



Dr Ron Ehrlich: Hello and welcome to Unstress. I'm Dr Ron Ehrlich.

Now, to be honest, this is a first. I'm actually quoting from the Old Testament. Yes, the book of Isaiah, as it turns out, taking Unstress Podcast to new levels. Here it is, "Put your own house in order." It actually gets a little more dramatic in the next line, and here it is, "Again for you are dying and will not live."

Wow, now that is a heavy message, but the first part is the theme of today's show. No, there will be no more Bible readings. The point is, you could be on the best diet in the world, eating organic, biodynamic food, taking the most expensive supplements, exercising, meditating, all which are great, but if your house is not in order, quite literally the foundations on which you are trying to build, rebuild or maintain your health, well, then all of those efforts may not pay the dividends they should. Enter the world of Building Biology.

Now, Building Biology is about creating healthy, beautiful and sustainable buildings in ecologically sound, socially connected communities in the selection of materials and the design of living environments, ecological, economic, social and social aspects are also considered. Now, that may seem a little bit distant from your own home, but it's not. It's not. There are in fact 25 guiding principles, so there is a lot to consider and there are a lot of things that can affect your health in ways you might not even have considered or imagined.

Who better to talk about these issues in the home, that may be affecting your health than Australia's leading Building Biologist, Nicole Bijlsma?

Now, Nicole's been on the show before. She's actually doing her PhD on this very topic. We've talked to her before, but today I thought she should just remind us, or for those new to this idea, enlighten us on just some of the things to consider in putting your own home in order. I hope you enjoy this conversation I had with Nicole Bijlsma.

Welcome to the show, Nicole.

Nicole Bijlsma: Hi, Ron. Good to be here again.

Dr Ron Ehrlich: Yeah, always good to have you on. I love our conversations. I always learn so much.

Now listen, it occurs to me that people often are looking at their health, they go on diets, they eliminate food, they meditate, they exercise, they do everything and have blood tests. They're on medications and supplements, but some of them are just not getting better. And it occurs to me that the house in which they live is the problem. And, of course, that's very much what this conversation is about. How do we work out if our house is affecting us, who's susceptible?

Nicole Bijlsma: Well, most people come to us as a building ... I'm a building biologist, and they come to us when they've gone everywhere else and they're not getting answers. I would argue your home and the built environment, whether it's the workplace or home, is probably contributing to most chronic illnesses. And that's a really big call. But in

the last 20 years investigating this, it's really clear that we're exposed to many of our toxicants or manmade chemicals or allergens, electromagnetic fields, which have just escalated significantly and will continue to escalate. With the introduction of 5G enormously.

So most of the triggers of illnesses, environmental triggers are actually in the built environment where we spend most of our time. So it's logical that this is the first place we need to investigate. To me, it's quite simple. I feel that what we breathe in if you don't ... Without air, you're dead in minutes. Without water, you're dead in days to weeks. Without food, you're within weeks to a month or so.

So I think we need to train our clinicians to look at what's in our air first, then our drinking water, and then our food in that order. And yet we look at food really well, and I think there's a lot more great information on the impact of food and the gut microbiome on human health. But we still continue to ignore what's in our drinking water, which is incredibly contaminated now because of the whole improper waste management and contamination. And, of course, our air. Our air is significantly dirty. Even in Australia, most people don't realize more people die from breathing outdoor air than they do from the road toll.

Dr Ron Ehrlich: Yeah, it just occurs to me too, that the very first question, well, not my very first, but the first thing one needs to explore is the foundation where you spend so much of your time and that is the house or where you're working. And, yeah, what are some of the things we should be looking at?

Nicole Bijlsma: Well, to see if there's a correlation between your health and the home, the questions I ask is, when did your symptoms begin? What was going on in your life at that time? And quite frequently people will say ... they don't even mention the house. So I often ask them, "How long have you been living in your home?" Well, that's interesting, because that correlates to the time you developed your symptoms.

Do your symptoms improve when you're away from the house? If you're away for at least three or four days, do you notice a change in your health? And often, people will say yes. "When you go back into the home, is it worse?" "Yes." "Is it worse in a particular room?" Then I'll ask more specific questions about the house. "How old is the house approximately?" Because age tells us an enormous amount of information about the potential hazards.

If it's built before 1970 we know there's likely to be between 20% and 50% lead content in the paint, so I want to know if there've been any renovations to that home. I want to know based on the age, especially this of course, now lead dust and asbestos are not an issue provided they're not disturbed. So that's why the whole question on renovation becomes really important.

