhD, RD, FAND: Today we'll spend a lot of time talking about the role of sleep and relationships between weight management and other chronic diseases related to diet. We'll talk about some of the the theory or the mechanisms by which we think these relationships

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00:06:16.640 --> 00:06:21.639

Robin Tucker, PhD, RD, FAND: occur. And then the last section of the presentation today

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Robin Tucker, PhD, RD, FAND: will be focused more on practical information that you can share with people that you care about. Whether those are your patients, your clients, your family members, or yourself. And how to improve sleep outcomes.

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00:06:35.780 --> 00:06:39.290

This slide shows you my disclosures. and I think

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00:06:39.400 --> 00:06:50.760

Robin Tucker, PhD, RD, FAND: you can read through those. But I think the most important thing that I want you to to take away from this slide is that I'm going to talk about later in the presentation the sleep education for everyone program, or SLEEP.

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00:06:50.770 --> 00:07:03.510

Robin Tucker, PhD, RD, FAND: I did develop this program. I will talk about it. I don't receive any financial compensation for my work with SLEEP. So just know that I'm not making any money off of this.

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00:07:04.790 --> 00:07:28.070

Robin Tucker, PhD, RD, FAND: Hopefully, by the end of today's session you will be able to explain at least two mechanisms by which sleep is going to affect weight management outcomes. You'll be able to identify at least two tools to screen for sleep problems and summarize at least two. Although we will go into many more behavior based strategies that you can share with people you care about to address sleep problems.

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00:07:28.930 --> 00:07:41.230

Robin Tucker, PhD, RD, FAND: So we have a a short poll here to to get you involved with today's presentation. I think Lisa is going to display that for you. So feel free to participate if you'd like.

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00:07:44.380 --> 00:07:49.869

Robin Tucker, PhD, RD, FAND: And do I need to stop sharing Lisa? Or if you might want to stop sharing for just a minute.

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00:07:49.930 --> 00:07:52.260

Robin Tucker, PhD, RD, FAND: Um!

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00:07:53.080 --> 00:07:54.540

Lisa Diewald: We will

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00:07:54.860 --> 00:07:58.900

Lisa Diewald: go ahead and share my screen.

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00:07:59.150 --> 00:08:00.509

Lisa Diewald: Just a minute.

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And.

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00:08:07.910 --> 00:08:09.320

Lisa Diewald: Okay.

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00:08:09.620 --> 00:08:10.580

That's.

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00:08:11.930 --> 00:08:17.439

Lisa Diewald: And we are going to go ahead and start the poll.

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00:08:22.340 --> 00:08:23.240

Lisa Diewald: Okay.

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00:08:24.100 --> 00:08:25.330

Lisa Diewald: And.

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00:08:26.830 --> 00:08:31.079

Robin Tucker, PhD, RD, FAND: You guys are fast asking about how much sleep you got last night.

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Robin Tucker, PhD, RD, FAND: It looks like the majority of responses have come in.

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00:08:49.100 --> 00:09:13.690

Robin Tucker, PhD, RD, FAND: And it looks like all over half of you achieved somewhere between seven and nine hours. Hopefully you can see the the poll. If not, I'll read it to you. About thirty-seven percent of you said more than six but less than seven, and nine percent of you less than six hours. So my follow up question. Lisa, I think you need to stop sharing.

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Robin Tucker, PhD, RD, FAND: me to.

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00:09:16.350 --> 00:09:19.179

Robin Tucker, PhD, RD, FAND: I can share the results. We'll stop sharing that

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00:09:21.790 --> 00:09:23.369

Robin Tucker, PhD, RD, FAND: and then

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Robin Tucker, PhD, RD, FAND: get back to sharing my screen.

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00:09:30.540 --> 00:09:59.309

Robin Tucker, PhD, RD, FAND: The follow up question or the bonus question. How much sleep should you have received last night? And you can think about that mentally. But I'm really happy to see that the majority of you did achieve recommended sleep duration for last night. So the recommendation is between seven to nine hours a night for adults. We'll talk a little bit more about that in the coming slides. But kudos to you for achieving what we

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00:09:59.320 --> 00:10:02.530

Robin Tucker, PhD, RD, FAND: think is consistent with overall good health.

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Robin Tucker, PhD, RD, FAND: So let's talk a little bit about why we, as health care professionals, should care about sleep. I know at least in the nutrition world we've sort of ignored it for a very long time, and didn't really recognize the role that it plays in diet related chronic disease risk and management. So it's going to give you kind of a background on what sleep is, why we do it, how we do it, and just to provide a foundation for the rest of today's presentation. We'll go pretty quickly through these slides.

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Robin Tucker, PhD, RD, FAND: I think it's important to understand or define what sleep is. So we're talking about the same thing. And I mean it's something we all do. So I think we inherently know what it is, but it's always nice to give a definition.

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Robin Tucker, PhD, RD, FAND: And there are multiple definitions of sleep available out there. But the one that I like is "sleep is a period of reduced responsiveness to stimuli. It's usually associated with immobility and it's reversible".

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Robin Tucker, PhD, RD, FAND: So to break that down a little bit more reduced responsiveness to stimuli. You're not alert to really what's going on around you unless it becomes strong enough stimuli to raise you out of the sleep state. It's usually associated with immobility. So you shouldn't be moving around when you're getting healthy sleep. But there are some sleep disorders associated with movement. As you might imagine, that is not desirable, and can even be dangerous.

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Robin Tucker, PhD, RD, FAND: And what distinguishes sleep from, say a coma, is that we can typically enter and exit into the state of sleep. Unlike if we were in a coma.

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Robin Tucker, PhD, RD, FAND: Now sleep appears to be essential, and what I mean by that is that every animal that's been studied engages in some sort of sleep like behavior.

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Robin Tucker, PhD, RD, FAND: But we don't really know the exact purpose why we sleep, but we do know that many physiological processes occur either during sleep exclusively or at different rates during sleep, and these are important to our overall health.

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Robin Tucker, PhD, RD, FAND: So gene expression. Genes maybe turned on or off, based on whether or not we're sleeping. We know that muscle repair happens during sleep. And even things like your brain being able to rid itself or flush toxic byproducts that build up over the course of the day like beta amyloid. This is happening during sleep, and this example is one of the reasons why we think that sleep problems are associated with increased risk of Alzheimer's disease.

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Robin Tucker, PhD, RD, FAND: So these are just the this is just scratches the surface of what's going on while we sleep.

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So it's important to understand that sleep is not wasted time. It is actually very very important for our overall health.

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Robin Tucker, PhD, RD, FAND: This slide kind of takes you through how we fall asleep, or the systems that are working to help us fall asleep. And there's really sort of two components here that need to be working together in order for us to easily fall asleep and and really stay asleep.

