

**EPISODE 178**

[INTRODUCTION]

**[0:00:11.1] AVH:** Today I'm interviewing the author of a book that, if I'm being honest, made me a little scared and a little depressed but it also made me laugh at the same time and I guess that's the mark of a good book right? But this was not fiction. Dr. Anthony Jay's book is called *Estrogeneration: How Estrogenics are Making You Fat, Sick and Infertile*. And you can tell he doesn't pull any punches from the title alone but his book explains what estrogenics are and how pervasive they are in our world and how despite the mounting evidence of their many negative effects.

How little is being done to minimize the use of unnecessary and often toxic ingredients in our food, our skin care, our daily products, basically everything we're coming into contact with every day. It's not all doom and gloom because he writes in such a human, personable way, he weaves in tales about his own life and he basically – he doesn't write like a scientist, he writes like a normal person.

He does offer plenty of actionable ways that we can immediately and relatively easily minimize the amount of estrogenics in our daily life. This is a great interview, really illuminating and provides so much easy, usable information that I highly recommend you listen all the way through and check this book out. I think you'll get a lot from it. But, before we get into it with Dr. Jay, here is a bit about today's show sponsor.

[SPONSOR MESSAGE]

**[0:01:34.5] AVH:** Today's podcast is sponsored by Clean Made Market and the Clean Made Food Fest. Taking place this October 21<sup>st</sup> and 22<sup>nd</sup> at the California Market Center in downtown Los Angeles. This market plus food fest is essentially a family friendly, health and wellness lifestyle experience for folks who want to enjoy some healthy food and learn about new brands, products and services for clean living.

The Clean Food Fest is this all-inclusive tasting event that features more than 50 of So Cal's best chefs and restaurants and whether you're Paleo, Gluten free, Vegan, all of the above, this festival has food for you and whatever your preference, the event is judgment free but it's also free of gluten, dairy, soy and refined sugar which I know us paleo folks are into.

Clean Food Fest is basically, it's a great event for people with food sensitivities but just people who love food and like to eat well and healthfully. The coinciding Clean Made Market, it's all about clean living. So attendees can learn about and shop a bunch of sustainable brands, products and services as well as checkout interactive workshops, cooking demos and talks from industry leaders in categories like beauty and wellness, energy and sustainability.

Tech, pets, fitness, I could go on. And, Paleo Magazine is a sponsor of the event so we will have a lounge there so you can come and hang out and say hi to us as if you didn't have enough incentive to go to this already. Yeah, it's going to be great, if you want to learn more or attend this event, check them out online at [cleanfoodfest.com](http://cleanfoodfest.com).

[INTERVIEW]

**[0:03:29.6] AVH:** Hey Anthony, thanks for being on the podcast, welcome.

**[0:03:31.6] AJ:** Thanks for having me.

**[0:03:33.3] AVH:** How's your summer going so far? What are you up to besides fishing I guess, we'll get into that.

**[0:03:39.1] AJ:** Yeah, actually caught a fish with my bare hands recently on video camera.

**[0:03:43.9] AVH:** Dude, that's like the most paleo thing in the world.

**[0:03:46.0] AJ:** Yeah, I've been doing it for a while but I do it for my kids just to entertain them but yeah, I just moved to Minnesota actually from Boston.

**[0:03:53.4] AVH:** Okay.

[0:03:54.2] **AJ:** That was a big change.

[0:03:56.4] **AVH:** If you got it on camera then that must be on social media or something right? Because if it's not on social media, it's like it didn't happen, we're going to have to check that out.

[0:04:03.0] **AJ:** It's on Instagram, yeah. I just started an Instagram account, first time ever.

[0:04:07.1] **AVH:** Okay, what do you think?

[0:04:09.0] **AJ:** It's actually pretty awesome. I like that you know? It's not all just people rambling or whatever, I just like seeing pictures so it works.