In fact, very often I find if it comes to asthma and allergies and chronic fatigue syndrome, the first thing I want to look at is mould, and I'll ask them, "Okay, so you've lived in the house for 35 years, you've got sick about 15 years ago. Tell me 15 years ago what was going on? Did you do any Renos?" "Yeah. About that time we did a bathroom reno." "Who was involved?" "Just a builder." "When they opened up that wall, was there visible mould?"

"Yes." "And what did they do?" "They spread it throughout the entire house and everyone got sick."

That is so common. What I find really useful is that there are certain illnesses that are strongly correlated with hazards in the home. So I've mentioned asthma, allergies, chronic fatigue syndrome, very strongly correlated with water-damaged buildings, and that's why I'm asking is there any visible mould? What is the size of the visible mold? Is it less than the size of a piece of paper? Is it up to the size of an interior door? Is it greater than the size of an interior door based on what we call the NIOSH tool? And that speaks volumes as to what is likely that it could be impacting their health.

Dr Ron Ehrlich: No, no. Hang on, Nicole. The NIOSH tool.

Nicole Bijlsma: National Industrial Occupational Safety and Health. It's a US established organization in occupational safety and they have developed this tool, very simple tool to quantify the visible mould and odour. The irony is, with all the scientific data we have right now, the one thing we know that is very strongly not correlated or associated, but causes asthma and allergy is visible mould and odour. As long as you can smell a damp dusty odour, you know that there are microbes growing and emitting volatile organic compounds because that smell is the smell of microbes producing all these chemical toxins into the air.

If you don't have visible mould, but you have the odour, that's not good because it means it's likely to be hidden in a wall cavity or in roof or in the subfloor, which means that you urgently need someone to assess that, to find out where the moisture's coming from and how far that particular has spread throughout the built environment. So any visible mould, that's a first really important question to ask as a clinician, is there any visible mould and/or are there any damp odours as a trigger because we know they cause asthma allergies and there's more evidence to indicate that they are strongly correlated with chronic fatiguing-like illnesses.

Dr Ron Ehrlich: Exit mould is a very popular way of people think they're dealing with it, which is basically just chlorine, isn't it? Or bleach?. How do we deal with it? How should we do once we've identified it? And that's not always straight forward, is it? Because I mean, you walk into a room and you can see that's one thing, but if it's in the wall, in a Gyprock wall, or behind under a carpet or under a tile, that's not so easy. Isn't there an odour detector?

Nicole Bijlsma: You know, I find about 20% of the population is very sensitive to the smells of mould, and they're the ones who come to my course to do study building biology. And they are much better than any instruments, any other [inaudible 00:09:38] instruments that can [inaudible 00:09:38] and going, "Yep, this is a problem." And then what they do, is they gather the evidence to justify their hypothesis or to establish their hypothesis. The cause of mould is not moulded, it's moisture.

Microbes are everywhere they're meant to be, everywhere. Fungi are nature's greatest decomposers, so they should be. They are in your body... I bet 5% of you got microbiome of fungi and they're meant to be there. And on all surfaces, because they decompose. The key to mould is moisture. So killing it with bleach or anything is irrelevant because 75% of spores can't germinate. They're already dead.

But if you have moisture and the 25% are sporulating, what happens is, it creates lots of high fee fragments that when you inhale those spores, even if those spores are dead in high numbers, you're going to get sick. It is strongly causing asthma and allergies and fatiguing syndrome. So you've got to find the first thing a building biologist is trying to do above all else in a water-damaged building is, where is the moisture coming from?

Once moisture sits on the surface for more than 48 hours, the microbes on that surface, bacteria and fungi, will start proliferating producing chemicals like endotoxins and mycotoxins to try and kill each other off, to take over that space. That's just what they do. You've got to get to the moisture. The problem is, in the last 30 years, we've created what can only be described as the perfect storm.

30 years ago we replaced the copper pipe with a flexible brand of water hoses, which are the number one cause of water damaged claims by insurance companies, accounting for about \$320 million in insurance claims every single year. That's like simple hoses under your sinks, under your troughs. What they don't tell you is, you need to replace that every five years. So if you don't, and if you keep cleaners like bleach under your sink or trough, you're going to accelerate the steel braid on the flexible hose and increase the risk that they will split, and, of course, lead to a water event. So you must replace them.

I would, every time a plumber comes into your house, get them to inspect it to make sure it's in good condition and if it's more than five years old, replace it, because Murphy's law, it'll probably split when you're on your European, your one and only European holiday, and then your house to come back to and you probably want to demolish it if you don't get to that water within 48 hours.

The second thing was, we went from sheet-based waterproof membranes in our wet areas to liquid-based. So, now you can buy this liquid-based waterproof membrane from your hardware stores and paint it on. It's shit.

