

**Dr. Ron Ehrlich:** Hello and welcome to Unstress. I'm Doctor Ron Ehrlich. Now, environmental stress. What do we mean by it? All too often people particularly in this environment where we're talking about climate change and a carbon-based economy and carbon sequestration, it's easy for us to get lost with what's going on in the outside world. It's a big issue. Let's not underplay it. We're going to be covering a lot of those stories, but today's program is called Healthy Homes, Healthy People. My guest is [Nicole Bijlsma](#). Now, Nicole is ... She'll tell you her story, but she is a naturopath acupuncturist and is doing her Ph.D. on this very topic. What a personal story, a story of resilience, her own story that got her into this, a story of resilience, a story of investigation, persistence, knowledge, redemption, fertility. Oh my god, it's a great story, so you got to listen to it. The other thing that I think is really interesting in today's program is when I hear her saying, you'll hear her say it too, "Indoor air is five times," get this, "Five times more polluted than outdoor air." Very sobering.

The other thing you're going to hear us talk about is the importance of the bedroom. You know that sleep is a really important focus of this podcast, my message, and it's an important part hopefully of your life, but today we're going to focus on the bedroom environment and some great tips there. The other thing is how many chemicals we're exposed to. This is shocking, and you might want to know how well tested those chemicals are. It's something we're going to talk about in this podcast, and also if you haven't heard this before, introduce you to the concept of the precautionary principle, which I think is really important. Look, I hope you enjoy this interview with Nicole Bijlsma.

Welcome to the show, Nicole.

**Nicole Bijlsma:** Hi, Ron. How are you?

**Dr. Ron Ehrlich:** I'm very well. I'm very well. It's so good to talk to you. Well, I know we've spoken on lots of occasions and I've heard you talk and I've read [your book](#) [Healthy Home, Healthy Family], and actually quote you in [my own book](#), because what you're doing is so fantastic. You have a story that got you into this that I think is a story that's so inspiring. Can you share with our listener how you got started in this area of home biology?

**Nicole Bijlsma:** Well, two things. I was working a naturopath and acupuncturist for 15 years and I started to notice a really strong correlation between many of my patients with illness like asthma and allergies, chronic fatigue syndrome, infertility, with their homes and especially things like electromagnetic fields and mould. It wasn't until my husband and I moved into our first home in Warrandyte that we both experienced insomnia, couldn't sleep within days of moving into this space. After 12 months I felt pregnant and then miscarried and subsequently had ten miscarriages in this house.

**Dr. Ron Ehrlich:** Whoa, whoa now. That's an extaord ... Miscarriages are a traumatic experience at the worst of times, but ten miscarriages. That is extraordinary. Over what period of time was this, Nicole?



**Nicole Bijlsma:** Seven years.

**Dr. Ron Ehrlich:** Seven years.

Oh my goodness, that's a real story of resilience there to be ... Anyway, go on. What happened then.

**Nicole Bijlsma:** Yeah, well we didn't qualify for IVF, so none of those pregnancies were ... Well, we conceived naturally, went to everyone you could think of, IVF specialists, but we didn't qualify for that. Went to hematologists, immunologists, miscarriage clinic at Royal Women's in Melbourne and no one was able to determine why we were miscarrying. Finally my mother and my mother-in-law saw an article of a woman who had recurrent miscarriages who finally gave birth to her son and went through this unusual procedure with a reproductive immunologist in the U.S., Allen Beer. He specialized in how the immune system affects a pregnancy. So we sent our bloods there and they said... "Oh yeah, you're miscarrying for these reasons and next time you get pregnant you've got to immunize yourself against your husband, take low-dose aspirin, use IVIG, et cetera." During that time I noticed, my neighbor said, "Oh, no one's successfully had children in this home." When I looked at the house I went, "There's a meter panel on the other side of the wall of our bed."

When I started getting into indoor air quality, noticed that the vehicle exhaust, the carbon monoxide would triple in the morning in our bedroom, master bedroom, which was closest to the T intersection and would take three hours to dissipate. I noticed geopathic stress under the bed, and then the local council would come and spray pesticides on our property in Warrandyte for blackberries..

