

The Science of Sleep (Pt 2)

With Dr Neil Stanley PhD
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TRANSCRIPT

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Steven:

Good afternoon once again, and you're joining us for the last of our lunchtime CPD sessions before the bank holiday. And today I have Dr. Neil Stanley coming back to join us only a week after he did a 90 minute session for us last week in the evening, and back by popular demand - and because we didn't get through even I think half of the questions that were asked of him. Neil - welcome to the platform - again, welcome to the Academy. (Speaker 2 - It's a pleasure.) I'm glad to hear that. I don't want to go through a huge history about you, but so there'll be people watching you don't know anything about you. I think it's fair to summarize by saying you've had 38 years as a, as an expert in sleep science, haven't you? - You founded the Sleep Institutes at Surrey University and you are the sleep physiologist, or you were the sleep physiologist until recently at the Oslo Hospital and you were one of the people behind the Leeds University. Sleep Questionnaire.

Neil Stanley:

The LSEQ - the Leeds Sleep Evaluation Questionnaire. Yeah.

Steven:

And then you're a member of loads of international societies. And I think what really, really impressed everybody when you came on last week is that you aren't shy

about telling us what you think about various celebrity sleep experts. I suspect we'll get something about that again this lunchtime. I'll try not to cover too much of what we were talking about last week. But let's, should we just start this time, let's make this a little bit more Coronavirus related. What are you, what are you seeing that your particular discipline, your expertise relates to in terms of stress or changes because of the Corona virus problem?

Neil Stanley:

Well, I mean there's two aspects to the Corona virus in terms of sleep. One is obviously the, the worries concerns stress about the situation. And that, you know, worry/stress puts your mind into a state of high alert anxiety is a good thing, but excessive anxiety is a bad thing. So it's of course, you know, important to worry about something cause that's your body's early warning system. But excessive worry, racing mind just means you're not going to be able to get back to sleep, or get to sleep, or if you do wake up in the middle of the night, you won't be able to get back to sleep cause your mind's racing.

Steven:

What makes you say anxiety is a good thing?

Neil Stanley:

Well anxiety is the brain's way of telling you that there is a threat and you should be aware of that threat - it's the fight or flight response. The problem is anxiety about a threat that you can do something about is OK - anxiety about sort of this existential threat which the virus actually is, is more difficult. And I say if it gets out of proportion so the body wants you to be aware that there is a threat in the environment and the brain. So that's why I say you're, you're not going to find it difficult to fall asleep or difficult to get back to sleep. I mean, one of the things you can do in this regard are sort of avoid watching the late night news and avoid discussing anything to do with a pandemic late at night. And, and, you know, practice, distraction techniques, whatever they may be. Anything that is pleasant but not emotionally engaging is something that you can think about.

Neil Stanley:

You know, techniques that have been used over the years. Subtracting seven from a thousand repeatedly or thinking of animals starting with consecutive letters of the alphabet or one that I read from the 1950 said list all the operas you had seen in alphabetical order, which I'm sure for most people would be a very short list. So, so there's, there's, there's those aspects. So that's the, the worry and stress. I suppose the other one is the lack of routine that we have if we're working from home and we don't have those societal things, you know, you get up, not because it's the time you want to wake up, but it's the time you have to get up in order to get to work on time. You have your dinner in the evening after you've got home after your work and your long commute, you go to bed in order to fit in with those sorts of societal constructs,

and this actually can either be a good thing or a bad thing. It can be a bad thing because without that rhythm you, you know you drift, you snack on things rather than having meals and you, you don't go to bed or you have an afternoon nap that you wouldn't normally have. But also it can be a positive thing. It can actually be a good thing that this now gives you the time to actually get back into healthy habits. You can because you're not allowed to go out at night, go to bed when you feel sleepy and not feel like you're missing out. You can wake up if your office is three foot from your bed. You don't have to get up two hours early in order to be at work on time, and if around now you feel a bit sleepy, who cares if you go home and have a 20-minute nap?

Steven:

Well, no, not right now, please...