Dr Ron Ehrlich: Nicole, just go on. I'm just about to book the builder back, bring the back in, I'm seeing the flexible hose. I saw them paint on the blue. Is that the blue paint that you put on?

Nicole Bijlsma: Yup. [inaudible 00:12:42]

Dr Ron Ehrlich: [crosstalk 00:12:43]

Nicole Bijlsma: The service life of that waterproof liquid-based membrane is likely to be about seven to 12 years max. Can you imagine doing a bathroom reno, laundry reno every seven to 12 years? No one can afford that. I couldn't afford it, and yet, that's the problem. This is why dampness is in almost every single home. We haven't actually established the prevalence of dampness in Australia. We need to, but it's likely to be in almost every home. Certainly within two years of a new build talking to the top waterproof membrane consultants. I wrote a report last year with Professor Mark Cohen to a very large insurance company, which, unfortunately, they [inaudible 00:13:26] so it's not available for public view.

But what shocked me talking to waterproof membrane consultants and going, "What the hell is going on? That dampness is in almost every home including new builds." And what they said was shocking and the meetings they've had as associations to go, "What's happening" And it's coming down to this. Deregulation of the tech schools 30 years ago leading to people who have got their cert three in waterproofing, internal wet areas who have no idea how to waterproof an external plan, a box or a below-ground area.

What they're finding is there are very few types. Even there were a lot of types to offer the course, but I couldn't find one that actually delivers the course, because it's all RPL. So what they're doing-

Dr Ron Ehrlich: RPL, hang on, stop Nicole. I know you're on a roll here, but all these acronyms RPL?

Nicole Bijlsma: Recognition of Prior Learning. What they're saying to the builder, "Okay, you've got a person who's studying building with you. They've finished their cert course. Now, have they been doing waterproof?" "Yes." "Can you sign them off and that's good enough to get this [inaudible 00:14:35]" There's no formal training, no resources. There's actually no type that we found after doing my research that actually has the structure to show students, type students how to do a below ground or an external waterproof membrane for planner box. This is where it's failing.

Dr Ron Ehrlich: Now listen, I have on a few occasions, done renovations in my home, and I know that the builder and he's a really top builder, he'd do the right thing, he thinks, and he's put on this blue liquid-based waterproofing. That's going to last seven years. It's underneath the tiles. That means we should Jack Hammer up those tiles. Yes? If we were doing the right thing?

Nicole Bijlsma: Yes.

Dr Ron Ehrlich: And then you said sheet-based waterproofing. What is sheet-based waterproof?

Nicole Bijlsma: So, it basically comes in sheets. So it's PVC sheets, and it's white masonry and it's put on, and it basically ... What's happening in the builders are following the Australian standards 37, 40 which is the bare minimum standard for waterproofing. It's not the best practice. So when it's going to court, because these new multistory buildings are failing and there are heaps of moisture problems within one or two years of these multimillion-dollar apartments going up, the builder is saying, "I'm complying with the Australian standard." But the Australian standard is not adequate. It doesn't say how to install it. And the sheet-based membrane should be used, but they're more expensive.

The irony is, it's only going to cost you may be up to \$1,000 more max for a bathroom reno to use the proper materials, which will change the service life of those membranes from five to 12 years to up to 30 years. If I knew that I would want my builder to say, "Look, from an extra 800 close, your bathroom is going to last 30 years, not 12." Jeez, I mean, consumers don't know this.



Dr Ron Ehrlich: So these sheets have joints presumably?

Nicole Bijlsma: Yes.

Dr Ron Ehrlich: And those joints must be vulnerable to moisture too, but they are taped over or ... How do we deal with those joints?

Nicole Bijlsma: I don't know. I'd have to-

Dr Ron Ehrlich: All right. I'm getting worried now, but it's okay. I will explore this more. But this is this story regulation, this deregulated environment in which we live in. I mean, if we ever wanted to see a metaphor for what could go wrong, that Grunfeld Tower disaster in London a few years ago, where, 80 or more people died, that was a metaphor for deregulation, wasn't it really?

Nicole Bijlsma: Oh, absolutely. And the fire colliding, et cetera, that's nothing compared to what's happening with moisture, nothing. [inaudible 00:17:38] the media hasn't really got onto the impact that water ingress is having on new builds, let alone on existing builds because, and it's all being made worse, because the energy efficiency and the six stars, eight star energy rating is making it worse, because they're creating type buildings where the water vapour is hitting an impermeable rap in the wall, condensing and creating all these hidden moulds within one or two years of a new build.

