11. Blue Light and Sleep – Alex Fergus

Blue light and Sleep

Blue Light. Alex Fergus a New Zealander living in Sydney at the time of this recording coaches some of Australia's top executives; helping them look and feel amazing through natural lifestyle choices.

Alex has a passion for improving health and fitness. He grew up in New Zealand participated in a lot of sports.
He represented his country in Rowing, won national bodybuilding titles and broke powerlifting records.I always wanted to be healthier, faster and fitter.

This thirst to improve lead Alex into the world of health coaching. Others came to me to learn what I was doing.

He continues to read, study, experiment, listen and learn.

Like most of us Alex has suffered his own health woes – from being a horrible sleeper, embarrassingly low levels of testosterone and gut issues. Through these setbacks he has learnt even more about the body – not only how to heal from these issues, but how to avoid them altogether.

Today Alex continues to learn ways to optimise his own and his clients health and

fitness, but also the people around him, family, friends and society as a whole.

Can I decrease the risks of Blue Light?

Alex also is the founder of www.blockbluelight.com.au selling products that help people improve sleep by living in sync with their natural light cycles. Alex is personally driven towards optimising his own health & performance by combining ancestral protocols and modern day science. He shares his knowledge in his blog at www.AlexFergus.com

Check out these links referred to during the interview podcast
Book – TS. Wiley – Sex Lies and Menopause.
Jack Kruse – https://www.jackkruse.com
Alex's – www.alexfergus.com
blueblockers –www.blockbluelight.com.au

Discount code for listeners:

BILL 10 for 10% off – that will expire in 3 months from June 27 2016

Articles:
https://www.alexfergus.com/blog/how-technology-blue-light-is-ruining-sleep-making-you-sick-fat-tired-and-how-to-fix-it

https://www.alexfergus.com/blog/how-to-improve-your-sleep-with-morning-sunlight

Transcript:

Alex 0:00
What they found now is that there's a particular wavelength, and that's blue light, that when the body senses that, whether it's through the eye or even for the skin, which is quite fascinating.

Bill 0:11
Wow.

Alex 0:12
Yeah, I'm predominantly through the eye. Obviously, that makes sense. Because

you know, that's we will our lenses to the world, I guess. Um, but the found that whenever we're exposed to this blue light, you know, the four, 415 to 480 kind of nanometer wavelength light, it disrupts melatonin production.

Bill 0:33
So it tells the body that there is still sunlight or there's light out there, you don't start begin to feel drowsy. So you can go to sleep.

Alex 0:43
Hundred percent, like

Intro 0:46
this is recovery after stroke with Bill Gasiamis, helping you go from where you are to where you'd rather be.

Bill 0:54
Welcome to the program Alex.

Alex 0:56
Thank you. It's a pleasure being here.

Bill 0:58
Tell me how's the weather up there today? Because we have freezing down here in Melbourne?

Alex 1:01
Yes, it's actually not too bad. Oh, she's down at the park getting my morning sun, sunlight exposure, I was t shirt and shorts. I mean, there's a few people getting the weird looks, but it's not too bad.

Bill 1:11
You're running around with a T shirt in the middle of winter.

Alex 1:15
Yeah. I figured what 10, 15 minutes outside, you're not going to die from it are you? It's um I'm a big fan of cold thermogenesis. And, yeah, maybe we can save that topic for another day. But yeah, just, I think a lot of people are quite soft these days, we're but when it comes to temperature.

Bill 1:35

Okay, okay, softer alright. We'll leave it at that because I'm one of those people.

So dude um, we'll get chatting about blue blockers, because the way I came about you was through a little bit of my own sort of journey. In kind of under trying to understand how I can enhance my well being, including my eyes, you know, my brain, my I've had some challenges that I've had to overcome. And I'm curious, what was it that sort of got you into a place where you are today? Where you're looking at trying to protect people's eyes with your awesome products?

Alex 2:17
Yeah, it's, um, it's, it's a long story, I guess. But I'll try to keep it brief. Pretty much. I've been a personal trainer for six, seven years, and, you know, is into health used to be quite competitive athlete, various sports. And, you know, I just, in a way I guess i was just selfish. I just wanted to learn what you have to do to perform better. And thankfully, I, I managed to find a job and a career where I could pass on this knowledge to others, and in terms of training and health, and I thought I knew it all in terms of diet and nutrition, supplements and all that.

And, you know, I end up getting really sick and, you know, pretty much 25 years old, here i was winning bodybuilding comps, but had no libido and no energy. So this is this is wrong, this is messed up. So that sent me on my own health journey. And yeah, just just start looking at and I have a university degree background. So I've done a little bit of research work and stuff, so sort of opened up PubMed and stumbled upon some books, and you just realized that okay, maybe what you're taught was, was wrong.

And over the years, like, so much has changed. I mean, I wish I knew half what I knew now, back then I would have been a completely different athlete, and I'm sure my clients who've reap the benefits as well. But throughout that process, you know, like, everything changes, like your outlook on saturated fat, that's a big one grains, obviously, all that sort of stuff. But you once you go through that level of, okay, food, nutrition training, I then stumbled upon another level of health and wellness. And that's more like environmental factors. So now all of a sudden, you're looking at things like light cycles, light itself, obviously, temperature, which I touched on before,

External environmental factors such as like, EMF, you know, pollution and, and it's funny because like, you know, again, once I go to that nutrition, new, new

found nutrition level with like, more of a primal, ancestral type diet, you know, I thought sleep, I've found it, you know, and I know everything. And, and now I look back on that, you know, which was only a couple of years ago, and I look back then think, geez, there's still so much I don't know. So it's crazy to think, you know, in couple years time, I'll look back on this moment right now. And thing, I still didn't know anything. But yeah, pretty much going through all those layers, just like peeling the layers of an onion, right?

Intro 4:45
If you've had a stroke, and are in recovery, you'll know what a scary and confusing time it can be, you're likely to have a lot of questions going through your mind. Like, how long will it take to recover? Will I actually recover? What things should I void in case I make matters worse, doctors will explain things. But obviously, because you've never had a stroke before, you probably don't know what questions to ask. If this is you, you may be missing out on doing things that could help speed up your recovery. If you finding yourself in that situation, stop worrying, and head to recoveryafterstroke.com, where you can download a guide that will help you. It's called seven questions to ask your doctor about your stroke. These seven questions are the ones Bill wished he'd asked when he was recovering from a stroke. They'll not only help you better understand your condition, they'll help you take a more active role in your recovery. head to the website now, recoveryafterstroke.com and download the guide. It's free.