**Dr. Ron Ehrlich:** Now this is ... Is this rural Victoria or is this a suburb of Melbourne?

**Nicole Bijlsma:** Warrandyte is ... It's only about a half an hour away from Melbourne, but it's the first state national park, so there are 583 million hectares of bushland in this area. It's beautiful. It's one of the first mining towns in Australia, but it was beautiful, pristine environment that we were, that we moved into wasn't so pristine. Even then, the house was nice and it felt great. It was there's something wrong, I couldn't put my finger on it, and I'm going, "I've done a double degree in acupuncture naturopathy, why aren't we learning about environmental medicine? Why aren't we learning about air quality and drinking water?" As I started to investigate that, I realized there was so much information in the scientific literature about vehicle exhaust air quality, electromagnetic fields and the impact on human health. I studied together this information and eventually established the [Australian College of Environmental Studies](#), which runs government accredited courses in this field.

**Dr. Ron Ehrlich:** Now Nicole, you are out in this pristine area and you're having trouble falling pregnant and it turns out that these things that you listed: Air quality, electromagnetic radiation, vehicle fumes, are all affecting you. Yeah, go on. What did you do then?

**Nicole Bijlsma:** Then, we relocated to the back bedroom, and that's the time when we found also Allen Beer who was able to assist us in determining why we were miscarrying. Then, we had the twins, fell pregnant naturally with twins, which apparently reduces the risk of miscarriages, because my immune system can't have that effect on both fetuses at the same time.

**Dr. Ron Ehrlich:** Nice.

**Nicole Bijlsma:** Then we, because of the history of having that many miscarriages and the vehicle exhaust, et cetera, we decided to move to a neighboring suburb, also a bushy area. Then, subsequently got pregnant two years later and couldn't afford any of the treatment we had in the first pregnancy with the twins, and gave birth to Charlotte without any intervention.

**Dr. Ron Ehrlich:** Wow. How old are your kids? You got three, gorgeous kids?

**Nicole Bijlsma:** The twins almost 11 and Charlotte is eight.

**Dr. Ron Ehrlich:** Wow. What an amazing story. Of course that led you from being your naturopath acupuncturist background into this college. Say the name of the college again.

**Nicole Bijlsma:** Yeah, [Australian College of Environmental Studies](#).

**Dr. Ron Ehrlich:** Yeah, because you've been running courses for health practitioners and people in that for, how many years now? Well, ten, or 11 years, I guess?

**Nicole Bijlsma:** '99.

**Dr. Ron Ehrlich:** '99. Wow, wow, okay. Tell us about home biology. You're book, [Healthy Homes, Healthy Families](#), which I believe is going through a new addition. We're going to talk about that in a minute too, but tell us about home biology, because people have ... Environment has become a big, big topic. Everyone's talking about climate change and what's going out there in the big world, but there's a hell of a lot that's going on in the world we inhabit within our own homes. Tell us a bit about some of those challenges.

**Nicole Bijlsma:** Well, we spend 90% or more of our time inside the building, and part of this was the revolutionizing IT and the movement away from people working outside to inside, and everything becoming technological. The fact that we spend so much time in inside, we're actually exposed to hazards and almost all of these hazards can be correlated with a chronic illness that a doctor would see every single day in their clinical practice. The chemicals that we're exposed to through building materials, household products, things like shampoos, conditioners, moisturizers, pesticides, cleaning products. Most of those chemicals have never been tested for their impact on human health because the duty of care is not on manufacturers to prove they are safe. It takes decades, generations to prove with those chemicals we put into building materials and everything, to see if they're safe or not. Of course, medical history's littered with missed opportunity and wasted resources, because as

the evidence was accumulating that environmental tobacco smoke could cause lung cancer and low birth weight, all of those things, it was 50 years from the time Richard Dole published his studies in 1952 before government action on environmental tobacco smoke.

This is unfortunately really common. Most of the things in our home have never been tested for their impact on human health. They are being correlated with Parkinson's, Autism, Attention Deficit Hyperactivity Disorder, Diabetes, obesity. You name most of the, almost all of the chronic illnesses you see are actually correlated with things in our house that could be directly related to instigating or aggravating them.

**Dr. Ron Ehrlich:** Now Nicole, I think that's something that doesn't come as a huge surprise to me, because I've looked into it, but that subject of testing, which rolls off the tongue very quickly and very easily, I think we need to take a step back here a little bit, because a lot of people may be surprised to hear that, because you make this assumption that if it's on the shelves, in the chemists, if it's in the supermarket, it wouldn't be there unless it's tested. That's actually not the case, as you said, is it?