So, this is why it's really important when you're building that you had these intelligent, impermeable reps that allow water vapour to move through the skin or what we call the building envelope, the walls and the roof and the floor, so the building can breathe. But that's not happening. So we've got regulations that completely forgot about all these things like water vapour movement, and the impact on human health is devastating. Certainly, it accounts for most of the work that we do.

Dr Ron Ehrlich: Because these eight, six and eight-star energy ratings mean your energy rules are going to be lower because you've sealed off all the areas where the cold air can go out or the hot air can come in or whatever. And we've created a little bit of a seal, haven't we? That doesn't allow for that ventilation to occur.

Nicole Bijlsma: Absolutely. And the other thing is, because most of our furnishings and materials come from Asia, they could be loaded with chemicals that no one regulates. So now you're also exposed to higher levels of what we call chemicals of volatile organic compounds, because that ventilation, the passive ventilation is compromised, so you're exposed to these chemicals like formaldehyde and flame retardants in your furnishings and your carpets that are imported that are not regulated. And now you're exposed to them for much longer because there's no good passive ventilation in the house.

Dr Ron Ehrlich: Yeah. So we've moved on now from the moisture and mould issue to the potential chemicals because the fire returns. We'll let the brominated, they're part of that volatile organic compounds?



Nicole Bijlsma: Yes, they are. Anything that's a gas at room temperature is what we call it a VOC, Volatile Organic Compounds. They are your perfumes, air fresheners, your pesticides, your ... many of your solvents, all of your cleaning products, perfumes, personal care products.

Dr Ron Ehrlich: You mentioned the house built before the '70s, lead is an issue. Tell us a bit about lead.

Nicole Bijlsma: Yes. Well, we did a really good podcast on this, didn't we?

Dr Ron Ehrlich: We did, yeah.

Nicole Bijlsma: Good doctors on lead. Lead is still a significant problem in older homes if you're going to renovate and expose a family to the lead dust. So it's really important if you're thinking about renovating, and the house was built before 1970 that you check it for lead, you can get these lead test checks from many paint stores or from the Leid Group, L-E-I-D Group in New South Wales and check it yourself. Or you can get a building biologist to do that.

And if it is lead, then I would contact the Australian Dust Removal Association who would be able to remove that lead paint and corner off, and really, using HEPA filters, et cetera to make sure it doesn't spread to the rest of the house. Because once you have lead in the body, getting it out, especially if children have a significant impact on their learning and behaviour, it affects their IQ, it's very difficult to get lead out of the body once it's in the body.

Often, ironically, a lot of the children I see with lead, high levels of lead in their body, it wasn't from a home, it was the fact that their mother, when their mother was growing up, their parents may have renovated the house, exposed her, the mother when she was a child to lead. Then it goes into her bones. And once she's pregnant and if she has a lot of vomiting, she starts degrading, breaking down her bone mass and releasing a lot of those toxic metals which go through the Placenta and through the breast milk.

So, a lot of these kids are already born with high levels, because the mother may have been exposed to lead dust when she was growing up. We call these transgenerational effects. It's pretty [inaudible 00:21:43], isn't it?

Dr Ron Ehrlich: Well, yeah. Back to another one you mentioned was asbestos, and I think that has got a lot of publicity, and the alarm bells immediately go up when any asbestos is suspected to be on site.

Nicole Bijlsma: Oh, for sure. And look, that's one ... Lead dust in asbestos is actually well-regulated. So you need to be licensed to assess, identify asbestos on a site, and you need to be licensed or certified to be able to remove it, which is a good thing. I would say lead dust and asbestos most builders have a good understanding of. However, there are so many other hazards that I would say are equally are adverse health effects that most people have no idea about. Like mould, electromagnetic fields, toxicants, which can accumulate over a very long period of time, and contribute to chronic illnesses.

Dr Ron Ehrlich: Yup. Well, this is exactly why I said, I mean, my view is that anybody with a chronic illness, the very first step should be to get your house assessed, because, hey, put your own house in order first and then start implementing all of the, well, you mentioned the water and the food. Let's touch on the water a little bit here because that's another one you mentioned. We'll get onto the EMF in a moment. We've spoken about that in a few programs, but I know you are doing your PhD on some really important things. Let's talk about water.

Nicole Bijlsma: Water, so important. It's really an important thing because there are many contaminants that exist in our water supply that most people have no awareness of. And, of course, the big one is fluoride, which I'm sure you've covered really, really well. And, of course, there was a very large study only recently that was the largest study ever conducted on fluoride that identified a significant decline in children's IQ later in life if the exposure to fluoride occurred in the womb.