Alex 5:53
And we find and Yeah, kind of about two years ago, I stumbled upon to circadian rhythm, importance of the so fascinating topic, like the amount of studies and stuff out there just showing how any slides disruption of circadian rhythm leads to a ton of health issues. So just stumbling upon that. And then from there, yeah, looking at light cycles. So looking at blue light. And

Bill 6:17
Alright, what I'm going to do is we're going to start at the end, so to speak, and then we're going to move through the beginning, right, so the end is I'm looking at you now you're wearing glasses that have got an orange tint on them. And they're really cool. I've ordered a similar pair, and I'm waiting for them to arrive. And they haven't arrived yet. I hope that that we're gonna be here before we got to talk. So that's all good. So I can, so I can also be wearing them. But

Alex 6:47
did you order these ones? the orange ones?

Bill 6:50
They're the ones I ordered yeah

Alex 6:52
These are you're nighttime ones, I use these during the day.

Bill 6:55
Okay. So it's even more, you know, more interesting than I thought it was I thought there was one pair to do everything. But that's all good. So tell me about why are you wearing these weird orange glasses on your head man?

Alex 7:09
Um, well, look, yeah, so like I said, before we got, we got two types, I don't wear glasses. By the way, I don't have contacts or anything. So these are purely blue light blocking glasses, or UV light blocking glasses.

So the reason I use these during the day is to actually protect myself from from blue light, which has been emitted from the screens, right. So a lot of people, not a lot of people, some people is discovering the impact of blue light in relation to sleep, and melatonin. And if you use an iPhone, for instance, and you've updated to the latest version, you'll see that night shift mode, right, and that applies a filter, or it's a software setting, it's not that effective, but it reduces the blue light exposure.

So I'll get to that in a second. And that's why I'd use these ones come not time. But during the day, I use this now these are, um, you might have heard of gaming glasses, like computer glasses and stuff, these are effectively these are gaming glasses, you can wear them if you're a gamer and stuff and these are actually designed to protect the, sorry I should hold them up a bit higher. These are designed to protect protect the eyes retina.

So if you pull up a light spectrum, if you do a Google search of like visible light, and you see the the rainbow with all the wavelengths and everything, you've got down one and like the purple, the violet, colour and then down the other end, you've got the red, so that spectrum, obviously changes, you know, violet, blue, green, yellow, into red, okay, and that's the visible, visible light spectrum. And so

as you increase the wavelength, and you go from the red to the purple and beyond, then you get into UV light, then you get into x rays, gamma rays and stuff.

Those are the ionising rays. wavelength and that's, that's what's harmful. That's why you don't want to be hanging out and x rays and stuff like that all the time. You go the other way from violet through to red, and then you increase the wavelength. But you decrease the energy and then you've got infrared waves, radio waves, TV and all that sort of Jazz, but ther is the blue light in particular, as well as having an impact on melatonin, which I'll get to say that blue light is it's it's high energy, it's high.

It's shorter. Yeah, shorter wavelength, but it's got more energy in it. And then um, that that light can damage the eyes retina. So pretty much a blue light in the 400 to 415 to 450 nano meter range can actually penetrate the eye. Like blue light from a screen, because you gotta remember, like, we haven't designed with screens, and you know, all these technology things, right? So it's new to us. It's, it's, it's our body doesn't expected it.

Bill 9:53
Yeah. So when you say can penetrate the retina? Where does it go? Once it does, that will be what?

Alex 10:00
Yeah, so so penetrates like, the eyes, natural filters. And, and, and it can destroy like cells in the retina.

So and it's a cumulative thing. So like, you know, like looking at computer right now, I'm not destroying eyesight or anything. But, you know, if you're sitting behind these computer screens, for hours upon hours, every day years upon years, you know, all of a sudden, you're getting eye diseases, macular degeneration and stuff like that. So that's why from day to day, you know, because I'm behind a computer, I do a lot of health coaching, blogging and stuff. So I use computers. So that's why I'm, I'm trying to protect my eyes. From a health health point of view.

There's nothing really from a sleep point of view here. But look, this is a really deep topic. And it's, it's something that I'm still learning about in terms of the eye health, but these guys out there, you know, showing how technology and the UV,

HEV, high energy, visible light, can destroy things like DHA omega3 fat, so that i is one of the body's highest stores of DHA and and it's it's been shown that blue light can destroy the DHA. And you know, if you don't eat enough seafood, there's all sorts of sorts of issues thats going on because obviously, you know, people know about DHA and omega3 is an anti inflammatory, but it also does things like on insulates the neurons and myelation. I don't know if you've heard of that?

Bill 11:31
Yeah.

Alex 11:31
So you're destroying that then all of a sudden, the body has less omega3's and all of a sudden, you're more prone to, you know, neuro transmitter issues. I'm

Bill 11:39
so hang on a second

Alex 11:41
sorry, I'm

Bill 11:43
not it's all good. So what you're saying, what you're saying to me is, at the deeper level, blue light can affect us in the brain. Like it can affect the neurons and the modulation, myelination, which is for people that don't know the wrapping around the neurons that protects the neurons, it helps them fire properly, you're telling me that long exposure to that damages eventually, our neurons in our body?

Alex 12:09
Yeah, hundred percent. And again, like this side of the blue light, this wasn't why I say don't blue blockers. And in fact, this has been a the last few months, this has been more of an eye opener no pun intended I guess and I'm still, you know, learning a lot about it. Um, but yeah, I mean, and again, if you think about it, purely from ancestral evolutionary point of view, whatever, like we weren't designed with like these bright screens, you know,

Bill 12:41
What were we designed to do? sit in front of the campfire, look at the fire?

Alex 12:45

Yeah, well, and this, this thing gets into the circadian rhythm side of things with the blue light. So, so yeah, just in a nutshell, you're right. That's why I wear these during the day. These aren't, I could wear these, but obviously, if I'm doing works with graphics and stuff, you know, these give a pretty orange glow. And ah can be tricky to do some design work. But the other ones I have, you know, I think it's about 40 50% filter, but it's also designed to block all the UV light as well. So that that protecting my eyes during the day, and I don't wear them all the time. We're as these glasses, these bad boys designed to block all blue light. Now, I wear these as soon as the sun goes down.