**Nicole Bijlsma:** No.

**Dr. Ron Ehrlich:** I've heard ... One of our podcasts we're doing with Professor Mark Cohen, who I know is the supervisor of your PhD and we're going to be talking about that in a minute, but I know Mark once mentioned to me that there are 140,000 or more chemicals that we're exposed to in our modern world today.

**Nicole Bijlsma:** Well, it's probably a lot more than that. There, every 60 seconds another 20 chemicals are registered for use on the world's largest database, the Chemical Abstract Service. Only have to look at the American Chemical Society database and see the ticker before your very eyes.

**Dr. Ron Ehrlich:** Wow.

**Nicole Bijlsma:** Which means it's 200,000 new chemicals every week. There's over 144 million chemicals registered for use in the database.

**Dr. Ron Ehrlich:** Oh my god. Oh my god, I've significantly underestimated by a few zeros there, but anyway, it's a lot.

**Nicole Bijlsma:** Well, yeah, exactly, and they say in commercial use about 143,000, but that was four years ago. It doesn't take into consideration the synergetic effect or mixture effect that happens in the air or our water, et cetera. What we have to go off is the large population by monitoring studies, which exams what chemicals are in our bodies. The largest one, of course, is in the U.S., called the National Health and Nutritional Examination Survey. They're discovering pretty much every chemical they're looking for, they find it, let alone we don't have the lab tests available to access all of the chemicals we're exposed to. They're finding hundreds of chemicals in all of our bodies, even those who are pregnant, indicating that are flame retardants in our furnishings and our mattresses and our chemicals



and our building materials and our air and our water and our food, is actually in our bodies and it's impact on human health is only starting, now starting to be realized.

**Dr. Ron Ehrlich:** You mentioned the tobacco industry and there's this term that's come about called, "The tobacco playbook," and the tobacco playbook refers to how they had hidden and gotten expert opinions to distract us from the potential harm. You're right, they knew about it in the 1950s, but surprisingly it wasn't until 2009 that the FDA declared tobacco as an addictive substance. 2009. Anyway, if we're waiting for it to come from above, we're going to be waiting a long time. What proportion of those 140,000 or millions of chemicals would actually have any testing done at all?

**Nicole Bijlsma:** 80 to 90% have never been tested.

**Dr. Ron Ehrlich:** Wow.

**Nicole Bijlsma:** We are the guinea pigs. The thing is the way they test chemicals, and this was the write up in my first article, the way they're tested is to give a group of rats some chemic ... The chemical until 50% of the rats die, to establish what's called the lethal dose 50. Then, they destroy the rest of the rats. You never know what impact that one chemical had on that group of rats that do survive, but the reality is every time you walk out of your home, you've exposed yourself to 60 chemicals in your shampoo and conditioner alone, in a hot shower it's absorbed straight into the blood stream, because your pores are open, and the synergistic effect of those chemicals on your genotype is essentially unknown. The scientific methodology doesn't have the ability to look at the mixture effects of these chemicals on each individual person. In the next ten years that's likely to change, because of the mapping of the human genome and how there's a 12 fold varied difference in the way in which each person deals with chemicals in the environment. A lot of this has to do with what they eat and a lot of it has to do with their exposure to things like biotoxins, like mould.

If you're in a water-damaged building and you are exposed to that mould and fungi in their bi-products, your ability to detox other chemicals is significantly compromised. We're now realizing that we have to look at mould, we have to look at things like electromagnetic fields, which enhance the permeability of the brain to the chemicals and your chemicals in your food, your air, your products, and what you put on your body. To me, it's really important to educate people. They're not, the exposure standards are not health-based standards. They're developing compromise with industry because the duty of harm is not required for the industry to prove they're safe. It takes a long time to prove if they're dangerous or not. This is what's happening with wireless technologies, this deployment of wireless technologies all over our schools and our homes without any requirement to prove what impact it has on human health. The one study that looked at this, or the one research report in 1994 by five electrical engineers at the CSIRO was made redundant and those electrical engineers were then sacked from their job.

It indicated they were concerned about the deployment of wireless technologies in Australia and especially children, and yet that radiofrequency division of the CSIRO was disbanded shortly after, because it was not in line with the telecommunications agenda.