Neil Stanley:

I have been told though I put people to sleep in the past, um but you know, it might be an ideal opportunity for, for healthy habits. Certainly if you've got teenagers who find getting up early in the morning to get to school you know, they, they might be able to actually find this a better, more relaxing time than, than that construct. And I think if we develop healthy habits now, then, you know, we may in future when all this madness stops, we can actually perhaps go back to, you know, having these healthy habits and not, you know, eating our lunch in 17 minutes in front of our computer screens or you know, going to bed in order to get up in the morning or whatever.

Steven:

Yeah. Well it's quite nice to hear. In fact, it reflects when we started doing these lunchtime broadcasts. I had a surprisingly large number of people write to me (email to me) saying that they found that this was giving an element of routine in their day. There was something fixed in the day. So I suspect a little bit by accident, we're hoping to establish that sense of routine in people's lives, which is nice.

Neil Stanley:

Yeah, I mean I think, I think the whole thing about our bodies is they run on rhythms. We, we, we like rhythm, we like repetition. We like knowing what's going to happen. And I think one of the problems with, you know, as everybody's aware, it's, it's, it's good Friday, tomorrow. Now that would be a good thing except for it's Friday - and you know, luckily it is Friday because you might have missed putting the bins out. I mean we missed putting the bins out last week cause we were convinced it was Wednesday, and it was actually Friday. So yes, that lack of structure as I say, can be difficult. If, if, as I say, if you, if you, as I say you can either get a healthy habit or you can develop an unhealthy habit which is just drifting and you know, not really caring and the hours and the days don't seem distinct between them.

Steven:

We talked quite a bit last time we spoke about what constitutes disturbed sleep and things like that. Could you tell us a bit about that sleep evaluation questionnaire that you helped devise?

Neil Stanley:

Yeah, I mean, the Leeds Sleep Evaluation Questionnaire was developed many years ago and it was designed, it's the only questionnaire I've ever designed to measure change. It was originally developed for the pharmaceutical industry. Most other sleep questionnaires actually ask, you know, 'How is your sleep now?' They're not sensitive to change, but the LSEQ was designed to be sensitive to change, and it just asks 10 questions about how your sleep has changed over a period of time. Now that can be medication, it can be any sort of situation that you know is ongoing. And it just asks, you know, how you know, whether you fall asleep quicker or slower. How you feel in the morning, whether you're more awake, less awake. And so there's various components of it which will actually show you how people are responding to any sort of intervention that you, that you put into them.

Steven:

So it's a sort of, it's a questionnaire that which is administered on a regular basis.

Neil Stanley:

It can be that's, that's the point. There isn't, there isn't, you know, cause some questionnaires, people will just go, sod it, I can't be bothered filling this out again. And this can be and as I say it has been used on clinical trials mainly and it has been used repeatedly in some trials I've done, we've used it even daily because it's so sensitive because it uses a hundred millimetre scale to take the answer. And it's so sensitive to very small changes in your behaviour with regards to sleep. That is an incredibly useful tool. Because as I say, the language we have around sleep is really quite poor. You know, we say we slept well, which tells you everything - and we say we slept badly, again, that tells you everything - but it also tells you nothing. And we don't have that ability to describe the problems that we have. And also it's a bit like the old joke about, you know, how do you define an alcoholic? - 'Somebody Who drinks more than their doctor.' You know, some of these complaints of poor sleep might not chime with your idea of what poor sleep is. So you might not take it seriously. Or if somebody says they're sleeping better, what actually does that mean? You know, concrete - what do you mean you sleep better? And then you get into this whole sort of discussion of, you know, did it take you longer to fall asleep, less to fall, you know, so, so the idea of the LSEQ is to sort of encapsulate these concepts in a very easily to use questionnaire.

Steven:

So that LSEQ, the Leeds Sleep Evaluation Questionnaire, is that something which would be useful to osteopaths, chiropractors, physiotherapists, or is it purely for sleep scientists?

Neil Stanley:

No, I mean, it can be used because it's very understand... It's in very easily understandable. It's not a complex question. There's no mathematical formula for it. You just need to measure the lines essentially. And yes, if you, if you have a client who comes in and says, you know, part of my problem is I'm not sleeping because of whatever issue, then the LSEQ could provide a way of seeing, you know, you're, you're doing your own intervention, you're not specifically intervening on the sleep side, but you can show whether that is having a, you know, a benefit to the person in terms of their sleep. And certainly, literally yesterday I had a, a meeting with a research group down in Bristol looking at pain and sleep and an intervention in pain a musculoskeletal in the intervention into pain and they are going to use the LSEQ on that study - as I say, sleep is not the outcome, but sleep is a nice by... You know, good sleep is a nice byproduct of the outcome.