And the reason behind that is again, if you think if you put your ancestral hat on, hundred hundred and 40 years ago, hundred 50 years ago, light bulbs didn't even exist. All right. Prior to that, we had fire obviously. Who knows when fire was invented prior to that, you know, we only had natural light, okay, and I guess you could say fires and natural light as well. So way way way back then, when the sun was Sun was up, great, there's light.

Sun goes down, there's not much lighter, you know, there's no, there's a moon puts a little bit of light stars, obviously a little bit light. But there's nothing like today we've got fluorescent lights here, screens and all that sort of emitting all this light so we designed in a way where we evolved in a way where when it was dark we'd go to sleep alright, like that's what you did. When the light light settings when it got darker as the sun was going down on Twilight and even when we had fire it's less light and it's particular light as well.

So again, going back to before we're not saying the visible light spectrum, how you got your, your violet through the red fire, for instance, is a is high in red light. You know, red and orange light and it's very, very low blue light. And I've actually, I've got a really, if anyone wants to like delve into this big time I've got an article on my website, I can send you the link you can even post it in the notes

Bill 14:53
I will definitely

Alex 14:54
in that article i've actually got a diagram showing the makeup of every light source. So you've got a candle you've got LED light bulbs, you got fluorescent, you go um, incandescent light bulbs alright and it's really fascinating because

candles and even incandescent light bulbs, which are now banned here in Australia, we're predominantly red light, you know, it's that's why they give that orange sort of grow glow. Yeah, whereas today, you've got like these white bright, you know, fluorescent lights. And they've got a lot more green and blue and sure that are more energy efficient. But they are emitted another source of light.

Bill 15:30
So just let's get back for one second. You said the incandescent light bulbs, the one that Edison invented, he had been banned in Australia, what are you talking about?

Alex 15:40
Yeah, I mean, look, again, I'm from New Zealand. No, you can't, I think the law

Bill 15:46
Are they stopping manufacturing them or something like that

Alex 15:48
And so those light bulbs thats um I keep going off track. Yeah, so going back to that fire evolutionary point of view, when the sun went down, will limit it to either no light or moonlight, which is very, very there is not much light brightness behind there, or fire, right,? And then that fire is, you know, if anyone else has look at a fire, not looked at a fire. It's a lot of red light, you know, there's not much blue or green light being emitted from that fire. And that is how, obviously, we evolved. You know, whatever you believe in, that's how we grew up.

Yeah, yeah, I mean, you can hunt them down, like I know, some like Chinese kinda two dollar stores, you know, I see them there. But pretty much like if you go into a Woolworths or Coles, and you go to light bulb section, they're all the energy efficient light bulbs, right, which, which of the fluorescent You know, um I think there is some led ones now. And they emitt, I mean, you notice. I live in an apartment building, I look at the apartment across the road at night, and you'll see an apartment with a really orange colour, which is the older incandescent light bulbs, they obviously still have them. And then underneath, you'll see this new newly renovated apartment, it's like this white, you know, like, glowing light. And you see that difference, right.

And that impacts everything from melatonin cortisol, you know, our circadian rhythm. So, um, yeah, pretty much what they found that is that there's a

particular wavelength, and that's blue light, that when the body senses that, whether it's through the eye or even for the skin, which is quite fascinating. Wow. Yeah, um predominantly through the eye. Obviously, that makes sense. Because, you know, that's we will our lense to the world, I guess. But they found that whenever we're exposed to this blue light, you know, the 4, 415 to 480 kind of nanometer wavelength light, it disrupts melatonin production.

Bill 17:47
So it tells the body there is still sunlight or there's light out there, you don't start begin to feel drowsy. So you can go to sleep.

Alex 17:57
Hundred percent. Like, if you're, it's 10 o'clock at night, the sun's been down, and you're under fluorescent lights, watching a bright, brightly backlit, you know, computer screen with your iPhone going as well. That's a lot of light, a lot of blue light. The brain, the body, the eye is thinking, Okay, it's another day. We don't need to start releasing melatonin now. Because it's the middle of the day, then of course, you go to bed and you know, why can't I sleep? Obviously, people still sleep. But what's happening is that melatonin has been on phase the life I shifted back.

So Melatonin is released a couple hours, three to four hours after low light after it stops sensing blue line

Bill 18:40
Wow

Alex 18:41
So you're going to be let's say in that example before you watching a movie, you got your phone, you're reading them bed with the screen right in front of your eyes, sure you can go to sleep and might not be the best late, but that that Melatonin is going to be delayed. Whereas if you were watching the movie with a filter on your screen, and you were blue blockers, or let's say you weren't even watching watching TV, you're just reading or, you know, having dinner over candlelight, or whatever it may be, you're already a couple hours ahead, right? Because you're blocking that blue light um reaching the eye due to due to the glasses.

Bill 19:15

Wow. So what you're saying what you're saying, Alex, is that basically what we're doing is we're disrupting our sleep cycle. People are sleeping less, as we know anyway, like there's, you know, research finding that people are sleeping less than seven hours a day, which is not recommended, but also the quality of their sleep then gets interfered with because they've looked at a blue screen.

Alex 19:40
Yeah,

Bill 19:40
the the sleep cycle starts three or four hours later, even though their eyes are closed and they appear to be sleeping. Melatonin hasn't kicked in. And as a result, they're they're having this disrupted or not very sort of high quality level of sleep.

Alex 19:57
Yeah, totally and pretty much nailed it, but the other funny thing is people a lot of people don't understand this. They just think of melatonin sleep hormone, right? Like that. That's association which is true. But Melatonin is also one of the most powerful antioxidants in the body. It's a natural antioxidant, right? And there's a lot of links between melatonin output and things like cancer and, and this is why you know, if you miss a couple of days sleep you have a bad sleep. You know,

you're more likely to catch cold you just run down a little bit more susceptible to getting a cold and flu and look, there's a there's a ton of reasons behind that. It's not just melatonin like obviously. Yeah, growth hormone and all that sort of stuff.