**Dr. Ron Ehrlich:** Yeah. Yes, well, it's a topic that I know ... It's a very easy one to miss this whole influence of industry on regulations, but once you're aware of it's a very difficult one to ignore. I find it interesting that the statistic of one in two men and one in three women will contract cancer by what age? 60, I think it is, or 65. Having been one of those one in two and being aware of this issue, I'm actually not surprised. I think if you're not up on this story, then you hear a statistic like that and you think, "Wow, that's shocking." It is shocking, but you're really surprised. This whole environmental home, biology story or what we're exposed to, makes you wonder, "How come we're not *all* suffering from that?" Maybe we all are. Now, one of the topics that I love talking about and I've spoken to on my podcast a lot about is [sleep](#), because I always say that [sleep](#) is the most important part of the day. You also make the statement about the room. Can you talk to us a little bit about how much time we spend there, the importance of it and what we can do to make it a really healthy room?

**Nicole Bijlsma:** We spend around 22 years of our life in a bedroom. From a building biologist perspective, it's the most important room, because if you don't sleep, your immune system suffers and every system of your body suffers. This is what we find with people with a lot of these chronic illnesses, and especially environmental sensitivities, like chronic fatigue syndrome, mould related toxins, et cetera, that they don't sleep, they sleep disturbed, and everything suffers. The bedroom is critical because you want to maximize your melatonin levels because melatonin is the most important anti-cancer neurotransmitter that we have. It makes tumeric look like it's not doing anything. We look at these important antioxidants and their impact on human health, but in fact, the body has its capacity to heal itself. This is primarily through neurotransmitters like melatonin and melatonin stimulating hormone. The quickest way to suppress it is to have a mobile phone or electromagnetic fields in our bedroom because that's what we do know about electromagnetic fields. It enhances the permeability of the brain to the toxins in the body, but it also suppresses melatonin.

Now, in terms of that it's critical therefore that you don't have your mobile phone charged in your bedroom. You don't have a meter panel or a fridge or an oven on the other side of the wall of your bed head, because as those devices go on and off all night, especially your fridge motor goes on and off, meter panels constantly drawing current, it emits a magnetic field, which can disturb sleep and effect melatonin. Have a look at the devices in and around the bedroom and on the other side of the wall of your bed, and make sure that you don't have any appliances that are within a couple of meters of your bed.

**Dr. Ron Ehrlich:** Does that include alarm clocks as well, the radio clock, clock radios?

**Nicole Bijlsma:** Yes. So the clock radios you find within 40 centimeters, it will emit high, very high magnetic field, but it drops off really quickly within about 40 centimeters to a meter. Your digital clock radio should be ideally on the other side of the wall of your bed head. Sorry, on the opposite wall to your bed head, so that you have to get out of bed to hit the snooze button. Even to have an alarm clock that is battery operated or wind up, which means that it doesn't emit any electromagnetic fields at all.

**Dr. Ron Ehrlich:** Yeah, yeah. The melatonin, of course, it's referred to as the master hormone melatonin. I think there is a book, a textbook out ... There are lots of

textbooks out, but one 400 pages talking about melatonin and all the stuff it does in the body. That's a pretty important one. You also mention mould. Tell us a little bit about that and the effect that that can have.

**Nicole Bijlsma:** In the last five years we've started to get a really good understanding that this is one of the key triggers to really poor health. We're starting to realize that one in four people do not have the capacity to create antibodies when they're in a water-damaged building. In a water damaged building what happens is you've got moisture that's sitting on a surface more than 48 hours and therefore the microbes, the bacteria, and the fungi start producing endo-toxins, micro-toxins, and volatile organic compounds or chemicals to out-compete each other for the site to take over. That's nature. That's what nature does when it's decomposing things. It's really important that we don't have moisture there for more than 48 hours. After 48 hours, depending on the surface area involved, it creates this chemical stew of biotoxins that then get released in the air. If one in four people who go into that building who don't create antibodies to those toxins and those antigens, every time they go in, it sets up inflammation in the body. Now, the second time someone goes into that water-damaged building, a normal, healthy person will have antibodies, which will recognize those antigens or the mould, fungi, bacteria in their by-products and will stimulate a immune response, which tags them and clears them through the body by the bile and into the bowels.

In these one in four people, they go back into that building and it's like it's got, their immune system has dementia, because it doesn't recognize them and doesn't have antibodies. It sets up inflammation again. When you have inflammation on a systemic level in the body, it effects the brain and it effects key neuro peptides, like melanocyte stimulating hormone.