Steven:

So where would people get it? Is it freely available?

Neil Stanley:

It is freely available. I, I administer it from a research point of view is available for MAPI the, the French research trust that run a lot of questionnaires for for people to use in their clinic, the version on MAPI probably isn't the correct version because it talks about medication in the instructions. My advice is to write to me, at my email address, which is drneilstanley@yahoo.co.uk, and I will send you a version of it for use in the clinic, shall we say,

Steven:

Could we just put one on the website for people to download? Would that be a better option rather than you getting 700 people talking to you or would you like them to do that?

Neil Stanley:

Yeah. I mean I, it could be done that way. Yeah. And I can put the manual up. I, it could be possible to put it on the website. Yeah.

Steven:

Yeah. Okay. Well, we'll... You and I will talk about that a bit later on. A little earlier on, you talked about medication and we've had a couple of questions about drugs. Vladimir and Nadia, both have asked questions Vlad about promethazine and other similar drugs and Nadia about Ambien and Diazepam and whether they actually contribute to getting good quality sleep, or I seem to remember from our discussion

way, way back that you said, yeah, they make you sleep, but that doesn't give you a good quality sleep.

Neil Stanley:

Yeah, I mean the thing is sleeping tablets don't actually in themselves change sleep. What they do is they allow you to stay asleep, therefore you can get the sleep you naturally could have if you weren't disturbed, if that makes sense. So a young 20 year old who is having poor sleep and takes a sleeping tablet because they're young and 20, they have a huge capacity to have good sleep. So a 20 year old taking a sleeping tablet will probably wake up and say, wow, that was the best night's sleep I've ever had. Now, if you're 80 years old and your sleep has changed due to natural aging and you're not going to get the deep restorative sleep that you got when you were 20, if they take a sleeping tablet, they may sleep through the night, but that's it. They're not going to get the deep restorative sleep because they can't, because the 80, so sleeping tablets aren't going to give you anything that you can't ordinarily get. So with drugs like promethazine and diphenhydramine, these are first generation anti-histamines, which have been around forever. They've been around for 50 years now, and they were found to cause sedation during the day, and people therefore thought that that may be beneficial to put you to sleep at night. Well, the different, the problem is sedation is not the same as sleep induction - sedation is that feeling of relaxation or anti-anxiety that may help you be in the right place to go to sleep. But it won't put you to sleep per se. But these are the things you can buy over the counter. Nytol for instance, is diphenhydramine, um and you know, other things can you know, other over the counter preparations like that contain either one of promethazine or diphenhydramine. They're okay - they do have side effects, but the one problem with them is that their efficacy runs out after about three to four days. So they're okay for short term help to go to sleep, but they're not brilliant long-term and nobody should be taking them long-term. This is why they sold in packs of seven isn't it - they're really not gonna work. Ambien and the other, the other benzodiazepines have been around for, you know, 20 years now. Ambien or Zolpidem and Zopiclone, which are the Zed drugs they're shorter acting, so they will help you go to sleep, but they may only last five hours or so. So you may wake up in the latter part of the night because they're not having a hypnotic action. Some of the older drugs like Temazepam, and that, may give you more sleep - eight hours or even more sleep - the problem with them is that you may face hangover in the morning. And again, you know, they are designed for short term use, not longterm use, although there are plenty of people who have been taking them for many years now. And the probable thing is that it's just a placebo by now. Uhou know, if they take the drug, they think they'll go to sleep, therefore they'll go to sleep and if they don't take the drug, they believe they won't sleep. And once you believe you won't sleep, you probably won't sleep.

Steven:

Okay. So we're looking at some sleep problems. Again, we talked last time about sleep apnoea and so on. We had a couple of other questions about that, one

specific about someone saying her husband has it, and can go for 30 seconds without breathing possibly up to 10 times a night. Is that a GP problem or is that okay?