[0:04:14.7] **AVH:** Right, yeah, that seems to be the general consensus, people just want to look at pictures and not actually hear what folks have to say for the most part. I was a pretty slow adopter to Instagram. Honestly, I was one of those nerds who was like really into Twitter because I'm a writer so I actually like words and I like reading words but once I got on to Instagram, I get it now.

I can see why people are so into it.

[0:04:38.5] **AJ:** Yup, that's what happened to me.

[0:04:41.8] **AVH:** We're here to talk about your book, *Estrogeneration* and I have to say, I really enjoyed your book more than I thought I would and the reason why I say that is because you know, with technical scientific books, and also books that are you know – talking about covering kind of scary topics, it's hard to say that you enjoy it, right?

I really did because this book was written in such a personable kind of approachable way right? you're weaving in your own story throughout the whole thing, your personal experiences rather than kind of just giving us the bullet points. Like here's what's happening and here's why you should be afraid and you incorporate your love of fishing a lot which I found highly entertaining.

Was it your intention to make this book entertaining and fun to read or were you just kind of trying to soften the blow of some of the scary information that's in it?

**[0:05:31.7] AJ:** For sure, I was definitely trying to make it entertaining and also as simple. Like you said, there's no question. I think in science today, people are way too technical, it's literally like a different language. You know lot of people kind of take pride in that and they like to talk to other scientists or other intellectual people with this language, mitochondria, oxidation, beta oxidation in the mitochondria, right? It's preferentially, you know what I mean.

These terms and it just loses people and what's the point if nobody come to understand what you're talking about? So I feel like yeah, I wanted to make it fun, I wanted to kind of introduce myself to people and make sure that people really understand what's going on with these artificial estrogen chemicals because they're a serious problem.

**[0:06:18.9] AVH:** Yeah, I agree with the different language thing and I think with today, information being ever more accessible and also people who really want to kind of take their education in their own hands and learn a lot this stuff and especially I think, our listeners and our readers at Paleo Magazine.

They really want to know as much as they can and so like you said, putting it out in a way that makes it accessible and not intimidating and easy for all of us to understand, I think that's really helpful. Like you said, I don't want to read a scientific journal, most of us don't, right?

If you make it, you put it out there in a way that we can understand and enjoy like you're really ahead of the game.

**[0:06:59.0] AJ:** I appreciate it, I'm glad you said that because I was really going for that.

**[0:07:02.5] AVH:** Yeah, good. I remember I was five pages in and I'm like, I'm learning as much about fishing as I am about estrogens here. That's kind of cool. Anyway, okay, let's get into it though, let's talk estrogens. Give us kind of the high level overview. What is an estrogenic? Why is too much estrogen bad? Talk about just kind of give us the elevator pitch.

**[0:07:24.8] AJ:** Yeah. Estrogenics are just artificial estrogen. That means anything that acts on your estrogen receptor and so what that means is basically, in your body, you have these receptors that pick up hormones, they pick up signals. I like to use the example of leptin actually, even though it's not quite the elevator pitch, it might take a little bit longer but I'll tie back to estrogen and it will make sense in a second. In our body, our fat cells secrete a hormone called leptin.

A lot of people have heard of it, what they don't realize is fat cells secrete that after we eat and it travels throughout your blood and most of your cells don't have a leptin receptor so it just kind of goes in, it goes in to your liver, it goes out. It goes in to your muscles, it goes out. But when it gets to your brain, you have a leptin receptor in your brain, you have leptin receptors, plural, in your brain. So when it gets in your brain, it actually binds these receptors and tells your brain, I feel full, I'm satiated, I should stop eating, right?

That's kind of how the receptor system works and estrogen is the similar of course, except, estrogen, you have receptors all throughout your body. You've got them in your fat cells, you've got them in your muscle cells, you've got them in your brain cells. When you start altering your natural estrogen levels with these artificial estrogens.

I made a top 10 list in my book and try to really simplify it so people can understand and find these things in their personal care products and their food, whatever. And avoid them but when you – like I say, you alter this natural estrogen level by adding these artificial estrogens, just throw an example out there, BPA is one of them, then you know, you have problems throughout your whole body. It's not just your muscles, it's not just your testosterone, it's not just your brain.