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Robin Tucker, PhD, RD, FAND: So there are two systems like I said, the first we call the homeostatic sleep drive system. Which is S in the graph that you can see here, and I think it an easier way to conceptualize this idea is this concept of sleep debt.

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Robin Tucker, PhD, RD, FAND: The longer you stay awake, the larger your sleep debt is. So. If we look at across the bottom. Here we have periods of wakefulness and sleep.

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Robin Tucker, PhD, RD, FAND: And when we wake up in the morning, if all has gone well, we've had a good night's sleep, our sleep debt is very low.

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00:13:33.760 --> 00:13:36.589

But the longer we stay up throughout the day

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00:13:37.130 --> 00:13:45.629

Robin Tucker, PhD, RD, FAND: you can see that it increases up to kind of a a peak point of it. That's it. That's not going to get any higher. You are at maximum sleep debt.

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Robin Tucker, PhD, RD, FAND: The other system that's helping us to fall asleep is circadian rhythm of alertness. And when you read sort of popular sleep articles, you know popular press, it really is kind of short into just your Circadian rhythm. But understand that there are many many processes in the body that follow a Circadian rhythm. And all Circadian means is just that it it happens over the course of about a day, and we'll repeat kind of every twenty four hours.

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Robin Tucker, PhD, RD, FAND: So the Circadian rhythm that we're interested in here is alertness. So how alert you are. And again, as we kind of go through and follow the the curve here in white. C for Circadian rhythm. When you wake up, most of us are not

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Robin Tucker, PhD, RD, FAND: terribly alert right after awakening. It takes us a little bit of time to warm up. But you can see as the day progresses, we have this area or time of maximal alertness, and then that begins to decrease over time, right?

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00:14:43.790 --> 00:14:57.539

Robin Tucker, PhD, RD, FAND: It's this difference here, this maximal difference, that's going to promote sleep for us would be very easy to fall asleep when we have low levels of alertness and high levels of sleep debt.

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Robin Tucker, PhD, RD, FAND: Now we'll talk a little bit later about the effects of some of the the behaviors that we engage in that can kind of compromise our ability to get sufficient quality sleep. And these would be things like napping. So if I take a nap in the middle of the afternoon, let's say, what that's going to do, is It's going to really kind of flatten this curve for my sleep debt, and I'm not going to reach peak sleep debt until much later in the evening.

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Robin Tucker, PhD, RD, FAND: Circadian rhythm can be influenced by things like eating, and exposure to light at night. And so these are things that are going to again

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00:15:37.710 --> 00:15:39.990

Robin Tucker, PhD, RD, FAND: make this curve

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00:15:40.530 --> 00:15:44.140

Robin Tucker, PhD, RD, FAND: push towards a later bedtime.

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Robin Tucker, PhD, RD, FAND: We're gonna talk about melatonin a little bit later on. Melatonin is a hormone released by the brain that decreases your alertness. And so it can kind of make this this curve here a bit steeper. so we can achieve lower levels of alertness faster.

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Robin Tucker, PhD, RD, FAND: But light exposure at night will suppress melatonin. Devices that we use at night are going to suppress melatonin. So these are things that we would recommend people not do if they're having trouble falling asleep. So

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Robin Tucker, PhD, RD, FAND: hopefully, that makes sense. And we'll kind of help you to understand some of the recommendations that we make regarding sleep.

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Robin Tucker, PhD, RD, FAND: As we assess people's sleep, we're interested in their sleep health. We really kind of concentrate on two main concepts, one being quantity, or how much sleep you're getting, and the other is quality.

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Robin Tucker, PhD, RD, FAND: We have to really focus on both of these together to get a holistic understanding of someone's sleep health.

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Robin Tucker, PhD, RD, FAND: So I think we've all we can all relate to a night of sleep where, based on what the clock says, you got eight hours of sleep last night, but you wake up and you don't feel very refreshed or restored. That's a quality issue rather than a quantity issue.

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Robin Tucker, PhD, RD, FAND: So it's important to understand that those two things are not the same. They are both independent risk factors for chronic disease. We'll talk more about that in just a moment. But I I think it's important to understand that both are important, and we really focus on quantity from a public health perspective, and we really kind of overlook quality.

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Robin Tucker, PhD, RD, FAND: So just want to talk about those concepts and just a little bit more detail. So you have a better understanding of kind of what we're looking at when we do sleep research, or again, recommendations for sleep health. Again, quantity is just how much sleep you're getting, on average, how much sleep you got last night, duration. It's an amount of time.

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And our recommendations like we mentioned earlier for adults seven to nine hours a night.

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Robin Tucker, PhD, RD, FAND: When you look at sleep literature, and we start to to talk about the concept of insufficient sleep or short sleep, there is no consensus definition of what that is. So you can see studies where they defined insufficient sleep as less than five hours a night

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Robin Tucker, PhD, RD, FAND: all the way up to just shy of meeting sleep recommendations in less than seven hours. And that makes it really kind of hard to compare studies based on different protocols or different definitions of insufficient sleep.

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Robin Tucker, PhD, RD, FAND: I think you could recognize that if you got four and a half hours of sleep one night and six and a half the next,

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Robin Tucker, PhD, RD, FAND: you would feel very different. And so, understanding the consequences of short sleep is challenging when we have these studies that are kind of all over the place. Unfortunately, that's the state of sleep literature right now. Doesn't mean we should ignore it, but just

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Robin Tucker, PhD, RD, FAND: recognize that it does matter how insufficient sleep is being defined.

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Robin Tucker, PhD, RD, FAND: You can measure sleep duration with a variety of tools. Polysomnography is the gold standard. But you may see studies that use actigraphy, wearables like Fitbits, and self-report or sleep diaries.

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00:19:03.020 --> 00:19:19.169

Robin Tucker, PhD, RD, FAND: I've been focusing on adults, because that's the population that I work with. But if any of you are working with children or or younger individuals, you can see that your sleep needs change over the course of the lifespan. The younger you are, the more sleep you need.

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00:19:21.490 --> 00:19:39.279

Robin Tucker, PhD, RD, FAND: It appears that our sleep habits have been changing over time. And I think it's important to understand that about one of every three people you see in your practice probably isn't meeting sleep guidelines. They're sleeping less than seven hours. So it's about thirty five percent of adults.

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Robin Tucker, PhD, RD, FAND: And again, this seems to have changed over time in 1910, for example, the average American was getting about nine hours of sleep per night. By 2012, this had reduced by about twenty percent. And so the average amount of sleep people are getting is just over seven hours a night.

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Robin Tucker, PhD, RD, FAND: This slide shows you sort of a graphical representation of short sleep duration, or the percentage of people who are not meeting sleep recommendation guidelines. The redder your state is the worse off you are. And I think it's really interesting to see that there are geographical pockets of

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Robin Tucker, PhD, RD, FAND: places where short sleep is predominant or is especially worrisome. We see kind of upper Midwest rust belt states the South. And then we have some sort of outliers in Nevada and Hawaii.