Now, we have other issues like chlorine, big problem because we know the gut microbiome is so important for good health. And I would say most of the clients that come to me as a building biologist to assist their home, have a very long history of recurrent antibiotics use. When you have children who are exposed to six to eight courses of antibiotics a year, and I'm just talking about a recent, like a few days ago, I did an audit of a home, she had six courses of antibiotics every year.

She's 13 now. She has chronic fatigue syndrome. I've just got the lab results back from the air conditioning system, and we're talking about 30,000 aspergillus penicillium spores in the air conditioner, which was black with visible mould. The mother was diagnosed with MS, she has MS, and the child, 13-year-old has chronic fatigue. This is what I'm saying, mould symptoms are identical to MS. They're identical to chronic fatigue. I think it's becoming so obvious if this is the issue, but how long was it going to take for naturopathic schools and medical schools to actually look at the cause?

Dr Ron Ehrlich: Well, it's part of an economic model really, isn't it? I mean, that's part of this chronic disease management model. It's a beautiful economic model. It's just not a very good health model.

Nicole Bijlsma: Exactly right.

Dr Ron Ehrlich: But back onto the water. Yes, you mentioned the fluoride, but that's not all that's there. Is there?

Nicole Bijlsma: No. Chlorine is a big one. I would say it's really important you don't drink chlorinated water. Chlorine is one of the strongest antibacterials you'll ever be exposed to. And, of course, the chlorine is also in your bleaches et cetera. A carbon filter, which might be cost you \$30 for a good solid block carbon filter is really important. You don't want to be drinking chlorine. Another one, of course, aluminium. In my drinking water, because it comes from the Yarra River, they add aluminium as a fluctuating agent, which basically means the aluminium gathers all the sediment, and it creates this slimy sludge, which it doesn't go into the water supply. It goes down as sediment and then they can siphon it off.

But you will find when you look at your water report, as some level of aluminium. And, of course, aluminium is found in high levels in a lot of autistic children. That was a recent study that came out that they surprisingly have high levels of aluminium. I mean, I think it's coming from another source, the to boost source that we can't talk about like children are exposed to most aluminium, and a small one and through their water supply.

Dr Ron Ehrlich: Yeah. I know this when they do water profiles on water. There's a whole range of other stuff. You mentioned carbon filter. What do you do at home?

Nicole Bijlsma: I have a reverse osmosis filter.

Dr Ron Ehrlich: Me too.

Nicole Bijlsma: It's the only way to go. I mean, and the discussion that it creates acidic water is ridiculous because all water on the planet is acidic. It absorbs carbon dioxide from the atmosphere, creates more hydrogen ions in the water, and so, you'll find seawater, like water, it's all slightly acidic. It's not a pH of seven. I think it also, it still leaves a small number of hydrogen ions and et cetera in the water supply. So it never really gets rid of 100% of everything, and I think it's the only option.

If we don't have a water filter in our home, our water is a brownie, yellow colour because, of course, we've got [inaudible 00:27:26] pipes. Another source of contaminants in drinking water is the domestic pipes. Now, your water distributor doesn't regulate that, because that's under your jurisdiction, and that's when most of the toxic metals can come from. Copper, silver and they would [inaudible 00:27:45] with lead. Of course, lead soda, that's right. So that's why it's really important. If you don't get a filter, your body will be the filter.

Dr Ron Ehrlich: What about PVC pipes? What do we get that can be neutral, can they?

Nicole Bijlsma: No. PVC is generally used for wastewater. It's rare. Occasionally, we see it, but it's not allowed to be used for potable water, but you do see it sometimes if a handyman puts it into the drinking water supply. PVC contains Diethylhexyl, the Deithylhexyl, for example, Deithylhexyl Phthalate, and Diethylhexyl are hormone-disrupting chemicals, so you don't want to be exposed to those very new PVC plastics. It's rare to find that in the domestic potable supply. It's normally in the sewerage outlet.

Dr Ron Ehrlich: I like to, with my reverse osmosis, I don't know whether I just made this up, but I'd like the idea of it. I always add a few grains of Himalayan rock salt. I just think, "Yeah, why not? Might as well put something back in." With the chlorine, I get that in a sense, because getting clean water to our house is good. It's important. But I just, I agree. I think once you get the water to your house, you do have a choice, and you have the choice of being the filter or getting a filter. That's nicely put, Nicole.