I mean, you see depression. You see a real pattern with all of these artificial estrogens in terms of health problems and that includes depression, that includes blood clotting, includes like I say, weight gains, fat. Because when you're naturally pregnant right? When you get pregnant, the body stores fat. I mean, that's a natural response because our ancestors didn't always have access to food. You know, if a woman was pregnant and she didn't have food, they eat fat. It's the most efficient energy form so of course that baby needs energy and the mother would burn fat for energy for the baby.

Now, we have abundance of food but we still store fat when our estrogen levels go high as in the case of pregnancy or if we artificially alter those estrogen levels with artificial estrogens, you know, you see fat gains and you know, some immune system issues so a lot of health problems.

**[0:10:10.3] AVH:** You mentioned fat gain, what are some of the other major kind of health issues, why is having too much estrogen bad? And also, specifically for women, because I think a lot of people have the idea that women are supposed to have a lot more estrogen anyway, what's the big deal, it's mostly dudes that have to worry about this stuff but maybe speak to that a little bit.

**[0:10:32.0] AJ:** Yeah, good question. I get that all the time, this idea that I mean, women obviously have more estrogen so they should be okay. But in reality, men have about 20 nanograms per liter of estrogen on average which is obviously really low. I mean, a nanogram is 10 to the minus ninth grams. We have about 20 on average. Women, actually have about 20, they range between about 20 and 400 depending on the time of the month assuming they're not pregnant.

When they're pregnant, they go up in the thousands, sometimes low thousands. Still, I mean, 20 to 400 is not that much different, you know, because again, it's just a really fine-tuned balance. It's a delicate balance and these numbers you know, they're not as, as large as people think. Then you talk about artificial estrogens and I mean, shoot, the levels are incredibly high.

Like for example, cows in the cow – they've tested cow blood for this particular herbicide that acts like estrogen, it's called atrazine and they find 700,000 nanograms per liter. I mean, it just blows your mind to think of how much this is going to cost problems in your system.

**[0:11:36.6] AVH:** Right. What about the difference between – so you're saying synthetic hormones but there are also natural sources of estrogen that are still problematic, right? I know you talk about a bunch of them in the book and I don't want you to give away everything but there are a couple that I thought were interesting because people wouldn't necessarily assume this.

I know soy for example is one that most people who are in to nutrition know soy can be problematic but there were other ones like flax or lavender even. Lavender in skin care and stuff like that and even marijuana, weed, like these are all problematic.

I think people also think, you know, "If it's natural, it can't be bad." I mean, lavender, how can lavender be problematic? Can you talk about a couple of those and I guess, the difference between synthetic and real, or maybe naturally produced and exogenous estrogens?

**[0:12:32.4] AJ:** Yeah, good questions. The plant estrogen, the phytoestrogens are body – we have adapted some ability to break a lot of these down including flax and soy, if you have a strong gut bacteria but it's still risky. Because you know, you still get some phytoestrogen in your blood eating soy and flax. The levels are incredibly high but when you talk about lavender, yeah, I mean, it's natural but we're distilling this stuff and you know, we're condensing it and then we're rubbing it on our skin in some cases with personal care products.

Or, you know, we're breathing it in to our lungs and that's a delivery system, an efficient delivery system. So when scientific research finds that lavender causes gynecomastia which just means breast tissue in males. It means man boobs frankly and with personal care products that use, that have high levels of lavender and then they remove the lavender and that gynecomastia, the man boobs go away. It's compelling, then they have the scientific research that shows, lavender acts directly on the estrogen receptors. It's not just a few case studies in people.

They have good scientific research and the problem is here is we're rubbing it on our skin, it's going through our skin. I mean, these hormones, they go through your skin, it's like testosterone patches or something and a lot of them do that but with the fragrances, you find things like parabens. Those go through your skin, those act like artificial estrogen.