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Robin Tucker, PhD, RD, FAND: The CDC has really interesting data up at the county level. So if you want to dig in a little bit deeper and see some of the geographical sleep disparities in your state. I think it's really interesting.

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Robin Tucker, PhD, RD, FAND: For example, I'm in Michigan. We have a pockets of short sleep, both in the Detroit Metro area as well as the upper Peninsula. And those are just two very different

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Robin Tucker, PhD, RD, FAND: experiences within our state. So the reasons for this are unknown, and it's an area of active research for sure.

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Robin Tucker, PhD, RD, FAND: So that was quantity or duration of sleep. I want to emphasize quality as well. And this is a little bit more difficult, because we don't have a consensus definition of what sleep quality

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00:21:17.940 --> 00:21:45.460

Robin Tucker, PhD, RD, FAND: really is, or how it should be measured. But it's this concept of really just "how well, did you sleep last night"? "How well do you sleep in general"? And again, quality and quantity are not the same thing. There had been attempts to try to objectively measure sleep quality. People have suggested that we look at the amount of time spent in the more restorative stages of sleep like N three or deep sleep and rem sleep.

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00:21:45.470 --> 00:21:58.239

Robin Tucker, PhD, RD, FAND: But when we do this, and we then we ask people, you know, how well did you sleep last night. Those measurements don't always agree with each other. So it's a struggle to try to objectively measure safe quality.

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00:21:58.630 --> 00:22:22.049

Robin Tucker, PhD, RD, FAND: As you can imagine them. We we often turn to self report, and really the kind of big hitter in this area. If we look at surveys, or questionnaires to ask people about their sleep quality. The Pittsburgh sleep Quality Index, or PSQI, is the leading tool. We'll talk about that more in just a minute. So I'm going to step kind of plant this seat here right now.

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00:22:22.060 --> 00:22:25.780

Robin Tucker, PhD, RD, FAND: But the PSQI measures sleep quality over the past month.

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Robin Tucker, PhD, RD, FAND: And I just want to emphasize again that sleep quality is really important to assess, to take into account when people are complaining of sleep problems because it is an important factor in our overall health. And I think you can see that on this slide. So if you dig into the literature, you will be able to find support for linkages between insufficient and or poor quality sleep

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Robin Tucker, PhD, RD, FAND: to the ten leading causes of death in the United States. Now, the chronic diseases we're going to talk about more in just a moment.

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00:23:00.560 --> 00:23:30.349

Robin Tucker, PhD, RD, FAND: But just to kind of point out. You know accidents, for example, if you're less alert because you're tired, your reaction times are slowed, you're more likely to get into an accident. Influenza and pneumonia. Your immune system is compromised. It's not working at one hundred percent if you're not sleeping appropriately. And things like intentional self harm. We know that sleep is important for mood regulation, for your ability to handle stress, depression, and anxiety. And so

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00:23:30.390 --> 00:23:45.049

Robin Tucker, PhD, RD, FAND: that relationship also makes a lot of sense. So basically, you treating people in any sort of way, there's probably a link to how they're sleeping and their overall health outcomes.

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00:23:46.620 --> 00:24:10.440

Robin Tucker, PhD, RD, FAND: So that's the background we got through that. And now I want to go into a bit more detail on these concepts between sleep, body, weight, and chronic disease. We'll talk about the mechanisms that have been identified or proposed. We'll do that kind of the thirty thousand foot view here. We're not going to go into any sort of biochemical pathways or anything like that, but I think it will give you enough of an understanding to really kind of

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00:24:10.560 --> 00:24:15.970

Robin Tucker, PhD, RD, FAND: conceptualize how these factors interact with each other.

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Robin Tucker, PhD, RD, FAND: So how do we get from something like insufficient or poor quality sleep to outcomes like challenges with glycemic control, or even type, two diabetes, weight, gain, or obesity, or cardiovascular disease? And I will tell you there are many roads that lead to those outcomes. I've just got a couple on the slide here due to time today.

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Robin Tucker, PhD, RD, FAND: But we see increased preference for sweeter foods. This is data coming out of our lab

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Robin Tucker, PhD, RD, FAND: where we asked people to reduce the amount of sleep they got by about two hours a night, and then brought them into the lab. And they liked the sweeter stimuli, whether it was food or beverages, far more significantly more than they did when they were well rested.

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00:24:59.460 --> 00:25:15.469

Robin Tucker, PhD, RD, FAND: Now, sweeter foods, often not always, but often maybe higher in added sugar, added calories. They they may not be the healthiest choices, and this can have an impact, of course, on weight, but also glycemic control and so on.

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00:25:15.510 --> 00:25:23.770

Robin Tucker, PhD, RD, FAND: We see alterations in appetitive hormones. So people report feeling hungrier and less full. After insufficient or poor quality sleep.

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00:25:23.820 --> 00:25:42.819

Robin Tucker, PhD, RD, FAND: We see increased inflammation. I'm. Going to talk about that in more detail in just a moment. So I'm going to skip over that briefly here. And then we also see oxidative stress and endothelial dysfunction which certainly play a role in cardiovascular disease outcomes. So all of these things have been demonstrated in intervention studies to occur.

117

00:25:42.830 --> 00:25:53.810

Robin Tucker, PhD, RD, FAND: And they occur quite quickly. You don't have to be a chronic bad sleeper to experience these things. And I'll give you evidence of that in just a moment.

118

00:25:54.670 --> 00:26:19.069

Robin Tucker, PhD, RD, FAND: So we're going to focus on body weight first. I think that's one of the the main reasons why many of us are attending the seminar today. It's important to understand that we have epidemiological studies that suggest that there's a relationship between insufficient and poor quality sleep and higher BMI. But we also have experimental studies, and I've listed some of them on the slide here. If you want to go look at those yourself.

119

00:26:19.080 --> 00:26:39.669

Robin Tucker, PhD, RD, FAND: So we have, you know, compelling evidence to suggest that sleep issues will promote or increase the risk of higher BMI. And we see these relationships in both children and adults. And I've bolded children here because the relationships are actually stronger in kids, b but they're present across the lifespan.

120

00:26:40.000 --> 00:26:53.479

Robin Tucker, PhD, RD, FAND: And just kind of a tidbit here. You know, the odds of obesity were one and a half times higher if you were an adult that reported sleeping six hours or less so pretty powerful stuff there.