Nicole Bijlsma: Yeah, and the older one is, a lot of the main distribution system, either pipes from your water supplier at the river too or the likes to your house, they were [inaudible 00:29:15] cement sheet. So it was [inaudible 00:29:18] cement sheet around the

cast iron pipes, for example, and poly plastic pipes. And that's starting to degrade to these best pipes are coming in. So you will often find acceptable levels of, or highly, I would argue, high levels of asbestos in your drinking water, especially in some areas, older areas like Frankston or Sydney or Melbourne, where it's breaking into, the pipes are compromised, and those fibres that are normally used for insulation around the pipe are getting in.

Millions of fibres per litre are acceptable on the Australian drinking water standard. And I certainly don't want me or my family drinking millions of fibres of the asbestos because they're still arguing whether it causes intestinal cancer or not.

Dr Ron Ehrlich: Now, I know you are doing a PhD and part of that is your EMF radiation, the effect on sleep. Tell us what that PhD is.

Nicole Bijlsma: I'm doing a four-week double-blind study to investigate the impact of wireless technology, and I've chosen a baby monitor because the radiation from that is higher than almost any other source I could find. That's horrific, isn't it? [inaudible 00:30:29] Basically, I will be putting it under a healthy adults couple's bed and investigating the impact that has on their brain waves, as well as objective and subjective sleep patterns, so they'll be taking a sleep diary, and looking at what impact it has. Now, because it's double-blind, basically we won't know and I don't know if that baby monitor is on or off, and IT consultant I've employed has a Twitter with the wise in a way that the digital display doesn't go on.

I don't know if it's on or off. Only he does because we're colour coding the ones that are being tampered with that don't work, but you won't know. The first week will be just taking your data, your brainwave data, et cetera, and your heart rate variability. The second week will be the Monitor, which may be on or off for seven days. Then the third week is a washout. On the fourth week, again, you'll be exposed to the baby monitor.

During the four-week period, you'll be exposed for about seven days to an active baby monitor. And we want to see if it actually does impact on brain function and the different sleep cycles and your quality of sleep and your energy levels.

Dr Ron Ehrlich: Because this is a huge, huge topic. We've covered it on several occasions, and we have this idea that, if it's out there, it's safe, which begs the question about all the other regulations we've already touched on. But wireless radiation, it's everywhere, isn't it?

Nicole Bijlsma: It's everywhere. I mean, how do you as researcher research this topic when there's no control? I mean, I couldn't do this research when 5G comes out.

Dr Ron Ehrlich: Just remind our listener, randomized control study means ... Go on, tell us, because people will hear that is, "Oh, yeah, that's good." But what does that mean? What does a randomized control study? And then the blind or double-blind. Give us 101 research.

Nicole Bijlsma: Double-Blind means that the researcher I, me, and the participants don't know if the device is on or off, or whether the drug is a placebo, or actually active. I

don't know if it's on or off, so I can't influence the client's perspective as to whether the baby monitor is on or off, because I don't know, and they don't know. So, that's double-blind.

Randomized is generally, you get a group and you determine which group based on normal computer generated goes into, which, whether it's controlled, or whether it's the control group, which means that they're not exposed, et cetera. So mine's a crossover study. So they're exposed to baby monitor twice. But it's not one of those occasions it's not on. All of the participants are exposed. So in my study, it's unique, and so far is that I don't have a control group that's not exposed. They all will be exposed one week out of those four, to the baby monitor, but I don't know which week that is. And they don't know which week it is.

Dr Ron Ehrlich: And as you said, a real control would be people have absolutely no exposure to WiFi radiation, and these tests people do have. So you divide it up into some groups don't have any exposure to WiFi and others do have. But, of course, in our world, that's pretty hard to find.

Nicole Bijlsma: Pretty hard, because our Smartphones are emitting RF radio frequencies all the time. You walk into classrooms, offices that have Internet routers that are beaming meters away, a whole house away more into the next house. It's becoming more difficult, and the problem is the research and adverse health effects with radio frequencies and the radiation from wireless devices shows long term exposure to low levels, increases oxidative stress and free radicals at the cell, which could increase inflammation and that can lead to chronic illnesses.

My study will be a short term study to see, "Well, does it actually impact brainwaves in the short term?" I don't know, and that's why I think it'll be an interesting study, especially now that we've got equipment like an EEG, an Electroencephalogram to measure brainwaves, which is most accurate device we have on the market to do that, and actually determine if it's impacting sleep functional at different sleep stages.

Dr Ron Ehrlich: It's interesting also because I know you know the answer to this is how our Australian standards on this. And again, people might be excused for thinking, "Well, if we've got it in the shops if the government says it's okay, then it must be okay" How did we in Australia compare to best practice? Thanks, Nicole. That's a terrific answer to that question. It worries me, Nicole when I hear you laugh like that. I'm guessing this isn't going to be a good answer.