That's why they're bad by the way, a lot of things are paraben free nowadays and that's why because you know, people are starting to gain awareness of this. They don't usually know why it's bad but they do kind of, they're – people are recognizing yeah, parabens are bad. I'm telling you, that's why they're bad because they act like estrogen and they go through your skin. That's again, parabens are unnatural versus you know, these plant estrogens which again, they're

natural. So we've been exposed to them throughout history but you know, we haven't been exposed to such high levels with all the processing that we have.

I mean, people were never eating soy burgers, they were never rubbing lavender on their skin or maybe they were breathing in some marijuana once in a while, some smoke. I mean, the smoke is a more significant issue in terms of the estrogen according to the science research that I've looked at. You know, with this natural ones, once in a while, not that big of a deal.

You're doing this all the time, you definitely start to see testosterone lower, you start to see a lot of patterns with the breast tissue, breast cancer and the same like type of health issues I've mentioned a little bit before.

**[0:15:07.8] AVH:** Are the health issues again we were talking about, the weight gain and things like that. Did they manifest themselves the same in men and women generally or are there some different things like the gynecomastia that's not pleasant? What are some other things that maybe women and men can look out for specifically?

**[0:15:26.4] AJ:** Yeah, I mean, regarding the weight gain, I call it the estrogenic paradox. Because these estrogens, these artificial estrogens, they cause your body to create fat cells. Women and men do respond differently in that regard but just fat in general. I mean, it might show up on your hips, who knows, it might show up in your belly, around your intestines.

Usually you know, it's dysfunctional with artificial estrogens, it's not where you want it to be but the estrogenic paradox is it causes the fat but it also stores in the fat. That's a huge problem because it's really hard to lose weight when you've got this chemical storing in your fat cells for years. I mean, I say this in my book but they've done studies and they find the average life of a fat cell in your body in humans is one and a half years.

Which is incredible. I mean, that's a long time for a cell. They've even found fat cells that have lived 10 years. That tells me as a scientist that because I already know these things store in your fat and there's a lot of proof for that. That means these artificial estrogens might be staying in your body up to 10 years. To get rid of those, you know, you have to take pretty extreme

precautions, you have to stop putting these things on your skin or stop exposing yourself to artificial estrogens.

Also, it helps to do things like sauna, you know, sitting in a sauna. You know, just exercising your metabolism. It's an uphill battle right? We're storing them in our fat and we're trying to burn the same fat cells that these things are causing fat. Does that make sense?

**[0:17:02.9] AVH:** Of course our fat cells would be the ones that lived the longest, right? The things you don't want are the ones that stick around. Then I guess another recommendation would be you know, to have healthy levels of body fat too right? Because the more fat you're holding on to, the more of these hormones that you're absorbing and you can just carry around with you right?

**[0:17:25.8] AJ:** That's a good question, it's a good point. Fat is interesting because you know, our body actually creates fat. I'm writing another book by the way, called *Blubber Brain* and it's hopefully coming out in the next year.

**[0:17:37.0] AVH:** That's catchy.

**[0:17:38.5] AJ:** Yeah, thanks. It's all about fats and cholesterol and all of this. But one of the interesting things about fat is you know, our body actually creates fat to prevent chemicals from harming our brain. I mean, that's one of the main functions.

If you eat a bunch of harmful chemicals like mercury or something, or even some of these drugs that people are prescribing, like some of these psychiatric drugs, it's amazing how much fat people – I do consulting for people that have some pretty intense psychiatric disorders and they take these incredible drugs and they get really fat really quickly. It's frustrating and depressing for these people.

The reason your body does that is because it perceives those drugs as a toxin. Your body thinks "I'm being poisoned" and so it responds by creating more fat to kind of put those drugs away. To put them somewhere because it's better to have them in the fat than it is to have them in the brain killing off your brain cells. Which of course live even longer and are more important.

You know, it's best to avoid these toxins and there's this kind of interesting debate sometimes within even conventional scientists, this idea that calorie counting works, does calorie counting work? Maybe it doesn't. And really clear evidence that calorie counting itself just doesn't work, is that herbicide I mentioned before, atrazine. It's totally illegal in Europe and of course we use just unbelievable amounts of it in America on our grains, especially corn.