Bill 20:37
immune function the lot laser level yep,

Alex 20:38
yeah, but but Melatonin is actually a key element in that immune function. A lot of people don't don't understand that. Um, and that's why, like, I just finished reading a book a few months ago, by TS Whiley, it was called sex and menopause. It was obviously written for menopausal woman woman, but I like reading. So you

Bill 20:58
you cut, you cut out there, what was it called?

Alex 21:01

Sex lies and menopause by TS Wiley. Anyway, I read that and yeah, it's written for females and stuff. But she looks at the link between breast cancer and disrupted circadian rhythms. And going further like low level in between, I guess, the low levels of melatonin due to the disrupted circadian rhythms. And then she's saying, you know, she ties all this blue light, and everything into it. And it just shows like everyone knows you touched on this earlier how important sleep is.

But you know, it's not, it's not just sleep, it's how we sleep. It's when we sleep, like you could be sleeping in the night shift is night shift workers, for instance, they might still get six, seven hours of sleep, but it might be daytime, they pretty much exposed to bright light all the time. Like even when they sleep during the day, you know, unless they're using blackout curtains in there. Again, they are more prone to all these illnesses and diseases and ageing and all that that um someone else who sleeps at night. Like it's really, really fascinating. And yeah, you're right, though that blue light is is delaying the melatonin production, which is obviously impacting how deep we sleep. But then in turn, it's impacting our health and things like melatonin cortisol, run in opposite as well. So, um,

Bill 22:13
yeah, there is there's a lot of research and a lot of work and some stuff that I read about what happens to people who don't sleep enough or don't get enough sleep and how it makes them lack of sleep makes people fatter. And the reason being is because the lack of sleep causes the body to not be able to utilize insulin. So when somebody eats a certain meal, and the insulin gets kicked in sugars, carbs, that kind of thing, to help process them the body's ability to activate that process decreases. And they become insulin resistant, quicker, and they gain weight and they're more likely to go into type two diabetes.

Alex 22:55
Yeah. And, and this is why, okay, calories in calories out, obviously, there's so much fruit behind, you know, how that's not valid. But even taking another step further. And people you know, I I study bodybuilding people get get into the whole macros If It Fits Your Macros and stuff like that, like that's still there's still more to health and even fat loss, then then diet and macros, right? Like because you got things like this, you could have a, you could be switched on when it comes to insulin sensitivity and in the lower carb diet and stuff, but then all of a sudden, you're only getting five, six hours of sleep now, you're undoing all this work you've done with your diet anyway, and this is why now I'm with the clients I

work with, by Tanya small element, it's all the lifestyle choices, environmental choices, and obviously it's like

it's the cheapest and most effective. I don't know what the word is the label is but uh, you know, all these kids that come to me and they want to get stronger or rugby players and they want to get fitter, faster or corporate guys, I want to lose weight. And they're like, Hey, what about this supplement? What about this diet plan? What about this? Look, just fix your sleep first, and then focus on all that other stuff like that should be the foundation. And it's free. You don't have to pay for pay for supplements or anything right. But so many people are caught up in the TV shows and addicted to technology. So

Bill 24:14
yeah, and the quick fix, right? Well, probably a pretty good way to fix things. I mean, all you gotta do is lay there and sleep right. But some people can't switch their heads off. And it seems like this could be due to the fact that they're doing all this blue screen stuff at at the time just before bed or even a few hours before bed. So you had away I've become that I know there's glasses. Yeah, but what else can we do to minimize exposure from computers, because a lot of people bring home work from you know, from the bring home work, and they've got to sit down and they've got to do an email or whatever, you know, at eight or nine after dinner when everyone's gone to sleep. So how do we minimize that?

Alex 24:59
Yeah, the answer is simple. You just get rid of technology and go live in the bush and live on the beach. But yeah, obviously, that's not practical for everyone. So obviously, look, the glasses are a big part of it. But everything from making your sleep environment as dark as possible. So there's been studies showing, again, I touched on this before, where it's not just the eyes, the skin. So there's one particular study where they had study participants in a pitch black room. So when I say pitch black, I tell my clients that they shouldn't be able to see the hand in front of your face, you shouldn't be able to count how many things like that. That's how light, there might be a little bit of light, but it's pretty dark yeah.

So I'll come back to that. But there was a study done where the participants were in a pitch black room, and they had a light LED, I don't know what exactly it was fibre optic cables on me strapped to the back of their knee. And then that ran off to a machine. And that was taped. So it was all covered over with tape. And the

participants didn't know whether the light was on or off, you know. And now it's like and it was a blue green, green light that was being emitted because greens very close to the blue and in the spectrum

And yeah the sleep participants through the night and they were monitored for levels of melatonin throughout the night. And they found that the participants who the machine was on the light was on on the back their knee tiny little light. And again, they had no idea the participants had no idea if it was on or off, right and they couldn't see it, there was no light being exposed to the eye, it was pitch black, but the participants where the light was on had lower levels of melatonin at night.

So sure, you want to you want to block the light, pre bed prior to bed but you also want to block it at night when you're sleeping. So I just got back from a trip to paleo FX and I was in Asia and stuff and we actually just put put together a blog that will be out in a few days on my website. But it's my sleep Sleep tricks sleep hacks. And obviously, there's a few supplements in there for you know, international travel and stuff. But I actually travel with a roll of black duct tape. I travel with this.

And I travel with I'm asked obviously, and I travel with I think it's here somewhere. It's a throw like a black throw right in wherever I travel. Even if I'm traveling domestically here in Australia or New Zealand, I'll take these things with me. And the reason being once you get to a hotel, you know, you've got that blinking smoke alarm light bulb above your head, you've got you've got the alarm clock, you've got the air conditioner there, you know, I was in Hong Kong and I wanted the aircon on because it was it was 30 something degrees and humid.

So you want the aircon on. But of course, it's got this bright blue LED light, like just and obviously, you know, the hotel I stayed in, in Hong Kong, for instance, have blackout curtains great. But still you turn off all the lights and it's still all these little lights are glowing everywhere. So I actually take the duct tape and cover all those LED lights

Bill 28:00
Right.

Alex 28:01
And I'll use the throw if there is like some some hotels, for instance, might have a

little window, you know, above their head above the bed that doesn't ever curtain on it, right? So just tape that up and cover the light, cover the window and then obviously sleep with the eye mask. Because even though you want to make the room as dark as possible, it is the eye that is the most most sensitive. So again, you make the you make you sleep environment as dark as possible.