121

00:26:54.130 --> 00:26:58.360

Robin Tucker, PhD, RD, FAND: So how does this? How would these relationships really

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00:26:58.720 --> 00:27:00.890

Robin Tucker, PhD, RD, FAND: you know, cause

123

00:27:00.900 --> 00:27:19.580

Robin Tucker, PhD, RD, FAND: weight gain or obesity? I think we want to talk about kind of the concept of energy balance, right? So if energy that you're consuming through foods and beverages matches the energy that you expend through basal metabolic rate, exercise, thermic effective food. Then we're in energy balance and weight is stable.

124

00:27:19.590 --> 00:27:33.649

Robin Tucker, PhD, RD, FAND: What happens with insufficient or poor quality sleep. We'll talk about both sides of that equation. For energy expenditure, if you stay up, say later then then you normally would you're getting shorter sleep.

125

00:27:33.740 --> 00:27:52.129

Robin Tucker, PhD, RD, FAND: When we measure energy expenditure, we really see, perhaps, no change in the amount of energy expended, despite being up later and and theoretically more active. Or some studies will report a slight elevation in energy expenditure because you're up later. You may be moving around a little bit more.

126

00:27:52.390 --> 00:28:16.399

Robin Tucker, PhD, RD, FAND: But unfortunately, any bump that you get in terms of energy expenditure is overwhelmed by increased energy intake. And we see this in both observational and interventional studies. So the scale now looks like this. We have an overall net positive effect on energy balance in conditions where sleep is not optimal.

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00:28:17.530 --> 00:28:22.719

Robin Tucker, PhD, RD, FAND: What's driving that relationship? Why is energy intake being affected?

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00:28:22.730 --> 00:28:39.610

Robin Tucker, PhD, RD, FAND: Again, multiple pathways for that to happen. I have just a couple of examples on this slide, and really I pick these examples because we've in our lab have have corroborated or identified these relationships as well. So I'm pretty familiar with these.

129

00:28:39.730 --> 00:29:07.220

Robin Tucker, PhD, RD, FAND: What you can see leading to weight gain would be something like people selecting larger portion sizes and reporting greater food cravings. We saw this in a population of women who were asked to reduce their sleep by about two hours a night when we brought them in. After doing that they were plating up larger amounts of food and or reporting greater food cravings at that moment.

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00:29:07.230 --> 00:29:11.240

Robin Tucker, PhD, RD, FAND: Those could lead to increased intake and weight gain.

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00:29:11.540 --> 00:29:23.789

Robin Tucker, PhD, RD, FAND: And the bottom corner here we see that there after you know, if you're experiencing sleep issues, you're going to have an increased susceptibility to the hedonic or pleasurable aspects of food.

132

00:29:23.800 --> 00:29:37.540

Robin Tucker, PhD, RD, FAND: There's some really interesting FMRI data out there. That shows that compared to a well rested state. If we've curtailed or shortened your sleep a little bit, and we show you pictures of healthy food versus junk food

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00:29:37.550 --> 00:30:07.529

Robin Tucker, PhD, RD, FAND: in your curtailed sleep condition, the the reward centers of your brain are much more likely to light up and to be interested in the junk food compared to the healthy food. When you have that sleep issue versus when you're well rested. There's also some interesting data about your willingness to go out and and get that food that's maybe not as healthy for you. You seem to be more motivated to do that. We did a study where we asked people to work for for chocolate candy.

134

00:30:07.650 --> 00:30:29.519

Robin Tucker, PhD, RD, FAND: They came into the lab. They pushed a button on the keyboard to get chocolate candy. After they had pressed the button so many times when they were well rested compared to when they were poorly rested. They worked harder under the conditions of of sleep and curtailment and ate more candy. So they were willing to work harder for for junk food basically.

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00:30:29.860 --> 00:30:53.200

Robin Tucker, PhD, RD, FAND: The final thing here that we'll talk about is just this increased time engaged in sedentary behavior. So even though you you may have a larger window of activity. You probably aren't being super active in that time that's being spent awake. So that, of course, is going to possibly affect the energy output side of the energy balance equation.

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00:30:53.600 --> 00:30:59.249

Robin Tucker, PhD, RD, FAND: The important thing I want you to understand is that these changes don't occur in isolation.

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00:30:59.440 --> 00:31:09.750

Robin Tucker, PhD, RD, FAND: People may be experiencing all of these things combined, and for our data we only perturb sleep by like one or two nights.

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00:31:09.760 --> 00:31:21.929

Robin Tucker, PhD, RD, FAND: This shows up very, very rapidly. So again you don't have to be a chronic poor sleeper to be experiencing these physiological changes that can promote weight gain.

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00:31:23.190 --> 00:31:34.199

So I showed you this slide before, and we focused on waiting and obesity. I want to take a step backwards in kind of this pathway and talk about inflammation for a moment. Just because I think it's quite interesting.

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00:31:34.490 --> 00:31:56.970

Robin Tucker, PhD, RD, FAND: What we know about insufficient or poor quality sleep is that after you know a several nights of this, what's going to happen is that you will experience an elevation in a variety of inflammatory biomarkers. They're actually sleep inducing. They will actually promote sleep. And you'd think "hey, that's a good thing, right"?

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00:31:57.110 --> 00:32:07.129

Robin Tucker, PhD, RD, FAND: It's not. The biomarkers that we have evidence for that. This is again just a short list. There are others. But C reactive protein, interleukin 6, and tumor necrosis factor Alpha.

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00:32:07.630 --> 00:32:24.740

Robin Tucker, PhD, RD, FAND: What happens is you get these elevations at the wrong time of day. So normally these would be secreted at night and again kind of promoting sleep. But what happens is that they start to be secreted in the afternoon and can cause daytime sleepiness.

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00:32:25.090 --> 00:32:34.619

Robin Tucker, PhD, RD, FAND: The flip side of that is that because they're elevated it in the afternoon they are lower at night, and this can promote difficulty falling asleep.

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00:32:34.830 --> 00:32:43.449

Robin Tucker, PhD, RD, FAND: Now this kind of cytokine dysregulation has been observed in several studies, and again in a short amount of time. So within a week or even less.

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00:32:43.460 --> 00:32:59.720

Robin Tucker, PhD, RD, FAND: So again, I think it's important to understand that you don't have to have like this you know, big diagnosed sleep, problem, or anything like that to be experiencing some of these maladaptive physiological changes.

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00:33:00.950 --> 00:33:17.019

Robin Tucker, PhD, RD, FAND: So I've been talking a lot about how sleep problems are associated with weight gain, and why that might happen. And I think the logical question. You know that we would have as well, okay, if we were able to somehow extend to sleep time. If people were getting more sleep,

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00:33:17.030 --> 00:33:22.859

Robin Tucker, PhD, RD, FAND: would that have a positive effect on body weight or um energy intake?

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00:33:22.870 --> 00:33:39.439

Robin Tucker, PhD, RD, FAND: And the answer seems to be yes. So there was a study that came out earlier this year. It's a randomized, controlled trial of eighty adults who had over, you know, we're experiencing overweight, and who reported that they slept less than six and a half hours a night.