But atrazine, if you have, there is a study that shows two populations of mice and they give them the exact same calories, exact same exercise, everything's the same. The only difference is they put low dose atrazine herbicide in the water from one of the groups and then no atrazine, just pure water in the other group and the group with low dose atrazine, again, I emphasize low dose because they're not going crazy. Low dose atrazine, total fat gain in these mice compared to the other group and that's the only difference.

Same calories. That kind of ends the calorie counting debate right there if we're exposing ourselves to artificial chemicals, especially as estrogen chemicals, and we are, right? I mean, it's amazing how much we're exposing ourselves. Yeah.

**[0:19:52.3] AVH:** Yeah, one of the common themes that I noticed in the book that you kind of just touched on there was the idea that so many of these chemicals are okay in America and almost nowhere else. Things from, like this red dye, I don't remember which one but the red dye that's in everything we're eating and putting on our body and these chemicals that we're putting on our grains. Like what is going on that we in the US were allowed to use and use all the time?

These chemicals that are openly considered basically poisonous everywhere else.

**[0:20:25.9] AJ:** It's yeah. It's really frustrating. I can't say I'm a super political insider but I do think that it's because in America, your politicians are often influenced, or frequently influenced, by corporate money essentially and there's a lot of money in this artificial estrogens here. I mean, red food coloring is a good example because we're making this – and red food coloring of course I just have to add, it acts like estrogen in their body. That's why it's illegal in certain countries like Japan.

Anyways, we're making this food that's just so processed, it just looks like brown mush that it's amazing how much these companies glam on or just safeguard these dyes, these food dyes because otherwise the food just looks disgusting. It's a consumer driven market. A lot of times, we, as consumers in America, we're buying products that are brighter red like these cherries right? You see these cherries people use for pie fillings.

People prefer the ones that are just – they look radioactive to me but those are the ones that sells. If you sell the cherries and you don't put the dye in, you don't sell any and then everybody outcompetes you. If these chemicals are legal, it's difficult in the most cases, you know to sell a lot of these stuff. At the same time, it's super frustrating. It's unbelievable.

**[0:21:46.4] AVH:** Yeah, not only I guess are people making a lot of money from these products and processed foods but then, they're also making money from the people who are getting sick as a result of using them. It's like this kind of nasty cycle where there's money to be made in a community of very unhealthy people, I guess. Which is kind of sad.

**[0:22:06.1] AJ:** No, it's a good point, yeah, it's true. I mean, William Davis just wrote a book about that and he's been going – the guy that wrote *Wheat Belly*. I think it's called *Un-Doctored* and he's been going around talking about that very thing. I think he's right and I think you're right, yeah.

**[0:22:22.1] AVH:** Talk a little bit about you said you have a list, you know, it's making it very easy for us to kind of figure out what we may be exposing ourselves to in our daily life that we can avoid to avoid some of these estrogens. Can you tell us about some of maybe the major ones or maybe the most insidious?

**[0:22:41.0] AJ:** For sure, yeah. Well we talked about phytoestrogens and that's plant estrogens and the next one on the list is somewhat natural as well, it's micoestrogen and that means mold, mico means mold so mold estrogens. It's amazing, one of the problems with mold, you know, one of the reasons if you have mold in your house, they come in with like hazmat suits like literally because they don't even want to breathe the stuff in. One of the reasons they do that is because mold secretes this chemical called zearalenone and I just call it ZEA in my book because most scientists like to abbreviate that way.

But ZEA is a microestrogen, it's a mold estrogen, it acts like estrogen on our body, just really causes infertility, that's by the way the most of this, causes infertility, breast cancer, I mean, depression, just the whole list.

**[0:23:28.8] AVH:** That's infertility in both sexes?

**[0:23:31.3] AJ:** Absolutely, yeah. It's even worse than infertility because it changes your epigenetics which I might be jumping ahead of myself a little bit but it actually can be passed on to future generations so it can decrease your fertility but it can actually diminish future generation infertility even more. It actually expands.