Bill 28:25
Wow, that's really cool. So I've got another question for you. Because we touched on it before we actually got to talk via our emails in the last couple of days.

And 40 I had cataract surgery. At 41, I had brain surgery and at 42 I had thyroid surgery. So I'm really conscious of the fact that I've probably done a fair amount of things in the past to keep me not very well for quite a long period of time. And then in the last few years, you know, all the stuff that I've done has sort of bit me on the but.

And you mentioned something when I said about the cataracts, and you mentioned something about cataracts and blue light. And you said something along the lines of the cataracts are the are the way the body tries to protect the eye tell me a little bit more about that.

Alex 29:22
All right, again, I'm not a doctor, and I'm not a specialist or anything. And, and this topic is very new, like similar to the the blue light and the retina during day. Like it's something that I'm still looking into. So, you know, if there's any doctors out there, listen to this, like, you know, throwing their arms up in the air. Like, again, it's more than I need to learn that. But

Bill 29:48
it's your point of view I want you know, the doctors have got their point of view. And that's cool. We love them. And we can't do without them. I couldn't have had cataract surgery without them. So I'm not saying they have got no idea. We love doctors, believe me if if it wasn't for doctors, Alex, I'd be probably, you know, brain damaged blind. And you know, my hormones would be all over the place. So yes, thumbs up to the doctors. So we just want to your point of view

Alex 30:14
Alright okay, well, this is my understanding. And there's a neurosurgeon in the states who is very, very passionate and very, very knowledgeable about this sort

of thing and the impact of blue light and eye health and stuff. And his name's Dr. Jack Kruse. So for someone like yourself, or if anyone else out there is, you know, cataracts or wants to know more about this, just google Dr. Jack Kruse and you can ah go down that rabbit hole.

But my understanding is that I'm cataracts are a natural mechanism, I guess that where by the I is trying to filter out all this excess blue light.

Bill 30:54
Right.

Alex 30:56
So it's a you know, if you do have the individual his around TVs and computers and all over time, and again, it's cumulative. This is why you don't see a 20 year old having cataracts. But you'll see 40, 50, 60, 70 year olds having cataracts. So that's saying that the eye is bringing in its own natural, blue light filters. And again, I'm like i've read one or two articles about this. And this is about as deep as I go. So then what they're saying is by having that cataract surgery, and not changing your environment, you know, the body's trying to protect you just like diabetes and everything, you know, you eat too many sugars over and over again, the body develops diabetes as a protective mechanism, right?

And then all of a sudden, you take drugs or you take insulin, and you keep eating the sugar is you set up for problems. And so I guess the same thing could be said with cataracts. I'm so based on my understanding and my limited knowledge on this area Yeah, I'd be saying to you, yeah, like, make sure you wear the filter, the glasses um wear ,put filters on your screen, minimize screen time, get outside as much as possible, you know do all those things to minimize that environmental thing impact they could potentially have on your eye, because in a way, and again, this is just one understanding the eyes telling you or the body's telling you. Hey, look, there's too much. Too much blue light being too too much blue tight exposure.

Bill 32:25
Yeah, okay. Well, there is some other bit of research that I did to understand what might have been the cause of my own cataracts. What tends to happen when you're in a high sugar diet, and I found out that I was very allergic to sugar, actually, you know, probably not in an allergy test where I pop up, you know,

with, you know, pimples or that kind of stuff, but my body doesn't deal with it. So sugar actually also damages the collagen in your eye.

Alex 32:52
Yeah,

Bill 32:53
as well as the rest of your body blood vessels, you know, your connective tissue, your joints are connected, damaged sugar everywhere, but in my case, specifically, and in the thyroid gland. So I've kind of done a lot of work over the last four years to understand what it was that I was doing that was causing that. And it's very likely that sugar played a massive role, blue light, bring that on board, there's another environmental factor, so two environmental factors, and who knows what else that I'm not aware of?

Alex 33:21
Yeah,

Bill 33:22
but I really like what you said about, I've now got to change my environment, because if it's happened to me once, well, I stopped consuming sugar because I understand how bad it was for my body.

Alex 33:32
Yeah.

Bill 33:33
But also, perhaps the exposure to blue light needs to be decreased. Because that, again, is only me doing half the job taking out one of the environmental factors not taking out the other one as well.

Alex 33:44
Hundred percent. I mean, you touched on this before with sleep and insulin sensitivity, right? Like someone with diabetes. Hopefully, you know, they'll realize all right, this is brought on by chronic carb consumption. But it's not just that these other variables as well, you know, they can cut out all their carbs, but then they can still own 80% of the carbs, or sugars. And then they're only getting four or five hours sleep every night. They are still, you know, they don't like it's not just blue light, there's probably a ton of other factors. And if I was in your

situation, I'd be trying to discover what all those factors are, and addressing and it also goes back to what I've touched on a few times now that it's not just food, you always have to look at better environment as well, for all sorts of health issues, or every health issue.

Bill 34:33
It's fascinating, man, I'm really found this topic. Really interesting. So the glasses that you wear during the day, are they glasses that you were outside as well? Or do you just wear them when you're inside?

Alex 34:48
Yeah, I just wear them when I'm exposed to blue light from a computer screen unnatural blue light. Blue lights good. Don't Don't think that blue lights the devil or anything like that we need blue live right um there's even studies showing that office workers who are exposed to blue light or sunlight during the day are more productive have enhanced cognitive function and creativity and stuff, right. So it's all about balance and cycles at night time, you don't want a new light. at daytime, you want the light, but you want sunlight, you want natural light.

Because that's full spectrum light, you know, you got your infrared you got your UVA, you got UVB needed for vitamin D synthesis, we need all that. And obviously, there's some good from that blue light as well. But I think it's about 50% of natural, sorry, 50% of sunlight is ah red light, you know, it's more red, purple, I think purple is about 10% blue lights, smaller amount. But again, we need that to trigger the body to say, hey, it is daytime, what we don't need is concentrated amounts of that blue light all day, 12 hours a day from a computer screen.