Nicole Bijlsma: No, it's not a good idea. We don't have exposure standards for health. Our exposure standards are based on six-minute exposures to very high levels that cause heating effects. There are thousands of papers showing that you don't need to heat the brain or the body to have adverse health effects. However, authorities that are often funded by telecommunications ignore this for obvious reasons. It's a capitalist society. So, we don't follow best practice.

In fact, interesting yesterday the Belgium minister Celine ... I can't spell or pronounce her last name, halted the rollout of 5G in Brussels, in Belgium on the basis that her citizens are not to be used as Guinea pigs until it can be proved conclusively that the technology is safe. So



they've officially halted the rollout of 5G because their citizens are not to be used as Guinea pigs.

The reality is, this radiation has already been classified as possibly carcinogenic to humans on the 31st of May, 2011 by the World Health Organization. And yet the body involved with exposure standards, often people on the board who've been funded by telecommunications. I mean, this is a massive role. We are a big Guinea pig on this entire planet rolling out a technology that is A, possibly carcinogenic. B, has thousands of research papers, especially in writing.

The last two years have been significant because of the national toxicology program in the US. They put \$25 million into their study. They released their results early because they were freaked out by the fact that they developed the study to show mobile phones don't cause cancer. They flipped and went, actually our rates are showing a significant increase in gliomas and Schwannomas as a result of exposure to RF and we're publishing our results early.

This was then also validated by the [inaudible 00:37:31] institute in Italy who also showed a significant increase in tumours in rodents. The data is there. Why rolling out 5G and putting wireless technology in our children's schools? It's just horrific.

Dr Ron Ehrlich: In case our listener missed it, the issue is not just the heating up of the technology, which is what they try to regulate against, but it's actually the radiation whether it's heated up or not.

Nicole Bijlsma: Yeah. How come they have a standard and exposures down based on heating for six minutes? The reality is the Australian public, 27 million of us are exposed to low levels for decades. We're exposing a new generation from the womb. No one knows what impact that's having. I mean, if we look at autistic rates, ADHD, have significantly escalated, and there are obviously other reasons why that could occur. But the synergistic effect of electromagnetic fields along with pesticides, along with recurrent antibody cues, are likely the big factors that have escalated children's learning disorders, which is just at a pandemic, not an epidemic. It's a worldwide epidemic in western countries.

Dr Ron Ehrlich: I was just recently at the Mind Foundation, the forum and, of course, the statistics are really disturbing. I mean, one in 10 kids are now diagnosed with ADHD. And actually, I got the statistic, I think it's up to about one in 70 diagnosed with autism. And in parts of America, it's one in 30 or 40. Whatever it is, it's very, very disturbing. Now listen, just finishing up here, Nicole, because we could talk on-

Nicole Bijlsma: If you look at the latest statistics from the Australian Institute of Health and Welfare, in some regions of Australia, it's one in three.

Dr Ron Ehrlich: Autism?



Nicole Bijlsma: Yes. In some areas, and this is why it's interesting. In some areas, between the age of five and 14, some districts have one in three children with autism in this country.

Dr Ron Ehrlich: Wow. God, I had not even heard that one.

Nicole Bijlsma: Yeah. Can you imagine if 75% of these children end up on what? 75% of autistic adults are on a national disability pension, they can't work. So can you imagine one in three in a community being on a pension? We can't afford this. We need massive immigration input in order for us to be able to care for our aged when we're older. Because the cost of caring for the aged when you have a workforce that can't work is enormous.

Dr Ron Ehrlich: Well, at that same forum, Nicole, and I was just telling you about it before we started to chat, I was emceeding the public forum and one woman put her hand up and said, "I do have a child, but I've had 12 miscarriages, 12 miscarriages." And she's been absolutely everywhere and done absolutely everything. And in the break, I said to her, "Gee, have you heard of a woman by the name of Nicole Bijlsma? She's got quite a story." And I know you've shared this before, and I wondered if you might share your story on this at this point.

Nicole Bijlsma: Sure. Well, I've worked as a naturopathic acupuncturist for 15 years and I noticed strong correlations between many of my patient's illnesses and their homes. Most of my patients with chronic fatigue by the third or fourth consult say, "Do you think the mould is a problem?" And I'll go, "What mould?" Well, we can see visible mould in our house, and that's when I got sick." "Oh, okay. Well, I've spent eight years at Uni with a double degree in acupuncture naturopathy I didn't learn anything about that."

And then, of course, when my husband and I bought our lovely house in Warrandyte, we moved in there, and we didn't sleep very well. And I was a great sleeper before that. And then, over a period of eight years, I had 10 miscarriages in this house only to realize we were sleeping on the other side of the wall of the meter panel.