Which is hard for people to get their heads, it just doesn't sound like it makes sense but it's just the reality. I mean we're finding this more and more now in science in research, this epigenetic phenomenon of kind of expanding health problems. A good example, Cate Shanahan wrote a book called *Deep Nutrition* and she's got a study in there about asthma.

Of course I have a number of studies in my book about epigenetics also and inheritance of epigenetics. But this asthma example is interesting. If your mother smoked, you have a 1.5 fold increase risk for asthma which makes sense. But, get this, if your grandmother smoked, you have almost a two fold increase risk for asthma.

That's assuming your mother didn't smoke. It's actually worse if your grandmother smoked than if your mother smoked because as the future generations go on, in some cases, the health problems actually exacerbate. It's because of these marks on your DNA called epigenetic marks. Like I say, it's a little bit ahead of myself because these artificial estrogens do the same thing but it's shocking.

**[0:24:57.1] AVH:** That is scary and it means that we can blame our ancestors for everything that's wrong with us. No, but isn't it also true then just to inject some positivity into this too that you can possibly affect your epigenetics as well right?

**[0:25:11.6] AJ:** That's what I was going to say, yeah, exactly. In fact, I think one of the reasons our parents were healthy but still eating a lot of the same chemicals that we're eating is because their parents and their grandparents gave them this incredible heritage of good health because they were eating organic because all the food was organic back then.

**[0:25:29.8] AVH:** Right, okay.

**[0:25:33.0] AJ:** You can do that for your kids too. I mean, sometimes it's amazing how much allergies are on the rise and you know, all this infertility, breast cancer's up 250% since 1980. I mean, all of these things that artificial estrogen cause, they're all on the rise but it's amazing how much you can improve your future offspring health by getting rid of these chemicals.

**[0:25:55.6] AVH:** Another big culprit I believe was sunscreen too which was kind of scary. Can you talk about that?

**[0:26:01.1] AJ:** Yeah, once again, I'll contrast Europe because in Europe, there's a chemical called 4-methylbenzylidene camphor and then there's another one called benzophenone, both of them are commonly found in sunscreen in America. I mean, virtually all of the sunscreen. If you go to just a store and buy the cheapest sunscreen, it's going to have a benzophenone and 4-methylbenzylidene camphor for MBC.

Those are illegal in Europe, they're so bad for you. Again, act like estrogen, go through your skin so and by the way, oxarbazole, a lot of people say, well what about oxarbazole? Well that's a benzophenone, it's in that benzophenone class, yeah, that's the same problem. It's in estrogen.

You've got to get zinc sunscreen, I tell people just get the zinc sunscreen and without those particular chemicals and you'll be fine. Zinc is natural, it's good, it works too.

**[0:26:50.2] AVH:** Okay, that's always helpful. All right, let's go back to the list, what are some things that maybe folks don't know about that we should be watching out for.

**[0:26:59.0] AJ:** Yeah, we've got, like I say, plant estrogen, mold estrogen we talked about, red food we kind of talked about. I mean, people, it's amazing how many athletes are drinking red food coloring and they're really obsessed with their testosterone but again, these things lower your testosterone. They not only lower your total testosterone by the way, they lower your free testosterone which matters even more.

Yeah, Atrazine we talked about, that's a herbicide they use on grains. Another big one is parabens which I barely mentioned but it's frequently found in perfumes and fragrances. They actually you know, in America, it's another one of these silly things. We were allowed to put things in our shampoo, our conditioner and just use the word "fragrances" and that just kind of means, all kinds of secret ingredients. They don't want to reveal their ingredients so they just use fragrance. Most of that is parabens.

They've got so many studies, I put them in my book of course, just mentioned a bunch of them and it's amazing how much parabens we have in our bodies. You know, in our pregnant fetuses, I mean, the whole thing. In fact, even polar bears in northern Alaska, they were finding they have parabens, high levels of parabens and it's because it goes in the ocean and it works up the food chain.