Neil Stanley:

Yeah, I mean if you are pausing during the night, certainly, you know, 30 second pauses during the night, that is sleep apnoea. So that's the, that's the sort of a diagnosis. What you need to find out is how severe it is. Now of course your bed partner's report is an important part in the discovery of how severe it is. But I would suggest that there needs to be an actual sleep evaluation. 10 a night would not be considered clinically relevant. You know, that's within the bounds of normal. Mmm. But I say that's only 10 that she's witnessed, and that doesn't mean that that's the situation - so yes, there is apnoea present. If it's just 10 times a night, don't worry about it. But I would suggest it's worth going to see your GP and you know, trying to find out if it is just that mild or whether it's crossing over into the moderate where you would be looking at treating.

Steven:

And the reason you would need treatment, I think you said before, is due to that sort of continuous oxygen deprivation.

Neil Stanley:

Yeah. I mean, yeah, I mean, you know, you have these massive spikes in blood pressure which lead to an increased risk of stroke. You also are not oxygenating yourself as well. You know, your normal blood oxygen saturation should be sort of 95, 97 - some apnoeics get down to sort of 85, 80%. So there's a massive dip in oxygenation, and the disturbance to the sleep that it causes will massively increase your risk of things like motor vehicle accidents and that sort of thing. So it's something to take seriously, but with a proper diagnosis that you should take it seriously. And treatment is effective either a continuous positive airway pressure, which blows air into the airway to keep the airway open so you don't obstruct. Or you can use something called Mandibular Positioning Device, which is like a boxer's gum-shield, which just actually pulls the jaw slightly forward, just by a couple of millimetres, so it doesn't recess and again occlude the airway. So both of those are easily available on the NHS, and so, you know, unlike other problems with sleep you are probably going to be able to get effective treatment for the problem.

Steven:

Okay. Related to apnoea, Krishna asked a question about your opinion on the theory that tongue-tied infants may be more prone to sleep apnoea or a type of sleep apnoea which may cause behavioural issues as they grow as a result of changes in the mouth/throat musculature. Any thoughts on that?

Neil Stanley:

Yeah, I mean absolutely. You know, apnoea can be or is mainly something to do with the upper airway anatomy. And we know there was a research came out a couple of months ago about having a fat tongue, although I'm not absolutely sure what the diagnosis, the diagnostic criteria for fat tongue is, but there was a, there is a link as a between that airway, anything that narrows that airway in any way will cause potentially an apnoea. And so in children, you know, we do know that children can suffer apnoea and it's something that you should be aware of, be cognizant of, it may change over time because they're growing, they're changing, um but again, that's something to go and see your doctor. But yes, extreme tiredness in a child will cause behavioural and performance problems.

Steven:

Well, I'd imagine also that the problems of apnoea, whether it's blood pressure spiking, whether it's oxygen deprivations - they're going to be much more significant in the developing body, I'd have thought, than somebody who's older.

Neil Stanley:

Absolutely. And that's why I say you need to, again, you need to, yeah, be worried but, but not overtly or say one or two pauses a night is perfectly natural. More than that then you should be seeing your doctor and explaining what you're witnessing.

Steven:

But of course, as you said earlier on, you may only see one or two a night and it's very difficult...

Neil Stanley:

Exactly. I mean, you, it, it, it's, it's worth bringing up to your, to your doctor. Certainly in children it's worth bringing up because they say it's a, it's a relatively easy check by the doctor to check the airway. You should be able to be done in his, his surgery there and then to be honest, so it is worth mentioning it. Definitely.

Steven:

Turning to the other end of the age spectrum, Moraz has asked what we can do to improve our chances of getting more deep sleep. And he says, n3, which perhaps you can explain, especially as we get older.

Neil Stanley:

Okay., n3 is what is called slow-wave sleep or Delta sleep. And it's the most refreshing part of sleep, it's the bit of sleep that makes you think you've had a good night's sleep. And it's also the bit that's vital for memory learning and growth. So we get about 25% a night a of our sleep is in this deep n3 sleep. What happens with n3 sleep as we get older is actually it decreases in men it starts decreasing around the middle thirties, early forties. In women, it's more around the mid fifties that it starts decreasing, and that's a natural consequence of aging. And unfortunately, there is

nothing that we know that is beneficial for boosting slow-wave sleep in the elderly above the level that you naturally have. So of course, if you get a good night's sleep, you will get, or you should get the deep sleep that you, you know, can get from a physiological point of view. But there is, well there are, there's one drug that we know improves slow-wave sleep in normal people of any age and that's a drug called pregabalin, which is used for epilepsy and neuropathic pain that does increase slow-wave sleep. But whether that is as, as you know, part of it is therapeutic action, whether that is something that would work in normal people to boost their, their sleep and subsequently their memory, a cognitive enhancer has never been looked into. And also like every drug it's got major side effects. I wouldn't suggest everybody run to their doctor and get pregabalin to try and help them, but unfortunately there's nothing other than getting the sleep you can get that you can do as you get older.

Steven:

Thank you. I'm warned by my team that already we've got far more questions and we're going to cover,.

Neil Stanley:

Well, I'll come back again. Then...

Steven:

...I would like to say is to those watching, I'm really sorry we won't get to every question that's been sent in, and if yours is one of those that doesn't get answered well I do apologize. I'm sure we'll get Neil back in again at some point and we'll get the questions for you then perhaps. What about sleep-talking? Lee wants to know whether sleep-talking is an indication of good or bad sleep.

Neil Stanley:

Er, actually neither sleep talking is what we know is a non-REM parasomnia - so it happens, it's not related to dreaming, it happens in mainly in n3 sleep, which we were talking about earlier. Essentially in a parasomnia like sleep-walking or sleep-talking - the brain is not an all or nothing phenomenon - the brain is not completely asleep. Some bits of the brain, like the conscious bit of the brain can be asleep, but other bits of the brain can wake up and if they wake up they can do what they're designed to do. And from an evolutionary point of view, humans are the only animals that walk and humans are the only animals that walk upright, and humans are the only animals that talk. So we've spent an awful lot of our new brain, shall we call it, devoted to walking and talking. And so they're the ones that are most liable to go a bit wrong and wake up and then cause us to do that behaviour. So in sleep-walking, we walk and sleep-talking, we talk. The thing we sleep-talking is that it's common. It's perfectly normal. There's nothing you can do about it except for sleeping better. So you don't have these, what we call partial arousals. The only problem with sleep-talking is if you say something that you didn't intend to say it

may, you may have a hard time convincing your bed partner that you didn't really know a Mary intimately. You know, because again, it's that is that, you know, is that an intentional thing? Is it a real thing? No, it's just your brain just saying things that are completely random. So some people have nothing to say during the day and have nothing to say during the night. Other people are vastly more eloquent during the night and can almost have conversations or appear to have things that sound like a, an intelligible conversation in their sleep. So as I say, like all parasomnias improving your sleep should reduce the occurrence of the events. But as I say, we probably all do it. We just need an audience to listen to us.

Steven:

Somebody wants to take us back to the LSEQ, the, the Leeds Sleep Evaluation Questionnaire. Just briefly to say whether there's any proof of its validity in a clinical setting rather than a research setting.

Neil Stanley:

It has been used in clinics. Yes. And as I say you're not, what you're doing is merely looking for change. So if the, if the, if the person fills it out correctly and you get a change and that's a change, you know, and they say it doesn't, it's not about, it's about better or worse. It's not about some formula that gives you a magic number at the end. So if they say they're sleeping better on the LSEQ, they're sleeping better. That from a clinical point of view is all you're ever going to get from somebody to be honest.

Steven:

Of course we've had a number of questions from people who didn't see you last time, asking about wrist monitors for sleep and so on. But one specific one, which I don't think we covered before - Suzanne's asked about, or she watched a webinar with an ITU doctor and he talked about the noise, blue light and so on in ITU and how that's affects patients. And what effect does that, does blue light and so on have on their recovery, do you think - on the quality of their sleep? I guess?

Neil Stanley:

Well, I mean, yeah, I mean sleep and recovery is, is massive. You know, and this, this goes right back to Florence Nightingale talks about the importance of sleep and the importance of light. Both, both for sleep and for keeping you awake. I mean, there have been studies that show if you're recovering from a major operation, major surgery and you're on the sunny side of the hospital compared to the dark side of the hospital, you'll be discharged three days early. And there's been work in depression that shows that if, again, if you're treated on the sunny side of the hospital, you'll get better from depression a lot quicker. Sleeping in hospitals is, is a terrible thing. I mean, the, the, the beds are horrible. The noise levels at shift change in a hospital is louder than a jet landing at Heathrow. The temperature is vastly too high, around 24 degrees, whereas it should be around 16 degrees. Um so I some...