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00:33:39.610 --> 00:33:53.770

Robin Tucker, PhD, RD, FAND: The intervention group receive some sleep hygiene training. We're going to talk about sleep hygiene, and all the things that we can do to protect that in a moment. So stay tuned. But they all they got was just a short sleep hygiene

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Robin Tucker, PhD, RD, FAND: sort of educational session. And the goal, they were told was that they should really be shooting for about eight and a half hours a night for sleep.

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00:34:03.080 --> 00:34:22.270

Robin Tucker, PhD, RD, FAND: What happened was at the end of the intervention in this for about two weeks. In the intervention group the people who were sleeping longer. They reported consuming a hundred and fifty calories less than they were at the beginning of the program. While the control group was actually eating more.

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00:34:22.280 --> 00:34:28.790

Robin Tucker, PhD, RD, FAND: So there's about a two hundred and seventy calorie swing here between these two groups, and these were significant differences.

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00:34:28.800 --> 00:34:54.270

Robin Tucker, PhD, RD, FAND: This is not the only study to suggest that sleep extension has positive effects on body weight outcomes, or at least energy intake. There's a study by Markwald that has also shown benefits and there are others. So it's just kind of nice to kind of get that confirmation that you know the negative side, and then we can also sort of counteract that with more positive sleep behaviors.

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Robin Tucker, PhD, RD, FAND: So those that was the tour of the mechanisms and the relationships between sleep and and body weight outcomes. We'll move into sort of you know. How do we might as practitioners identify or screen for sleep problems.

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00:35:12.710 --> 00:35:42.590

Robin Tucker, PhD, RD, FAND: I'll just give you a couple of tools that you might be interested in using in your practice. The easiest one is just, you know the question right? How are you sleeping? How much sleep do you usually get? How do you feel in the morning, you know. Do you feel like you're getting good quality sleep, and this can just start the conversation about the importance of sleep for your health and perhaps stimulate, you know more, probing to see if there are really, truly some serious, underlying sleep issues that that need to be addressed.

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00:35:44.580 --> 00:36:03.449

Robin Tucker, PhD, RD, FAND: Another tool that you might be interested in using is the patient health questionnaire nine or PHQ-9. Now this is a tool that's used for screening for depression. But there are a couple of questions on the PHQ-9 that certainly relate to sleep.

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00:36:03.460 --> 00:36:21.639

Robin Tucker, PhD, RD, FAND: So question number three. If you have trouble falling asleep, staying asleep or sleeping too much. If somebody reported that they were you know this this is happening more times than than less. Then that's somebody that I would want to have some follow up questions with, and see if there are sleep issues that could be addressed.

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00:36:21.650 --> 00:36:29.879

Robin Tucker, PhD, RD, FAND: Question four you feeling tired, or having little energy, of course, that could be associated with depression, but it could also stem from sleep issues as well.

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00:36:29.890 --> 00:36:45.960

Robin Tucker, PhD, RD, FAND: The reason I'm showing you this is because there are a lot of facilities that do already use the PHQ-9 as a screening tool upon patient admission. So you may already have access to this tool, and maybe you didn't know it, or you didn't know that it could be used to assess for sleep.

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00:36:47.620 --> 00:37:16.249

Robin Tucker, PhD, RD, FAND: We mentioned the PSQI earlier. It is a widely used tool, at least in the research community to assess sleep quality. It has been cited literally thousands of times. It has been translated into multiple languages. It has been validated in many, many populations, countries, race, ethnicity. You name it. It has really been tested. So it may be something that you're interested in.

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00:37:16.910 --> 00:37:45.680

Robin Tucker, PhD, RD, FAND: The PSQI asks a lot of questions about, you know, when you're waking up when you're going to bed, how long it takes you to fall asleep? The great thing that I like about the PSQI is it allows you to categorize people based on the score, and you can identify whether or not you think they've got adequate sleep quality, or if they've got an increased likelihood of sleep problems. So somebody who scores less than five things seem to be going pretty well. If they score five or higher,

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00:37:45.690 --> 00:37:56.449

Robin Tucker, PhD, RD, FAND: then that's somebody that may need, either, you know, kind of an assessment on behavioral side of things, or maybe there's a physiological problem that's causing them issues with their sleep.

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00:37:57.150 --> 00:38:07.429

Robin Tucker, PhD, RD, FAND: And the point of the next few slides is not to read every question, or anything like that. I just want to show you what it looks like on paper. So you can see

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00:38:08.320 --> 00:38:37.040

Robin Tucker, PhD, RD, FAND: there are quite a few more questions than PHQ-9 for example. And that's kind of one of the drawbacks that I find of the PSQI depending on how quickly your patient reads, and how quickly they process. It can take upwards of ten minutes for them to complete the PSQI, which may not be conducive, you know, in your environment to getting the patient seen and and taking care of. I will also say that the scoring process for this is not intuitive.

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00:38:37.050 --> 00:38:54.490

Robin Tucker, PhD, RD, FAND: You do not get to just add things up and come up with that score of five, or you know, less or more. You have to do some calculations. And then, based on that, you assess this value, and for the practitioner it's quite burdensome.

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00:38:54.500 --> 00:39:08.099

Robin Tucker, PhD, RD, FAND: The way around that, however, is, if you go to this link here, and the patient puts in their information regarding the PSQI into that website, it will automatically score it for you. So that's terrific.

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00:39:08.110 --> 00:39:18.899

Robin Tucker, PhD, RD, FAND: But of course you have to have an internet and an internet equipped device in order for that to happen. So that may or may not be the case with where you are. So pros and cons to PSQI.

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00:39:19.810 --> 00:39:38.400

Robin Tucker, PhD, RD, FAND: Another tool you can use is the Sleep Hygiene Index. Before we move on, I just wanna give a definition of sleep hygiene in case you're not familiar with that term. Sleep hygiene just refers to the behaviors that we either engage in or refrain from that protect our sleep health.

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00:39:38.410 --> 00:39:55.179

Robin Tucker, PhD, RD, FAND: So if we think about like oral hygiene or dental hygiene. Those are the behaviors like brushing and flossing that we do to protect the health of our teeth, right? Sleep hygiene is no different. These are the things that we're going to do to, you know, prioritize our sleep and maximize it.

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00:39:55.190 --> 00:40:12.889

Robin Tucker, PhD, RD, FAND: So the Sleep Hygiene Index has thirteen statements. And the options for your patient or clients is that they read the statement, and then they they can respond. Either that they always engage in this behavior, they frequently do this, they sometimes, rarely, or never engage in these behaviors.

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00:40:12.900 --> 00:40:23.090

Robin Tucker, PhD, RD, FAND: And when you find the always and frequently answers, those are behaviors that they may want to consider changing if they're having trouble sleeping.