**Dr. Ron Ehrlich:** Say that again. Which one?

**Nicole Bijlsma:** Melanocyte stimulating hormone, MSH. Which is really important, because it's involved in endorphin release and dealing with pain. It's involved with sleep and the ability to sleep in circadium rhythm. It's involved in keeping other bacteria in check. What happens then is that people start getting these weird infections in their body, like in the upper respiratory passages, which create these chemicals that have to be dealt with by their body. Their gut microbiome gets skewed, because every time they, the body tries to get rid of these biotoxins, it puts it in the bile into their bowel, but then effects their gut microbiome, which increases their risk for gluten-related sensitivities.

**Dr. Ron Ehrlich:** Wow.

**Nicole Bijlsma:** What I'm saying is what they're inhaling in a water damaged building, could effect food and how they deal with food. This is something most naturopaths and GPs don't have a good handle of yet. Then, by effecting sleep, their immune system is effected, their ability to deal with cancers, and other things is compromised and they start developing these chronic fatigue-like symptoms, and brain fog, because they can't concentrate, short term memory. They lose words mid-sentence, anomnia, and they start really going out of their mind. They become a different person and they're tired and no one's able to identify ... In the worst case scenario they're diagnosed with a mental illness, which is



actually not the case. It's inflammation in their brain and their periphery and their poor circulation and their inability to thermoregulate and they have thyroid related symptoms. It goes on and on.

**Dr. Ron Ehrlich:** Wow.

**Nicole Bijlsma:** Unless you get them out of that environment, they continue to be sick, no matter what supplements they take.

**Dr. Ron Ehrlich:** How do we know if we've got ... Obviously if there's mould growing on a, behind a cupboard or on a wall ... How do we identify it?

**Nicole Bijlsma:** Well, we know the history. It's always about the history. Having a look at since you've moved into this place have you noticed changes in your home? "Oh, yeah. I've noticed that I've developed these illnesses." "Okay. How long have you had those symptoms or those illnesses?" "Two years." "Oh, that's interesting. That's when you moved in." That's the first flag for me that maybe the environment or their home, is it making them sick? "Do your symptoms improve when you're away from the space?" "Oh yeah, when I go on holidays the symptoms get much better." That's another flag to indicate there's something going on in that home. Look at correlating symptoms. Any time someone has asthma, allergies, chronic fatigue syndrome, potentially headaches where they haven't found a cause, or insomnia, they're the main ones where building biologists can be very useful, because they're often the triggers for health-related symptoms: Mould, electromagnetic fields, house dust, mite, all those things.

**Dr. Ron Ehrlich:** Okay, so mould is huge. It's a big issue. Of course, we're in our bedrooms still, and I'm intrigued by how we spend so much time in it. You mentioned by the time you leave the house, the shampoo. There's quite a lot that goes on between lying in bed, they're asleep and getting up to go to the bathroom. We haven't even left the house yet. There's also ... You mentioned fire retardants. That's in mattresses and stuff too, isn't it? What is a fire retardant? What sort of chemicals are used?

**Nicole Bijlsma:** Okay, so they're many the Polybrominated Diphenyl Ethers.

**Dr. Ron Ehrlich:** So these are, to summ ... A brominated, so bromide impregnated materials?

**Nicole Bijlsma:** Yes, exactly. When you look at the benefit of these flame retardants in reducing the time of ignition, so when you get an ember that lands on a child's pajamas or a mattress, how long it takes to ignite, there's a delay by the use of these flame retardants. The reality is flame retardants are found in almost every person and child that has ever been tested. The benefit of being, of reducing this delay, ignition source, and the risk of having a fire in your home, is that justified by the fact that these chemicals have been directly correlated with Autism and neurobehavioral disorders? I don't think so. We've got these stupid laws that we've introduced these chemicals, and the risk of you actually having a fire in your home is so negligible, but the fact is the children will have flame retardants, as indicated by a recent study that came out even two week, this month. An Australian study

that showed that 80% of children had flame retardants in their feces and it's correlated with Autism and significant adverse health effects. Is that justified?

**Dr. Ron Ehrlich:** Yeah, that's extraordinary. You've mentioned neurotoxic, neurological issues. These are persistent chemicals that stay with us?