Well only half jokingly say that if you're ill, the last place you should ever go to recover is a hospital. Because they are not designed for allowing you to get that restful night's sleep, which is so all important for getting better. And I say this is recognized right back to Nightingale in the Nightingale wards with their big windows and how father beds were spaced and the fact the nurse was in the ward you know, a desk with a banker's light rather than round the corner with a machine that goes ping to alert you as to whether you are having problems during the night. So there is a huge problem with sleeping in ICU or in hospitals in general.

Steven:

Does that translate to being at home as well? Because lots of our devices, I mean, excuse me, he means blue light. You're being in the middle of the night as well, I suspect.

Neil Stanley:

Absolutely. I mean, 26% of teenagers are woken up after they've fallen asleep because of their mobile phones are pinging dinging or you're getting a call. So yes, I mean in order to get sleep we need a dark and quiet bedroom. And for many people we bring in things into the bedroom that make it neither dark nor quiet. And you know, from an evolutionary point of view, you know, when the sun goes down, we get that release of melatonin. So we should really be falling asleep around three, two to three hours after the sun goes down. That would be our natural rhythm. But you know, now most people certainly now in lockdown, most people wouldn't be able to tell you what time the sun went down because we replaced the sun by light, by screens. And that's the problem that we're not getting what's known as 'dim-light melatonin onset' because we don't have dim light anymore. Uh we live in bright light and certainly those LED lights, those bright, very harsh, white lights - they're terrible for sleep. I mean, they really are exactly the wrong thing that you have, which is what, you know, a lot of people have now in their bathroom. So they may have been behaving themselves, you know, not watching things on the laptop, but they switched the light on to brush their teeth and have a pee, and they've undone all the good work they've done, because these lights are so incredibly bright. So yeah, light and noise have no place in the bedroom.

Steven:

So allowing for two minutes to brush your teeth, and I believe the average time for a pee is 40 seconds, is two minutes and 40 seconds plus a bit of faffing around enough to upset that, um...

Neil Stanley:

Yeah, I mean we, we know, we know that with regards to sunlight, it takes four minutes of sunlight to tell your body to stay, to stay awake. So if you're under one of those 6,000 Kelvin bright-light LED bulbs, you've only got four minutes. So yeah, a man, probably a woman. I don't think so. That's not a sexist... No. We actually did a

study looking at nocturia, i.e. Peeing during the night, and we were using wrist worn measurements and we found that men can get up and go to the bathroom in a minute and a half. Women take a bit longer and the factor is that they actually wash their hands and that's an absolutely scientific finding. It was the only finding from that drug trial. And you can imagine how excited the drug trial, the drug company was, when we found out that drug was no different than their competitor. But we did find out that women wash their hands at night.

Steven:

It's it's disturbing to realize that these sexual stereotypes are actually born out in fact - men are lazy and dirty and women are hygienic. Jennifer has asked about viral induced insomnia. Apparently her 14 year old daughter had glandular fever three years ago and has had sleep problems ever since. Is there any evidence on viral induced insomnia? She's been given the sleep hygiene leaflet from the GP and as Luke at what it says about blue light, she has a blue light filter on her phone, but insists on having a pretty tree light, with blue-emitting flowers and says it makes no difference to her sleep. Could that be true, or should Jennifer insist that it goes?

Neil Stanley:

Okay? two parts - uh yes, there is definitely a viral-induced insomnia. And the particular culprit or the, the, the, the most well known culprit of that is Epstein-Barr Virus, which can have long-term effects on your sleep but otherwise it can affect their sleep. With regards to blue light at night, actually stripping blue light out of your phone is ineffective. The only way to avoid light from your, or damaging light from your phone is not to have your phone at all. Erm, having a nightlight that's blue isn't ideal. But at least it's not right in front of the eyes, which is the problem with a mobile phone is that it's so small that you actually have to put it so close to your eyes and it's the brightness of the screen, whether it's blue or not, that disturbs your sleep. Having a blue like nightlight - if she says it doesn't disturb her sleep fine, but taking away the phone is a good thing whether it's light or not.