They did a study on 11 different polar bears, they all had parabens.

**[0:28:14.5] AVH:** Yeah, I remember reading that and it was very scary. All kinds of tests on animals in the ocean like fish, that are just full of this stuff. I mean, it shows how – I guess because, well let's talk about, we can't really talk about estrogenic without talking about birth control, right? Because that's got to be one of the biggest culprits and I guess it's also that element that it's not only affecting like the individual who is taking the synthetic hormone but also the larger community because then this hormone gets put into our waterways right?

I guess also, correct me if I'm wrong but it's because it's a hormone versus something else. It doesn't get like deluded, it doesn't die, it doesn't go away, it stays there. That's scary.

**[0:28:58.9] AJ:** I know. Well it's hard to filter those things out because I mean number one, I think the reason we've underestimated these so long in our recent history is because

nanograms per liter. Remember, nanograms that is a low concentration and I mean that is our natural estrogen is right? So even 50 years ago we weren't able to accurately measure male estrogen because it's so low. I mean it's a difficult thing to measure and these chemicals act at a really low concentrations.

And they're found in water at low concentrations but the problem is with birth control your body doesn't break it down, that's how it's designed. I mean chemists literally make birth control specifically so your body doesn't break it down. So it stays longer so it does a longer lasting impact. You urinate that out, it stays in the water supply and just ends up right back in your drinking water and by the way, just so people know because it's not all doom and gloom.

You can get rid of it really easily by using any kind of water filter that has activated charcoal and most of them do. Most of the water filters have activated charcoal. That gets all of these hormones out and it's worth doing especially if you live in a highly populated region, like I know you live in New York City I think. I was just in Boston, I mean anywhere there's a big city it's amazing how high the levels of birth control are in the water.

But the other thing that people should know is if they're out in the country in rural America there's a big problem with the herbicides especially atrazine and so even though it ends up in the drinking water even atrazine does and you've got to filter water out there. So in general I think everybody should be filtering their water and use activated charcoal.

**[0:30:32.2] AVH:** Cool, I actually just bought on Amazon these sticks, like activated charcoal sticks, that you can just literally chuck in your water glass. Because yeah, I read your book and I was so scared. We'll get into that about how to deal with this without being overly paranoid but I guess one question I have to – you say a lot of studies in here. There is obviously a lot of research being done. But a lot of the symptoms of synthetic hormones can be either vague or possibly attributed to other things too.

Like if you look at infertility issues, weight gain, even cancer, some of the stuff is like we live in a world that is so full of unhealthy lifestyle choices and toxic chemicals and bad foods. We are in the most convenient and awesome but also the most unhealthy kind of world that's ever been. So how can we pinpoint the exact cause of some of these problems? How can we say, "My

issues are a result of too much estrogen or these synthetic estrogens?” How do you figure that out?

**[0:31:37.5] AJ:** Well for starters, you just avoid them. I just recently talked to somebody here in Minnesota, who I never met but she had read my book and she was having apparently a lot of miscarriages. She's never been able to have a child, I mean totally not infertile because she would get pregnant but then she would have miscarriages and she literary after reading my book just completely overhauled all of her personal care products.

All of her food and that's one of the reasons I love paleo so much is because it makes it easy right? I mean eat your whole foods, eat your meats, eat your vegetables, you get away from a lot of these processed chemicals without having to overthink it. But anyway, sorry you're going to add something?

**[0:32:17.6] AVH:** No, I was just going to say yeah, I mean like you said in the book just by not eating a lot of grains you're avoiding a lot of the chemicals and stuff. So it's a good start.

**[0:32:26.6] AJ:** Yeah and it's amazing the health impacts but specifically with this woman, she did all of those things and boom, she carried a baby to term now and is a great story. That's the kind of thing that I see a lot but again like you said, it's difficult because with this artificial estrogens, they act like estrogen and that's a natural thing so that your body doesn't have – most of the time you don't have an allergic reaction or some really strong headache or something immediately noticeable.