So I know people you know, like you may have heard about SAD seasonal affective disorder, you know, people that live close to the polls, for instance, you know, low levels of UV, sorry, low levels of vitamin D, due to a lack of UVB exposure and stuff. So you know, they're not getting that full spectrum of sunlight because the sun is lower in the sky for big periods, right. So there are a lot of machines and light bulbs and devices now where you can actually go out and supplement with that light. So those guys are getting these bright, you know 10,000 Lux full spectrum light bulbs I know biohackers that have got tanning beds, UVA UVB tanning beds on which is putting out some blue light as well and then they got infrared lights you know so it's not look stay away from blue light and never use it

it’s just stay away from that constant And that’s the same with a lot of things like your carbs everything right? It’s not it’s not carbs the bad the devil it’s look don’t have carb don’t have sugar and every single meal

Bill 36:57
Yeah,

Alex 36:57
um so yeah,

Bill 36:59
Be aware I supposed it’s be aware of what consuming and what we’re consuming whether it’s in the form of light or food or whatever it is to be aware and know what you’re putting either in your mouth or exposing yourself to and if you know that then you can do something about it and if you notice a difference in how you’re feeling because you’ve made a change then that’s what you need to go by and not just take it for granted that everyone else who’s manufacturing all these products has got our best interests at heart right?

Alex 37:27
Yeah, totally. Totally. So what what do I do on a day to day situation I actually just released an article on my blog I’ve got a website a personal website its just alexfergus.com and an article I had out a couple days ago was titled was, how to improve your sleep with morning sunlight, morning sunlight, right. So a lot of my readers is people who are my followers and everything obviously are quite up to speed with blue light and lack of blue light at night in regards to sleep, but they weren’t really aware of morning light.

And so morning light, you’re getting that hit of blue light, plus your infrared plus your, the UVA and plus your red light. And that’s actually setting off a cascade of events where you know, you didn’t serotonin release, you’re getting the spike in cortisol, which is what we want in the morning, which sets sets you up for a melatonin like a dropping cortisol in 12 hours time which then in turn spikes, melatonin, you know what I mean. Um, so yeah, like I if someone’s fascinated about sleep and all this, like, definitely check that article out.

But pretty much like the way I do it in a day to day basis is I’ll get up and then you wake up 6:30 you know that half an hour, an hour before sunrise. And I’ll try to sun exposure on my face on my eye, no contacts, no glasses, no hats, you know, I

got clients, and they do it with their contacts. I was like, No, take your contacts out. Because that again, it's just a filter, right?

You want full spectrum exposure, I get that sunlight on my face. And then thats why I was down at the park you know T-shirt and getting some sun on my skin and you know, you don't need much like 5, 10 minutes is great. Um, and then I'll come back and do my work and the phone behind a computer. I'll be I'll be using these. And then lunchtime. Again, I'll go back outside and get some UVB because that's not present in the morning unless it's middle of summer. So I'll get some UVB. And then I'll come back. And then obviously, soon as the sun goes down five, six o'clock at the moment here in Sydney, then I put these on.

And that's what I do. And, look, the easiest way to think about it is people like oh, what are you doing how you do it, you just want to be as close to the natural cycles as possible. And if that means it's simple, you get sun, you get light during the day, and you don't get light at nighttime. And if it's artificial light from computers, then you filter that to match the natural light cycle outside.

Bill 39:56
Awesome. Curiously, again, I want to hear your thoughts. The Australian Government is making us all energy efficient. And they're telling us to change our halogen lamps.

Alex 40:06
Yeah.

Bill 40:07
To LED down lights.

Alex 40:09
Yeah.

Bill 40:11
What kind of lighting is LED?

Alex 40:14
Yeah. So that goes back to the incandescent light bulbs and stuff, look LEDs aren't as bad as the fluorescent and the halogen. The other problem with those fluorescent lights is the flicker effect. So you know, people can be sensitive to

migraines and all that sort of stuff. I'm into tracking EMF non non native EMF pollution. And I'm, you know, I just got one of these,

Bill 40:38
what's EMF?

Alex 40:40
electromagnetic frequencies. So, Wi Fi cell phones, everything I mean, I'm light you know, that's the electromagnetic spectrum. But the dangerous ones, obviously, cell tower, Wi Fi, all that sort of stuff, right. And I go into these devices where I can go around measuring it and it just arrived the other day and we've got some fluorescent light bulbs here in this apartment, we never turned them on. Because come night time, you know, we we have red light bulbs. And so they are never on, but I turned one on the other day, and I put the sensor up there.

And it was emitting quite a lot of like, harmful. um you know harmful electromagnetic pollution, right? And so. So there's a whole issue, it's not just the blue light. And then you're also looking at all these flicker effects, you know, the the output of EMF. So LED's don't have a lot of that. So in that regards, it's actually pretty good. Um, because I couldn't stand fluorescent light, like if I had to work under fluorescent, light.

But even you know, if I get if I visit a client in his office, and I'm under fluorescent light for an hour or two I don't know, maybe I'm just super sensitive and a precious little butterfly. But I do notice that like, I do notice,

Bill 41:50
yeah,

Alex 41:50
hey you just feel a little bit off after for a long time.

Bill 41:53
So so so LED are not as bad as people are making out or?

Alex 42:00
no from from that side of side of things. No LED is actually pretty good. We sell LED red LED is on our website, the very very energy efficient which is great you know, you know,

Bill 42:10
Red LED's but you're, where talking about the normal color LED's, LED Down lights.

Alex 42:16
Yeah, yeah. Yep. So sorry, I just want to say like we sell them as in, I'm perfectly fine with the LED's, you know, like, I wouldn't be selling them the if I thought they dangerous in any way. So a typical down light with LED light. Again, it all comes down to the spectrum, color spectrum being emitted. So

if you get into white LED down light, then you've got similar problems that you're getting from a white halogen light from the blue light thing. But the beauty is that the LED's can easily be modified to create different light spectrums.

Bill 42:49
Oh, ok

Alex 42:51
so like a halogen or fluorescent light is fixed, right? Whereas a LED, you know, you see these little sensors where you can change the light bulb, change the light color.

Bill 43:00
Okay, all right,

Alex 43:01
3so that that's a big plus, um, and people already switched on to this. So this company's coming out now that have these natural light bulbs. So they'll admit a little bit more blue white light in the morning, and during the day, and then naturally, like as you sync it with your phone or whatever, and then it will start going more warmer colors, like yellows, and then as the sun goes down, it goes more red glow, right? And that's just one bulb. You don't need to change the balls or anything. So companies are coming out with this. And in fact, GE American electrical company just released a white paper couple days ago.