Steven:

Okay. We had several people ask about melatonin tablets. Are they useful in getting a good night's sleep? Are they better than, for example, Valium?

Neil Stanley:

I am completely against melatonin. One it's only available on prescription in the UK for over fifty-fives with insomnia - it is being used much more widely than that. It's not a very strong hypnotic, even if it is used in the over fifty-fives, many people use melatonin supplements that they either buy in America, or they on buy online. Most of these well all of them are uncontrolled - you have no idea what's in them, you have no idea of the potency of them. And there's no long term safety data on melatonin. It's never been developed as a medicine, so it's never had to pass the safety test that you would expect it to have done so - so I, I've never taken it, I never

will take it, and I'd never recommend anybody other than completely blind people or severely autistic children should take melatonin. That's my personal view, which I can back up with science if anybody wants to inquire. But no, I, I, I don't see it as being a beneficial thing to be taking.

Steven:

Which kind of leads on to a question by Ben, which is - are there any natural remedies which have an evidence base for improving the quality of sleep?

Neil Stanley:

I mean, there are, there are a few. I mean acupuncture certainly has got a pretty good a weight of evidence behind it. Reiki also seems to have some good evidence behind it. In terms of you know, lotions and potions, valerian has pretty good evidence that it works. Most other things, there are one or two papers that say it works, but nothing really persuasive, shall we say. For a lot of people it's placebo. That's not a bad thing - it's agency, you take a pill you think is going to help you sleep, you don't have to worry, therefore you don't worry, therefore it helps you sleep. So if somebody says they take Passiflora or, or something like that, then, and they think it helps them sleep, then I'm not to say don't do it. You know, there's side-effects of most of these drugs or most of these compounds are so mild, there's not to be problematical.

Steven:

Could the same be argued about acupuncture - that it's a placebo effect, or was there more hard evidence for that?

Neil Stanley:

No, I mean, you know it's how, how, how do you do sham sham acupuncture? You know, I, I'm one of these people who has a dread of needle and can feel it touching every cell in my body. There's no way you can fake that on me. So, yeah, I mean, again, if, if somebody feels, you know, I mean massage. I mean, my, my ex wife was a masseuse. Now she would say that her clients fell asleep. I felt like she was beating me up. And I would never forget, you know, I didn't find it relaxing. I found it therapeutic, but not relaxing. So, you know, it's horses for courses. One man's relaxation is another man's torture.

Steven:

I've gotta meet your ex wife. I have an anonymous question here about insomnia and I have to read this carefully - how much insomnia can be attributed to the sufferer not having met and overcome sufficient physical and mental challenge during the day?

Neil Stanley:

Yeah, I mean, yeah. My old professor once famously said, the best way to get a good night's sleep is to be awake during the day. You have to do something. I mean, your sleep is about repair and recuperation and settling the account of the day. If you haven't done anything, then you don't need that, that benefit. So unless you know, you know what it's like on a Sunday, you, you wake up late, you read the paper, you have lunch, you fall asleep in front of the Grand Prix, you have dinner, you go to bed early because it's Monday the next day and you don't sleep. Why? Because you haven't done anything. So exercise where the physical or mental is a great way to give your body... I'm not going to say you gotta earn sleep, but yeah, you've got to learn sleep. You've got to do something in order to need the recovery.

Steven:

Okay, specific concepts here that I'm not familiar with, Kerry has asked about the wakeup time concept and the importance of the 90 minute Lito cycle.

Neil Stanley:

Okay, well people talk about a 90 minute cycle. There's one particular uh, in inverted commas sleep expert or ex mattress salesman as he actually is, who released a book called the Constant Routine 90 - Nick Littlehales. He goes on about this 90 minute rhythm that we have and we should sleep in 90 minute cycles. And it's not about the number of hours, it's the number of 90 minute cycles that we have. He's the only person who believes this. And also when, Hartman published the first data sleep cycles, he showed they varied between 34 minutes and 170 minutes. So the ideal that is 90 minutes is a nonsense, it's actually the average is 95 minutes. So you're 25 minutes out at the end of the night if you're doing 90 minute cycles. This all complete nonsense. What there is a 90 minute thing is Jan Born showed a few years ago that your body and brain starts waking up around 90 minutes before you actually wake up. So if your body and brain knows when you're going to wake up, i.e. A Fixed wake-up time, your body and brain can prepare to hit the ground running. If you don't have a fixed wake up time, your body and brain has no idea what time it's preparing for and therefore you may wake up and feel that sort of sleep inertia, that feeling of grogginess that many of us have when we wake up in the morning. But that's the only 90 minutes, and it's again a roughly 90 minutes then that we have. So fixing your wake-up time is a very, probably the most powerful single change that any one person can make to their sleep is to fix their wake up time seven days a week, 365 days a year. Certainly what I do.

Steven:

Is that, is that a purely a wake up time or is that a get out of bed time?

Neil Stanley:

Aah, I mean, again, the best way I feel because I'm a morning person, the best way to start the day is to leap up, open the curtains and get on with the day. But I know some people who are evening people who may find it a bit more difficult. But the

key thing about that is, you know, don't set your snooze alarm, set your alarm for the time you're going to wake up and then get up at that point whether you get up and physically leave the bed, but don't turn over and snooze and snooze again because that's really not good for you.

Steven:

Okay. We've probably got time for one more. Someone's asked whether there's a correlation between sleep quality and the lunar cycle?

Neil Stanley:

Er, yes, there was a study done in Switzerland at the University of Berne and showed that you have worse sleep at full moon.

Steven:

Is that just light related?

Neil Stanley:

It could be, it could be like light related, but it could also then stretch back a bit further. You know that we have a gamekeeper's moon and a poacher's moon. A Gamekeeper's moon is, you know, a bright, full moon. So from, you know, the reason we sleep at night somewhere safe is to stay away from animals that can eat us because they've got better nocturnal vision. So it may be a full moon makes us, well, it can be one way - either it means that we can do something for the first time because it's not dark or it may mean that we're more vulnerable to predation because other things that can't see us during the night can now see us and may want to eat us. So yeah, it's certainly there. I mean, I know, I know the team in Berne who did it. I know the science is good. But again, what the, what the evolutionary explanation of it is, I don't know. But you know, yes. One would presume that if you were to look across the 28 days of the lunar cycle, you would probably find subtle differences.

Steven:

Well, I guess the bigger question is what do we do about it? Which is a question we don't have time to answer cause we've come to the nearly the end of our time. I'm just, I'll just pick a question at random to, to ask about this. Jess has asked about the blue light. What's the research around screens and sleep policy at the moment?

Neil Stanley:

Okay. There's two bits of research. One is that it's not just blue light, it's any light, and even down to some people, candle light is enough light to disturb the melatonin release. The other thing is some studies have come out showing that it may be dose-related. You may, if you get sufficient blue light in the day, then blue light and your screens will make no difference to your sleep. But if you don't get sufficient, those are the people who may be disturbed. However, we haven't been able to

quantify what 'sufficient' means in that statement. But it might be the blue light is a dose. You need enough of it to tell your body it's definitely daytime. Any more than that. It's like taking a multivitamin. Some multivitamin is good, too much you just pee it out. Same with blue light. It may be that if you get enough, if you work outside all day on a glorious day like today, then it doesn't matter what you look at on your screen at night.

Steven:

I'm looking forward to the time when I find myself peeing blue light. Neil, my last observation is that you mentioned a mattress salesman and his book I believe that there are other books that one could turn to for information about good quality sleep.

Neil Stanley:

No, my, my book How to Sleep Well has been out for a couple of years and if you've enjoyed the way I've answered these questions in a no nonsense, no bullshit style, then you probably will like my book to be honest.

Steven:

Right. Well we're, we're going to put a link to your book, and to the Leeds Sleep Evaluation Questionnaire on the page where this recording appears, which is free access to everybody who's registered to look at these lunchtime broadcasts. So we'll put that up. Neil, there are, you know, there's about a thousand other questions that I could have asked and hopefully we can convince you to come back in in the not too distant future. Thank you for joining us this lunchtime - it's been really, really helpful, really enjoyable conversation. I love conversations where there's a lack of bullshit and bollocks and that's why I quite enjoy getting you back on the show. So we'll see you again soon. Thank you for today.