**Nicole Bijlsma:** They're persistent, organic pollutants, which means they stay in your body forever. When you get pregnant and you are female, you will pass them on through the placenta into the child and via breastfeeding.

**Dr. Ron Ehrlich:** If it's so ubiquitous, I guess it's our choices, is there clothes that we can buy non ... Has it been regulated that you have to have fire retardant? I wouldn't be surprised.

**Nicole Bijlsma:** Yeah. Well, you've got your low-fire danger pajamas in children. I strongly suggest that you don't buy them, because they're loaded with these flame retardants. I've had patients with significant skin and lung-related problems that only occur while they're sleeping: Coughing, eczema that's worse at night whilst they're wearing those pajamas because they're lung and skin irritants. It's insanity. I recommend people not to buy these low-fire, danger pajamas for their children, and buy things like ... Fibers, organic cotton, bamboo is excellent as a material. Wool is naturally fire retardant and not required ... Most of your clothes don't have these flame retardants, but your furnishings, your carpet, your fabric curtains, they do. It's based on these stupid laws where they haven't really looked at logically to go, "What's the risk of actually having a fire in your house versus knowing that those chemicals will be in your body and can correlate with the incidences of health effects?"

**Dr. Ron Ehrlich:** What about mattresses and pillows?

**Nicole Bijlsma:** Yes. Mattresses do. I'm not aware of pillows that do. Maybe in their foam furnishings, possibly. That's why it's important if you're going to get furnishings, go with natural fibers, go with second-hand furnishings that have already out-gassed these chemicals. The longer, the older the furnishing, the less likely they'll out-gas. The problem is most of the chemicals, these flame retardants are found in household dust, because they are not bound to the materials, they come out in the household dust, and that's of course why children are so vulnerable, because they're breathing zone, especially if they're crawling is close to the floor where the household dust and the chemicals are. That's, of course, why it's important that they dust using microfiber cloths, slightly damp microfiber cloth, and they use a good vacuum cleaner fitted with a HEPA filter to reduce that load.

**Dr. Ron Ehrlich:** Now Nicole, we haven't even left the bedroom. We're still talking and there's still dust mites. I know that's a -

**Nicole Bijlsma:** Oh yeah huge.

**Dr. Ron Ehrlich:** Again, that's another topic gone. Give us a brief, brief summary of the challenge of dust mites.

**Nicole Bijlsma:** Dust mites are the most common allergy in the world. They affect 21% of the world's population. They cause asthma, hay fever, sinusitis, and eczema. Even though we know this, I'm still shocked that when people go to clinicians they are given herbs or supplements or drugs when in fact they should be going, "How old is your mattress." The older it is, the higher the load of dust mites. In a home, there will be between 100 and 500 dust mites per gram of dust. If you're sensitive to the dust mites, a protein in their feces that you'll be allergic to, then it's important that you can do some simple things to reduce the load. They're going to be there. Wherever you are, they're eating your skin cells, they're meant to be there, but you want to reduce the load and you want to reduce your load, especially if you're sensitive to dust mites. What you do then is to get, again, a good vacuum cleaner fitted with a HEPA filter and motorized head. You want to damp dust your home. You want mattresses that are not old, less than ten years old, and you don't want mattresses that are contaminated with urine, that are passed down from sibling to sibling.

You don't want mattresses where you've had someone who's really sweaty. The more moisture in the mattress, the higher the dust load. You want to make sure you reduce the dust in general because that's where they're going to be. You want to make sure you use dust mite resistant covers on your pillows and mattresses for those that are allergic to dust mites.

**Dr. Ron Ehrlich:** Yeah. Wow. For our listener, again, you've mentioned HEPA filter, H-E-P-A, HEPA filter vacuum cleaners. What does that stand for?

**Nicole Bijlsma:** High efficiency, particulate air. That means it will filter everything, particles down to .3 micrometers or of your allergens, two to 100 micrometers. If you can filter down to .3, you will reduce almost every one of your allergens.

**Dr. Ron Ehrlich:** Okay. Listen, honestly, we could talk for weeks and we're still in the bedroom. We've dealt with electromagnetic radiation. We've put that aside and we've dealt with mould and that is a challenge if you're in a house that's been water damaged. You really got to get to the bottom of that one. That's ... What's a good way of dealing with mold?