Yeah, and it saying how, you know, that aware of the impact that blue light has, and they're going to do something about it. And it's, it's great. So, look, if I was building a home, I'd be using LED's instead of your fluorescent whatever.

Personally, here in our apartment, we use, we don't use any lights at all. We have a Himalayan rock salt lamp with it with an incandescent light bulb. Two things the incandescent light bulbs release a lot of red light, so it's great. But then you put it inside that, the the salt itself and it makes more orange glow. So that's the only light we use at night. We don't have light bulbs in our fridge, we took them all out.

And then we have a lot of I think I've got one here. These are the sorry.

Bill 44:34
So that stops you from snacking at night as well. You cant see what is in the fridge.

Alex 44:41
We have to tell you about the experiment we did for five weeks where we got rid of all light. But then we have these red LED night lights. So okay, so we have these all around an apartment. And you know, these are not bedside table lamps. We have couple in the kitchen. So when the sun goes down, we um curtains are obviously down because the street lights outside. So we're blocking all there. And then yeah, we've got a Himalayan salt, salt lamp on and then we've got this and the kitchen and the bathroom in the hallway. Because the beauty of these is you don't need you don't even need your orange glasses on because there's no blue, it's just pure rd light, it makes your bedroom look like a Amsterdam

Bill 45:25
red light district.

Alex 45:26
Exactly. Not that I know what that is. Someone told me.

Bill 45:31
Exactly, exactly. I read about it somewhere um, mate curiously. So the million dollar question is, so what do you now notice that's different from you today, as we wrap up this interview that's from you today and the way that you are today in the way that you feel compared to what you were like before you were doing all the sleep stuff. What do you notice that's different about you?

Alex 45:55
Oh, I'm completely different. I mean, it. Yeah, I was pretty sick. I'm not as sick as

yourself. But I was, you know, no energy, no drive, nothing rock bottom testosterone and through the roof estrogen levels. And obviously, that's not the case now. But a lot of things have changed, you know, everything's been, it's not just one day, I just discovered all the stuff about light. And you know, it was food, it was training and everything. But nowadays, like, I sleep like a baby, you know, 9, 930 at night after wearing the glasses for an nhour or two. And I still watch movies and stuff, we just use them with the computers use them with

Bill 46:36
with the glass,

Alex 46:37
Yeah Yeah, I'll go to bed. And you know, we have our red light on, I might read a book and instead of my phone or instead of a Kindle. And I just fall asleep like that. Like it's that's just the new normal, if I have a bad night, it's six and a half hours, maybe I woke up during the night. Like, that's a bad night sleep for me. And that alone in terms of it energy throughout the day, like, you know, three o'clock comes around, and I don't have that slump in energy that I used to have a year ago,

Bill 47:06
right?

Alex 47:07
Um, you know, like, more resilient codes and all that stuff. I can you know, just all those little thing.

Bill 47:13
What about, what about your mood and stress?

Alex 47:17
Yeah, I mean, look at again, it's hard because so many things have changed throughout the last couple years since we set all this up. So I know I'm more resilient, happier and healthier I I just know that my girlfriend know that. But again, like I used, when I used to work as a PTA I'll do the mornings, maybe we wanted to at midday in a gym, and then obviously nighttime. And so I've cut out a little bit nighttime clients over winter, because, you know, I don't want to be under fluorescent lights at eight o'clock at night, and then have to travel home, you know, when the sun's been down for three, four hours.

So the big, big thing for me it's just sleep like I just sleep so much better now and even on that recent trip, like soon as I got that to my hotel, you know, it was blue blockers on red lights in block or the light, ok it's not going to be as good as you know, when you're in a stable sort of environment and light cycle. But

Bill 48:11
that's okay.

Alex 48:12
Yeah, like I just I think sleep is one of the biggest biggest changes and obviously, all of that the host of the array of benefits that come with their

Bill 48:21
Yeah, so sleep is or lack of sleep is you know, link to so many health issues, especially especially, like we are already talked about diabetes, it's also linked to depression. It's also linked to you know, other disorders of the mind of the brain, for example, all sorts of things. So it's really important your sound like a, you've researched that a fair amount, you're pretty, pretty passionate kind of bloke when it comes to sleep. Tell me how, how supportive was your girlfriend at the beginning, when you were taking the lights out, turning him red and doing all this stuff.

Alex 48:57
So look she's put up with a ton of things . When I when I threw out the cornflakes and skim milk and started having bacon and eggs for breakfast every morning. You know, that was that was a huge change.

She is I mean, I love her to bits like she's a nanny. But she's um, she's fully open to all this and just through just through hanging out with me and stuff like she gave is she picks up on everything she's not as keen in terms of the initial change. So she might get a few weeks or months behind. But used to laugh at me for everything. Like she's just like, You're an idiot. And now every night like she wears them without glasses on if she travels or she packs them like.

And I mean, look, obviously I'm biased because I sit up this company, which by the way is a very small, it's not what I do, I don't consider myself like a ecommerce guy, I consider myself a health coach, I set the blue blockers out purely because I saw an opportunity, my clients couldn't buy these glasses. So I said yeah im going to set it up. So obviously biased, but I anyone I'm like look,

just just try it just for a couple of nights switch off the overhead lights, wear the glasses when you're watching TV and just see how you feel

if you don't, if you don't feel any change, then whatever was like 15, 20 bucks for glasses, chuck them out give them to someone else. But every one thats tried that it's like wow, I feel better. And they soon realized. But uh, you know, we did a five week experiment where we had it was last Wednesday, we we had no artificial light, no technology after 7:30 at night. So that's when we took out a light bulbs in the fridge and no phones nothing. And we both did that. And this is before I had those red LED light bulbs.