And once we relocated to the back bedroom, that's when I had my three kids. And, of course, the council would come in and spray the blackberry bushes with pesticides and we lived on the teen dissection and all the vehicle exhaust would accumulate in our bedroom and double the level of carbon monoxide, carbon dioxide, et cetera. It was just, I started to investigate how our homes affect our health and I realized there are elephants in every single one of our homes.

Dr Ron Ehrlich: Which leads me to just as we're finishing up because we want to leave our listeners with some positive things, something to move towards. What would you suggest? I mean, obviously, the world of home biology building biology is an important component to this.

Nicole Bijlsma: Yeah. You know what? It's really simple. Go back to the olden days prior to industrialization. Open your windows, air your things outside, get a good vacuum

cleaner. As I said, if you don't get a filter, your body is the filter. So there are two fields as you need. You want a reverse osmosis filter, or a good carbon or [inaudible 00:42:44] filter. So it removes most of the petrochemicals and some fluoride that's important in your drinking water.

And the other one is a vacuum cleaner with a HEPA filter. So filters most of the allergens so it doesn't become airborne. Open up your windows, really try and reduce your toxic load. Don't believe the ads. They're trying to sell you stuff you don't need. Use microfiber cloths to clean the home and minimize your use of cleaning products? I mean, I haven't mentioned, but my husband and I sold our house to create the Abode cleaning product range, and it's really designed for people with chemical sensitivities.

So you're using dish liquids with no fragrances, or if you use fragrances, essential oils, you're using laundry liquids with very mild surfactants and they're food-grade so that you know you can use them on the farm when it comes out of your greywater, et cetera. So really minimize. Get rid of perfumes and air fresheners, they're incredibly toxic and don't use pesticides in the house. Use alternative means, which I've described in my book using simple things like diatomaceous earth, good housekeeping so there's no smells that attract the pests, sealing everything around the house, so they can't get in. It's simple.

Most of the things I recommended my book is knowledge and that's why I think it's important because the reality is consumers can't make an informed choice, because what they're being fed is actually false, and it's to generate more dividends or profit at the cost of public health. So once you're educated as to how to do it, you'll actually find you'll save money and you'll be healthier for it.

Dr Ron Ehrlich: Well, Nicole, I know that book is now in its third edition, brand new, updated, fabulous. We have it for sale in our surgery. But we'll have links to that website, the Abode, your website, the book, and, of course, for anybody that was interested in pursuing a career in building biology. I know that you run courses on that, and we'll have links to that as well.

Nicole Bijlsma: Fantastic. Thank you so much. And we don't have enough people to do the work. The industry is just escalated. We have more work than we have building biologists, so it'll be great to get more people on board.

Dr Ron Ehrlich: Yep, thank you so much, Nicole.

Nicole Bijlsma: Thank you, Ron.

Dr Ron Ehrlich: Well, if you're struggling with a health problem or even just want to have your house checked out and to make sure your house indeed, is in order, I would suggest getting in touch with a building biologist. A friend recently did just that. No major health concerns and while checking out the electromagnetic radiation in the house, found that the biggest source was actually coming from under the bed on the second floor. These kinds of things can be really significant, and you might just literally be lying on top of it and not even realize it.

The logo for 'unstress' features the word 'unstress' in a white, lowercase, sans-serif font. It is positioned on a green square background. Above the text, there is a faint, white, stylized graphic of a human figure with arms raised, suggesting a state of relaxation or stress relief.

Now, in order to solve a problem, or for that matter avoid one, it helps to know what that problem is. And the thing about environmental toxins, and this is the good news, with good information, you can reduce your toxic load to chemicals, mould, electromagnetic radiation by 80% or 90%. Now, we'll have links to Nicole's Australian College of Environmental Studies where she has been training building biologists for over 20 years. And they have a directory that can put you in touch with someone in your area.

If you're a health practitioner assessing your patients' health, this is definitely an important tool to use. Now, don't forget we have our new Unstress app from the app store or Google Play. Apart from the home page on that app, check out the dropdown menu for a health assessment tool based on the five pillars and some breathing exercises and much, much more. We also have a five-week course starting on the 2nd of September. Until next time, this is Dr Ron Ehrlich, be well.

This podcast provides general information and discussion about medicine, health, and related subjects. The content is not intended and should not be construed as medical advice or as a substitute for care by a qualified medical practitioner. If you or any other person has a medical concern, he or she should consult with an appropriately qualified medical practitioner. Guests who speak in this podcast express their own opinions, experiences and conclusions.