**Nicole Bijlsma:** That's a good question. With mould it's really important-

**Dr. Ron Ehrlich:** Thanks.

**Nicole Bijlsma:** That you actually get the source of moisture. Wherever the moisture is, that's where the problem's going to be. Mold, fungi, bacteria isn't the issue. It's moisture. Because everything in your house can be used as breed sources, the moisture's there for more than 48 hours, it's a problem. Find where it's coming from. If it's due to condensation, then it could be due to poor ventilation, exhaust fans that aren't working. It could be that the moisture isn't being vented to the exterior. If you're getting condensation in your bathroom, then you need to get a good exhaust fan where you exhaust it outside, not into the room space. If you live in a high climate where there's high levels of relative humidity that exceeds 60%, like central coast of New South Wales or Far North Queensland, then you either want to kick your air conditioning on 24/7, because it pulls moisture out of the air, or you have a whole house dehumidifier to keep the humidity levels below 60%. Now, house



dust mites don't have eyes and they can't drink. They don't have a mouth. They absorb, they depend on the moisture in the environment to thrive.

Once you have moisture above 60%, that's when all your allergens, your cockroaches, your dust mites, your rodents and pests, and of course, your mould will take over.

**Dr. Ron Ehrlich:** Right, so that's really quite important. It's interesting, because in our modern houses there used to be vents up in the walls, and it's very popular to have them removed. We like to have everything nicely sealed off so we don't have drafts and we're efficient in our heating and our cooling, but of course that creates an issue about ventilation, doesn't it?

**Nicole Bijlsma:** Absolutely a recent report came out that new buildings in Melbourne and Tasmania, 40% of new buildings by their first winter will have condensation and mold related problems.

**Dr. Ron Ehrlich:** Wow.

**Nicole Bijlsma:** 40%. If you think 40% of new buildings in core temperate climates like Melbourne, Tasmania are at risk of mould, and one in four people can't create antibodies to mould, and will not be diagnosed adequately by their clinicians, because they don't understand the impact of mould, this is a crisis.

**Dr. Ron Ehrlich:** Yeah, and we haven't even gone into the bathroom yet to look at all the different issues there about you have just turned the water tap on. We've got to get you back and talk about water quality and some of the other things. You've mentioned so many great things here for us to ... People could be getting a little bit depressed about this story, but actually it's about personal empowerment, isn't it? It's about being aware of a problem and getting control of it. You've got a ten-point checklist of things that can help. Run us through a couple of those things that people can do, so we leave people with a positive note before we go on to our next discussion, which will be about water quality and plastics and all of that. Go on, tell us something positive.

**Nicole Bijlsma:** The good news is once you're educated you can make an informed choice about the products you use, and you can reduce your load very simply through knowledge. First is take your shoes off before you go inside the home. This will significantly reduce the dust load, and I've already mentioned everything that's in the dust: Chemicals, house dust mite, et cetera. Shoes off before you enter the home. Use a vacuum cleaner fitted with a HEPA filter and motorized head, because where the dust is where often the problem is. Use a vacuum cleaner that's appropriate. [I've listed the top ten vacuum cleaners on my website.](#)

**Dr. Ron Ehrlich:** We're going to have links to that. We're going to have links to that and your book, as well. Go on.

**Nicole Bijlsma:** Air your home by opening windows. Your house needs to be aired, unless of course you're in very heavy traffic. That's not good, or if you're in a mining

town where you've got higher levels of particulars, not a good idea. Most people, open your windows, air your house, important.

**Dr. Ron Ehrlich:** Now, Nicole, Nicole, on that HEPA filter vacuum, you can also do your mattresses as well, can't you?

**Nicole Bijlsma:** Absolutely. That's a good thing to do, especially if you have dust mite allergy. As soon as you change your sheets, wash them in hot water or at least 60 degrees is important to get rid of dust mite and kiln. Also, vacuum clean your mattresses as soon as you get off the bed, because that's when the dust mites start migrating to the middle of the mattress. Reduce the number of chemicals to clean your home. I really want you to look at what you're being fed through propaganda and media that's actually trying to sell stuff that you don't need. Air fresheners have no place in a healthy home. Antibacterial are a disaster for human health, because you are 90% bacteria, and what they've found is the more the use of chemicals that effect bacteria, the higher the rate of asthma and allergies. It's really important that you don't have air fresheners and perfume, which I consider one of my toxic chemicals apart from pesticides that you have a integrative pest management where you're not using chemical pesticides like fly spray or pests, spraying on your ... Pesticides sprayed in your home. That is lunacy, because they incredibly toxic chemicals.