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00:40:23.100 --> 00:40:53.090

Robin Tucker, PhD, RD, FAND: So we'll go into this in much more detail in the next few slides. But I'll just show you, for example, the first statement. I take daytime naps lasting two or more hours. If somebody is always or frequently engaging in that behavior, and reporting they have sleep issues at night, that would be something that I would encourage them to to change. If they can go without the nap great. If not, limiting the nap to about twenty to thirty minutes would be a better choice than the two hour

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00:40:53.100 --> 00:40:55.339

Robin Tucker, PhD, RD, FAND: session.

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Robin Tucker, PhD, RD, FAND: So we'll go over this in more detail in just a moment. But again, this is really nice from behavioral point of view. That you can help to kind of coach your patient or client into getting more and better sleep.

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00:41:08.560 --> 00:41:17.370

Robin Tucker, PhD, RD, FAND: So on the coaching front. How do we educate people to get more and better sleep? What recommendations can we make?

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00:41:18.070 --> 00:41:38.689

Robin Tucker, PhD, RD, FAND: First, we need to kind of think about the etiology or the cause of the sleep problem. And I think you can kind of lump these into three main categories. There could be a physiological problem, there could be an environmental problem, or behavioral problem that's resulting in, you know, undesirable sleep outcomes.

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00:41:38.700 --> 00:42:04.039

Robin Tucker, PhD, RD, FAND: So from a physiological perspective, there are many possibilities that would be interfering with sleep. Something like obstructive sleep apnea, which is where the airway collapses multiple times at night waking the patient up, hyperglycemia, an enlarged prostate these are going to be conditions where there's probably frequent trips to the bathroom while trying to sleep. It's going to disrupt and fragment sleep.

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00:42:04.050 --> 00:42:23.020

Robin Tucker, PhD, RD, FAND: If you have a diagnosed sleep disorder that would obviously be something that would be physiological. And really these kinds of conditions or problems should be seen by a physician, nurse practitioner, somebody who is going to be able to kind of diagnose and treat those problems.

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00:42:23.230 --> 00:42:24.660

Robin Tucker, PhD, RD, FAND: However,

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00:42:24.670 --> 00:42:46.709

Robin Tucker, PhD, RD, FAND: if your patient is complaining of environmental causes of sleep. Problems like the environment in their room is too hot or too cold. Maybe they live in a noisy apartment. Maybe there's bright light um shining, or you know, roommate has the light on at night, or something like this. Those would be environmental causes of sleep problems. And we can offer advice on that.

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00:42:46.950 --> 00:43:10.469

Robin Tucker, PhD, RD, FAND: And then behaviors right. If we have poor sleep hygiene. If we have an inconsistent sleep schedule. We're using our devices or caffeine too close to bedtime. These are things that can be, you know, addressed through education. And so we're going to focus really on the environmental and behavioral causes and advice you can provide to address those issues.

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00:43:10.480 --> 00:43:39.750

Robin Tucker, PhD, RD, FAND: And recommendations, improving sleep, hygiene, through education, through behavior change, can be as effective as medication in improving sleep outcomes. So, I think the key, though a lot is, we know, in the nutrition world is consistency. It's having the sort of that consistent discipline to engage in these behaviors on a regular basis. That's can be so difficult for all of us, right?

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00:43:39.780 --> 00:43:42.120

Robin Tucker, PhD, RD, FAND: So consistency is key.

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00:43:43.020 --> 00:43:56.489

Robin Tucker, PhD, RD, FAND: So we'll go back to our old friend the Sleep Hygiene Index here and understand that this is going to be kind of the framework for the next session of slides here. Okay, So we'll go into this in more detail.

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00:43:57.080 --> 00:44:20.860

Robin Tucker, PhD, RD, FAND: The first four concepts we can knock out all at once, because they kind of have the same underlying issue. If I take naps lasting two or more hours. If I go to bed at different times from day to day, I get out of bed at different times. If I stay in bed longer than I should. All of these sort of revolve around this idea of a lack of consistency in bed and wake times.

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00:44:20.870 --> 00:44:37.020

Robin Tucker, PhD, RD, FAND: When we developed our sleep education for everyone program. After the program ended we asked people what were the most powerful concepts or recommendations that you learned about in the program that really helped, you know, improve your sleep.

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00:44:37.030 --> 00:44:41.649

And we asked people for one week to try the following.

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00:44:41.660 --> 00:44:58.389

Robin Tucker, PhD, RD, FAND: Set a consistent bedtime and a consistent wake time and do that for three days in a row. And ideally, one of those days should be a weekend day. Right? You have to give yourself at least seven hours to sleep and just see what happens.

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00:44:58.500 --> 00:45:04.849

Robin Tucker, PhD, RD, FAND: And they reported. Many, many of them reported that this was actually extraordinarily helpful.

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00:45:04.860 --> 00:45:24.999

Robin Tucker, PhD, RD, FAND: So. You can recommend that consistency being super super helpful. Other people have reported this. It just helps you to get into the rhythm of when to fall asleep. It helps to cement sleep debt. And it's just a really simple but powerful tool in the toolbox.

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00:45:25.010 --> 00:45:37.389

Robin Tucker, PhD, RD, FAND: Now we're not perfect, right. So there are going to be times we're going to stay up later than maybe we should up past our bedtime. Um, if that happens, you want to maintain that consistent wake time.

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00:45:37.400 --> 00:45:52.710

Robin Tucker, PhD, RD, FAND: What that's going to do, is It's going to help strengthen your sleep debt for the following night, and we'll help you to get to bed at your desired time rather than sleeping in. That's going to shift everything backwards, and you're going to have a hard time getting to bed when you want to.

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00:45:53.100 --> 00:46:00.889

Robin Tucker, PhD, RD, FAND: Moving on point number Four. If you exercise to the point of sweating within an hour going to bed. Why would we not recommend that?

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Robin Tucker, PhD, RD, FAND: This is because it will raise core body temperature. One of the signals for us to fall asleep. It helps to reduce the levels of alertness is a drop in core body temperature. And actually we see the temperature in the extremities. So hands and feet actually increase, and this differential in in temperature is a signal for sleep.

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00:46:22.080 --> 00:46:50.750

Robin Tucker, PhD, RD, FAND: Another option that can be recommended to kind of hack this biological change is a warm bath or shower about an hour before you want to go to bed. I realize you're like well that increase your body temperature, your core body temperature, yes, temporarily, but not to the same degree as exercise will, and not for the same amount of time. And after you get out of the shower or bath, your core body temperature starts to fall quite quickly. This may promote sleep.

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00:46:50.760 --> 00:47:00.519

Robin Tucker, PhD, RD, FAND: Another example. If you're patient, if it's safe for them to wear socks to bed. If they don't have any circulatory issues, then socks might be another option as well.