So we actually had candles all around the house. And it was fascinating, obviously sleep improved, but so many other things changed in our relationship and well being like, you don't have that distraction of always wanting to check your phone because the phone's gone it's locked away. So you end up talking and sound silly, right? You know, talking to a girlfriend but after four or five years of living together, like just all of a sudden you having these deep and meaningful and I ended up reading a ton of stuff like I i'd print out some articles during the day and just have a book and and so much changes like you appreciate food all the sudden like instead of coming I'm looking forward to some silly TV show you'd come home and look forward to like a really good meal and and you knew after that there was nothing so you'd sit in the joint it was it was huge. It was a really big change. So after that experiment, she was like totally on board with the whole light thing. So

Bill 51:29
your girlfriend sounds like my wife very prepared to just let me do what I need to do to find things out and then at some point if she feels like it's useful for me, if she notices a different in me the difference in me then she kind of considers it for herself. So yeah, I'm a bacon, I'm a bacon and eggs guy in the morning. I better like it's going out of fashion. I put it in my coffee you probably do as well?

Alex 51:55
Actually I don't drink coffees.

Bill 51:57
Okay,

Alex 51:57

but I'm big fan of butter.

Bill 51:58
Yeah. So you know, I'm she started to come on board. And we are doing all these little we, we're re-learning what we need to know to be healthy. And when I say we re-learning, we thought we knew it all. Like I did think that the standard advice from the big corporates and from all those people was designed with my well being in mind It turns out that a lot of that stuff was designed with their hip pocket in mind.

Alex 52:26
Yeah,, I say that to my clients. Like, again, I do a bit of PT but I do a lot of health coaching now. And I tell them, Look, you're paying me for my expertise. And obviously I want the best results for you. But just remember, no one is more about the health than you, like no one and on the health coach, right. So obviously, I've got a lot of invested interest in and getting the results. But still, at the end of the day, no one cares more like yourself.

So you sometimes have to be the one and you're done this yourself, i've done this myself who has to go out, do you own research and do your own experiments. And you soon realize that you're right, like what's coming out of, you know, these government recommendations or mainstream media and stuff in regards to health and diet and like, it's often not necessarily in the best interest for you, which is sad, but it's the hard truth. So, yeah, anyone listening? Yeah, totally anyone listening like, you know, don't don't get your health advice from like, the morning Herald, or, like some fashion magazine.

Bill 53:34
Yeah, and don't even take it from us, like direct our lives in a life, we could be talking rubbish as well, we're not, but we could be. And you may as well just search for yourself and find out I before I believe anything, or look at anything or try anything and use myself as a guinea pig. Like i'll I'll try and find it in 10 or 15 different places that say the same thing that come from different sources, different backgrounds, different experience, so that I can feel better about Okay, let me give this a try. It's not likely to be detrimental to my health. So I'll give it a try.

And then I pay attention what was different between where I started and what's,

what is it like now, and if the difference is something that has worked for me has served me, then I'm all for it. Because I people that have had strokes or bleeds in the brain, surgery, brain damage of any type are more likely to experience things like epilepsy later on in life, dementia, and all those types of things. Mate I have already had those problems, I'm not interested in going down that path when I'm 50, 60 or 70. And I don't want my parents, sorry, and I don't want my children, you know, having to look after me at that extent,.

I would rather be independent and you know, diet 85 or 90, by getting hit by a bus, then, you know, losing my marbles. So that's kind of where I'm about and I encourage, and as a health coach myself, I see a lot of people that are suffering day to day, you know, they're cranky, they're angry, and they're not realizing that it could be their food, it could be their lack of sleep, it could be their lighting, you know, it could be all these environmental factors that are just chipping away at their resilience, that their ability to stay strong, you know, and, and often, you can shed some light in a conversation with somebody like this, that we've had that that just, pardon the pun, the light bulb goes on for them, you know, the know, the nice warm, you know, light bulb goes on for them. And then you know, from there, they gain health or they gain vitality or they gain an experience and never gained before. So I really appreciate this opportunity to talk with you your your time. And

Alex 55:44
It's been great.

Bill 55:46
I'm curious, where can people find out about you? I know we mentioned that a couple of times, but just mentioned your you know, your social media and your website.

Alex 55:55
Yeah, so yeah, obviously, the blue blockers website where you can buy these glasses and the red LED's which will be in stock in a few days. and a bunch of other products that's blueblockers.com.au we'll do a discount for your listeners. So I'll set something up, how about we go with Bill, Bill10.

Plug that into the checkout, you'll get you'll get 10% off any purchase? Yeah, blueblockers.com.au That's the shop and there's bit of information there in terms

of blue light and everything and Bill10 is the discount code. And then my personal website is my name AlexFergus.com. And look, this thats just a blog. I like um I build up. I'm using this as a bit of a knowledge base for my clients. So for instance, I've got her quite in depth article on on blue light, you know, and that was I don't have to repeat myself every time I have a client I just send them there. So yeah, AlexFergus.com. I don't really do much on social media. I do a weekly newsletter where I send up articles I like so I'm going to

Bill 57:06
ok so people can sign up at the at the website, blog, etc.

Yeah,

Alex 57:10
yeah, sir. And otherwise it just reach out to me if you got any questions, you will find my email and on that website. Or, blueblockers and I'm happy to answer any questions. I know for some if they've never heard of this before. It's a bit like what the hell is

Bill 57:25
listen to the, voice to the interview twice, three times and share it with your friends especially if we if you know people that have had cataract surgery especially if you know people that suffer from headaches, migraines, all that type of thing like share, let them know yeah

Alex 57:40
know anyone that wants to improve the sleep right? And you know, it's funny, I used to, I'll finish on this I used to get riddiculed for setting it up and people like what do you on about this blue light, and i usd to just throw all these studies at them. Because there's a ton of studies and and that's still you know, don't even take the time to read it. And now, Apple comes out with the update on their phone, right? It's built into the phone and I don't know how many billion people have iPhones but it's like look, this is one of the biggest companies in the world saying this does exist like and then all of a sudden people coming to me oh that blue light thing. I'm like I told you so.

Bill 58:14
And it's a nice I told you so I'm looking forward to them releasing their update for them for the Mac books and further in iMac's.

Alex 58:22
f.lux. Google get flux f.lux and it's some that's been around for years so I have that running on my computer does exactly the same thing and it actually blocks more blue light than the iPhone version. So you can make it really really red so look everyone should have that on it's free download on Mac I think it's on Windows as well. So um

yeah, good that iflux all this information guys will be in the notes in the description of the podcast so you'll be able to find that easily. Alex, thanks for your time. I really appreciate it.

No worries. It's been good anytime.

Bill 58:57
All the basement,

Intro 58:59
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