Instead, don't keep food lying around the house, air your home, don't have water lying around the house, make sure your pet food is enclosed, so the rats can't get to it. That's, I've made some really good websites on my, in my book and on my website on integrative pest management you can go to. When you're cleaning the home, again, microfiber cloths followed by a clean tea towel. My husband and I created a cleaning product range, called [Abode](#), that you can get through health food stores, and they have only food grade ingredients, so they're specific for people with chemical sensitivities.

**Dr. Ron Ehrlich:** Yeah, they're great. We use them in our household. There's a plug. Go on.

**Nicole Bijlsma:** Thank you. Use the sun. Air your mattresses, your bedding, and every time you wash your sheets, air your pillow as well. You've got a lot of moisture in it and you want to make sure to reduce the dust mite load that you air it in the sun when it's a warm, sunny day. Even your chopping boards and things like that, and good and soft toys, and fabric. New furnishings should be aired in the sun before they're put inside the home. Store food and beverages in glass. Plastics we haven't gone into yet.

**Dr. Ron Ehrlich:** We'll get there.

**Nicole Bijlsma:** Yeah, stainless steel, lead-free ceramics. Don't freeze or heat food in plastics. Put them in glass. If it has a plastic lid, that's fine, as long as it's not touching the plastic, but store them in glass. Make space for your electrical appliances. Make sure your electrical appliances aren't within a meter of where you spend time, like your favourite couch, your bed, of course. Making sure if you prepare food in the kitchen that it's not near the dishwasher while it's on, especially if you're pregnant. Water filter, absolutely critical, but I think we'll save that for a podcast on that, one on water, especially that microbiome and

chlorine and et cetera, and the latest study of fluoride, biggest study of it, just published a few weeks ago. That's really important.

**Dr. Ron Ehrlich:** Oh, we're going to be talking about that. Yeah, go on.

**Nicole Bijlsma:** And of course if there's visible mould, that is often a trigger to indicate that it will aggravate asthma, sinus, hay fever, and eczema. Get to the source of the moisture.

**Dr. Ron Ehrlich:** Yeah, and you've got this great, cleaning thing of using vinegar and water, which is a lot simpler and healthier, and effective than some of the other stuff.

**Nicole Bijlsma:** Yeah, physically removing the mould with your microfiber cloth is important, more important to get to the source of the moisture. I've got quite a few pages of that in my new book, [Healthy Home, Healthy Family](#).

**Dr. Ron Ehrlich:** Yeah, now Nicole, thank you so much for joining us. We're going to have links to [your web page](#), which has got so much information and also [your new book](#), which I think we're coming up for, this is the third addition, and totally, totally revised and up to date. Yeah?

**Nicole Bijlsma:** There's three pages that are the same and the rest is changed, and there's almost 900 references from a scientific to say why you need to have a good understanding of electromagnetic fields, mould, and chemicals. More important how simple it is to reduce your exposure to those things.

**Dr. Ron Ehrlich:** Fantastic. Nicole, thank you. We're going to get you back. We're going to talk some more.

**Nicole Bijlsma:** Thanks so much, Ron. .

**Dr. Ron Ehrlich:** There it is. It all sounds a little bit overwhelming, but it's not. It's not. If knowledge is power, well, you've been given some knowledge to empower you to take control and make decisions that can make a really big different. I often say that we're allowed to vote every three, four, sometimes five years and we hope that that vote makes a difference, but sometimes we have, something we have, we get to vote on each and every day and that is when we buy stuff and how we spend our dollar. If money talks, and we know it does, then how about letting our money talk for us and make a difference in that way? You can reduce your own chemical load in your own home by 80 to 90% just by making informed decisions. I guess the question is: Are you going to follow the precautionary principle? It's something that I've been empowered to do. Or are you going to be a passive part of the human experiment? Remember that tobacco playbook we talked about? Well, let's not wait for the change to come from above, let's start from the ground up, and literally the ground up, but let's make a different in our own lives and in our own homes.



Look, there's so much to talk about with Nicole. She is a wealth of knowledge. I have to get her back and I will be getting her back in the next one or two weeks. Hope you enjoyed that. Until then, this is Dr. Ron Ehrlich. Be well.

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