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00:47:01.600 --> 00:47:27.920

Robin Tucker, PhD, RD, FAND: Moving on alcohol, tobacco or caffeine. If you're using that within four hours of going to bed or after going to bed. That is not recommended, because these compounds either will inhibit your ability to go to sleep or like in the case of alcohol, where you think it might make you drowsy and help you to fall asleep. It may, in fact, do that, but what it will do is it will prevent you from getting enough time spent in the more restorative stages of sleep.

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00:47:27.930 --> 00:47:57.859

Robin Tucker, PhD, RD, FAND: Important note about caffeine. We have people who are fast metabolizers and slow metabolizers. If you're a slow caffeine metabolizer, the effects of caffeine will linger in your system for quite a while you may want to limit caffeine to mornings only if you think you're a slow caffeine metabolizer that will give you your system plenty of time to break that down and excrete it. We did have a a gentleman in the sleep program who decided that he would forego his usual afternoon Starbucks

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00:47:57.870 --> 00:48:06.300

Robin Tucker, PhD, RD, FAND: just to see what would happen, and actually report it back the next week. That that did, in fact, make a pretty big difference in his ability to go to bed at night. So

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00:48:06.540 --> 00:48:08.060

something to think about.

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00:48:08.560 --> 00:48:27.420

Robin Tucker, PhD, RD, FAND: Seven and twelve. I do something that may wake me up before bedtime, or I do important work before bedtime. If you're doing that engaging in stimulating or stressful behaviors, these are going to impact your ability to get to sleep. We'll talk a little bit more about stress and management in just a second.

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00:48:28.900 --> 00:48:32.659

Robin Tucker, PhD, RD, FAND: Number nine I use my bed for things other than sleeping or sex.

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00:48:32.670 --> 00:48:49.540

Robin Tucker, PhD, RD, FAND: This has to do with kind of cognitive retraining and helping your brain to associate the bedroom with relaxation and calmness, and actually helps you to get to bed faster than if there is that lack of association between those things.

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00:48:50.420 --> 00:49:20.400

Robin Tucker, PhD, RD, FAND: Ten and eleven are environmental issues. So uncomfortable bed, uncomfortable bedroom. We can make recommendations around improving physical comfort. Do you need more or less blankets? Do you need a fan? An eye mask is a quick and easy way to block light. Earplugs can be used to mask sounds or noise. But if you're like me, I usually rip those out by the end of the night, and they're not working anymore. So white noise might be a solution to that. There are

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00:49:20.410 --> 00:49:37.299

Robin Tucker, PhD, RD, FAND: white noise apps. There are white noise YouTube channels. For me, I'm cheap, so I just use my bedside table, the the clock radio that that's sitting right next to my bed, and I'll tune that in between stations. So there's just static

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00:49:37.310 --> 00:49:44.210

Robin Tucker, PhD, RD, FAND: and that will work for me. It can drown out my neighbors dogs that like to bark at six am. So I can sleep through that.

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00:49:45.670 --> 00:50:15.179

Robin Tucker, PhD, RD, FAND: Finally, I go to bed feeling stressed, angry, upset, or nervous, or, I think, plan or worry when I'm in bed. If that sounds like you or patients that you treat. We know that conditions like anxiety, and it doesn't have to be clinically diagnosed anxiety. We all have times in our life where we're a little more anxious than others. Or if you're like me and your ruminator, where you engage in repetitive negative thinking. You know, something went wrong that day, and all I'm going to do is think about

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00:50:15.190 --> 00:50:33.899

Robin Tucker, PhD, RD, FAND: you know, how all the bad things that surrounded that. Or if you start to get stressed out about all the things that you have to do tomorrow, or didn't accomplish today. Like all of these thoughts, just kind of start to spiral, you can really feel like the adrenaline start to flow. These these feelings are not conducive to sleep.

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00:50:33.910 --> 00:51:03.899

Robin Tucker, PhD, RD, FAND: So relaxation techniques like deep breathing, meditation, Yoga, tai, chi. These all have the shared ability to activate your parasympathetic nervous system. That's the rest, and digest nervous system, so that heart rate and blood pressure decrease. There are a lot of tools available online. You know, to to help patients and clients engage in some of these activities. I have just two examples on the slide here that you can check,

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00:51:03.910 --> 00:51:23.169

Robin Tucker, PhD, RD, FAND: but there are many, many others. so I encourage you to try something that may work for you. I will also say that in addition to that consistent bedtime and wake time recommendation that our participants in the sleep program followed. They also said the relaxation techniques were key in helping them.

212

00:51:23.280 --> 00:51:47.040

Robin Tucker, PhD, RD, FAND: I have a couple of other relaxation techniques that you may want to try. These I've found to be particularly helpful. So one of the things that I'll do if my thoughts start to to spiral is to count backwards from a thousand by three. So I start with a thousand and nine ninety-seven, nine ninety-four, and I just work my way through the numerical system until I fall asleep.

213

00:51:47.210 --> 00:52:01.819

Robin Tucker, PhD, RD, FAND: This is key because subtracting by three is just enough of a mental challenge to keep my mind focused on that rather than my to do list or my stressors or what have you. So try that and see what you think.

214

00:52:01.840 --> 00:52:19.689

Robin Tucker, PhD, RD, FAND: The other one that I've been using a lot lately, and I I will tell you I did not come up with these techniques. If you know who did, please let me know, so that I can attribute those to the right person. But another technique you might want to try is thinking of a word. And so the word I thought of was desk.

215

00:52:19.830 --> 00:52:35.740

Robin Tucker, PhD, RD, FAND: Desk starts with the letter D. So what you'll do now is, you'll think of all of the possible words that you can that also start with the letter D. And as you think of a word, you need to create a mental picture of that word before you go on to the next one.

216

00:52:35.750 --> 00:52:47.940

Robin Tucker, PhD, RD, FAND: So I thought of dog first, so I have a picture of a dog in my mind, and then I went to door. And so there's a picture of a door in my mind, and then dish, and you just keep doing this until you run out of words.

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00:52:47.950 --> 00:52:59.220

Robin Tucker, PhD, RD, FAND: And then you go back to your original word, and you find the next letter, and you repeat the process. So E in this case. I've got elephant, ellipse, egg, and you continue doing this until you fall asleep.

218

00:52:59.240 --> 00:53:14.790

Robin Tucker, PhD, RD, FAND: Now one point that I'll make here, too, is that if you don't fall asleep within about ten or fifteen minutes, don't continue to try. Don't continue to look at the ceiling, or look at the the clock, and just get frustrated by your inability to fall asleep.

219

00:53:14.800 --> 00:53:32.570

Robin Tucker, PhD, RD, FAND: Get out of bed, go do something that is not stimulating under dim light, and wait until you feel a little bit sleepy, and then try again. So again we're kind of short circuiting all of this anxiety and frustration around sleep so that we have positive outcomes with sleep.

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00:53:33.280 --> 00:53:41.730

Robin Tucker, PhD, RD, FAND: We'll go very quickly through the next few slides, because I know we're We're running short on time. Can you eat your way to better sleep. And my

221

00:53:41.790 --> 00:53:50.630

Robin Tucker, PhD, RD, FAND: too long didn't read response to this or spoiler alert is we don't really know. We don't have really good data on this.

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00:53:50.640 --> 00:54:19.329

Robin Tucker, PhD, RD, FAND: There are some foods that you might see touted as rich in melatonin, which again helps with Circadian rhythm and and decreases alertness. Problem is, most foods don't have enough melatonin to be really at a dose that we would consider physiologically active. However, like in the case of tart cherries, they do have an effect on inflammation, and it could be the synergy between reducing inflammation and a little bit of melatonin that may have a beneficial effect on sleep. But

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00:54:19.460 --> 00:54:23.290

Robin Tucker, PhD, RD, FAND: that's something that we're actually interested in our lab and our testing right Now,

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00:54:23.860 --> 00:54:35.010

Robin Tucker, PhD, RD, FAND: chamomile tea, warm milk? Limited scientific evidence. But if it works for you, and it doesn't make you go to the bathroom frequently and disrupt your sleep. Then why not?

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00:54:35.150 --> 00:54:56.739

Robin Tucker, PhD, RD, FAND: We've written a systematic review that was published earlier this year. And really again, the the science just isn't there to say that if I follow a high carb diet, or a high fat diet that this would be helpful, and I'll leave you to to look at those slides as well. If you have questions about that. I happy to take those.

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00:54:56.840 --> 00:55:15.290

Robin Tucker, PhD, RD, FAND: Last slide. If you would like to be able to refer your patient or client to a sleep behavior program, you can do that. You can refer them to the Sleep Education for Everyone Program. It's offered through Michigan State University Extension. It's free of charge. There are multiple classes.

227

00:55:15.330 --> 00:55:27.189

Robin Tucker, PhD, RD, FAND: Check it out. Um. And if you're interested in actually learning how to deliver that program, you can contact me for more information. Training is free as well. My contact information is here,

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00:55:27.340 --> 00:55:32.279

Robin Tucker, PhD, RD, FAND: And with that I'm going to stop sharing. And hopefully we have time for questions.

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00:55:32.840 --> 00:55:50.690

Lisa Diewald: Okay, Thank you. Thank you. Dr. Tucker, this is excellent. I do want to just before we get started. I do wanted to just remind people that you will receive a CE certificate after. Essentially, an email will

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00:55:50.700 --> 00:56:10.349

Lisa Diewald: come to you with a link containing the evaluation. And for nurses you need to fill that out in order to get the CE certificates. For all others, we encourage you to fill out that at that evaluation, so that we can certainly get you your CE certificate and get you

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00:56:10.390 --> 00:56:14.580

Lisa Diewald: some information from you in terms of what

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00:56:14.760 --> 00:56:17.860

Lisa Diewald: improvements we can make on the Webinar.

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00:56:17.870 --> 00:56:45.290

Lisa Diewald: Okay. And then also I did wanted to let you know that we have a Food as Medicine series that we are in the middle of. You can look on COPE's website if you would like to jump in at session Three. We have three more sessions that are going on, one beginning November fifteenth, one November thirtieth, and one early in December. You can learn more about them and register for them

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00:56:45.300 --> 00:56:57.530

Lisa Diewald: on COPE's website. So, I just have one quick question. I think that's about all we have time for.

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00:56:57.920 --> 00:57:07.059

Lisa Diewald: How long does it take to reduce the effects of poor sleep on health once sleep begins to improve? So I know you've talked about the fact that it doesn't take long

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00:57:07.080 --> 00:57:13.290

Lisa Diewald: many days of poor sleep in order for you to start seeing the effects. But how about the reverse?

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00:57:13.420 --> 00:57:43.410

Robin Tucker, PhD, RD, FAND: So I don't know the exact answer to that question. But I there are studies where if let's say we measure the outcome of interest when someone is well rested. Okay, Maybe it's inflammation, and then we follow kind of a work week, where for five days we we give them shorter sleep than maybe they're used to right, and then we measure outcomes again. So maybe we measure those biomarkers on, say, Friday. Then we allow them to sleep in for the weekend right Saturday and Sunday get all the sleep you possibly

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00:57:43.420 --> 00:57:48.089

Robin Tucker, PhD, RD, FAND: can. Obviously, if you want, and we're going to measure those outcomes a third time.

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00:57:48.110 --> 00:58:03.220

Robin Tucker, PhD, RD, FAND: What we see is that things are bad between Monday and Friday. Right, that Friday you've really accumulated that sleep debt. And so you've got some indicators of say, high inflammation. After two days of ab libitum sleep,

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00:58:03.230 --> 00:58:19.220

Robin Tucker, PhD, RD, FAND: those markers improve, but they don't come back to baseline. So trying to kind of binge sleep on the weekends to catch up for maybe five days of poor sleep health, or poor sleep behaviors isn't sufficient. So I know that.

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00:58:19.230 --> 00:58:42.590

Robin Tucker, PhD, RD, FAND: But eventually, you know, if you were able to keep these these good sleep habits up, for you know, several weeks I would imagine that things would would really start to improve for you. So I don't have an exact number, but we do know that if you think you're able to really kind of catch up and undo all of the damage that you did during the work week by sleeping in on the weekend. We know that that's not the case.

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00:58:42.640 --> 00:58:43.589

Lisa Diewald: Okay,

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00:58:43.600 --> 00:59:05.559

Lisa Diewald: great. I think you've left us with lots of hope and lots of practical applications, which is really something that we all relish so that we can share them with our with our patients. There are a couple of people who have additional questions, and I would encourage you to email Dr. Tucker at the email address that she provided in her slide set.

244

00:59:05.570 --> 00:59:35.559

Lisa Diewald: If you are still looking for the slides, they are located on the Villanova COPE website, you simply find the COPE website and then go to Webinars, and then you'll be able to search for today's Webinar and find her slides right there. And, as I said, an evaluation will be going out shortly. We encourage you to give us your feedback on topics that would be of interest to you, and I want to just give a shout out to Dr. Tucker for

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00:59:35.570 --> 00:59:55.040

Lisa Diewald: your wonderful presentation. We really appreciate your time. We appreciate your research that you've done, and we wish you all the best going forward. So thank you very much. Thank you. Okay. Have a great rest of your day, everyone. We look forward to seeing you at upcoming COPE Programming.

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00:59:55.530 --> 00:59:56.749

Lisa Diewald: Have a great day.