And it's more of a long term thing that you see by not losing a miscarriage or again, by slowly losing weight. So yeah, it's not as dramatic. It's not as exciting but it's super important. I think the science is really clear about it. One of the other things that's super important is that all of these estrogens, these artificial estrogens, they act on the same receptor. They act in your body in the same way, so it's additive. So if you have some molds, if you've got a little bit of atrazine herbicides and birth controls.

Some parabens you are rubbing on your skin, these are just compounding the problem and they're all acting in the same way. To have these – like I said to give rise to these health

problems. So once in a while like I said before, it's okay. You get a little bit of exposure, you don't have to worry but the problem is the daily exposure is constant. With all of these different chemicals it starts to add up.

**[0:33:50.5] AVH:** Right and so it's safe to say even if you are not feeling the effects that getting rid of a lot of the stuff is relatively simple and it's a smart idea for most people. I guess it does parallel the paleo diet for a lot of people who live their life a certain way or experiencing maybe problems that they considered where normal. I know so many people who said, "I just thought it was normal to feel like crap after I ate or to be bloated all the time or to have weird digestion" and stuff.

It's not until you remove some of these things from your life and feel how you're supposed to feel better that you can start to see the differences.

**[0:34:28.4] AJ:** Exactly, yeah and plastic is another big one that I haven't even mentioned but I want to because people ask me about and if I don't mention it people say, "Wait, what about plastic?" It's definitely estrogen like BPA that's why it's bad. It acts like estrogen in your body and we talked a little bit about regulation before. BPA is unbelievable because when companies say "BPA-free" a lot of times they switch over to Bisphenol S.

BPA is Bisphenol A and they just switch to Bisphenol S, which is literally just as estrogenic. It's just as unhealthy but they can call it BPA-free and so there is a bunch of other analogs to BPA that they can also use with other letters. So you have to watch out with these plastics and even if it doesn't have any of the Bisphenol plastic, most plastics have phthalates. Especially plastic number one which is unbelievably common. I mean people go into their fridge and they pull out their juice or whatever.

And plastic number one in the bottom, it's the little recycling symbol, that's polyethylene terephthalate. Phthalate is the keyword, phthalates are artificial estrogens that's the other one in plastics and it's really pervasive and extremely damaging. I mean I personally think it's going to be illegal in the near future hopefully in the next 10 years or less but who knows with the way our regulation goes and all of that but often times Europe will drive some of these.

You know they will make things illegal and then Americans will start paying attention. So often times this is a grassroots movement, people start to become aware and the general population raised the awareness, they stop buying the products and the government finally comes through and makes it illegal. I hope that happens because phthalates are just unbelievably dangerous.

**[0:36:07.4] AVH:** Right and that's a good point about the BPA free thing because there was that kind of push for a while. BPA free plastics but it was still plastic. So would you say then that it's a pretty good rule, you want to be putting your food and your liquids in glass or stainless steel like any kind of plastic is probably better off avoided.

**[0:36:27.6] AJ:** Yeah, in fact the best numbers are numbers two, four and five. If you absolutely have to use plastic two, four and five. I talk about this in the back of my book again and you know I probably should mention too that in my book I have different plans right? For estrogenic avoidance, so let's say you're a pro-athlete well yeah, you want to be really more careful than most people really obsess about this because you need your testosterone.

You need to really perform, that one percent makes a big difference for you. So you want to have "the gold level plan" you really want to avoid these things. But for the average person I have three different levels of plans because some people don't want to be that extreme. They don't need to be that extreme and so yeah, you can use some plastics but you definitely don't want to heat anything in plastics and liquids are worse than solids of course because liquids, the molecules move around faster.

You get more transfer and one of the interesting things especially for people that eat paleo, because we eat a lot of good fats, is that fats bleed more of this artificial estrogen leeches into fats. So if you've got let's say olive oil stored in BPA, just as a random example and then you've got another container with water in a BPA jar, the olive oil will have a higher level of BPA. There'll be more BPA that leeches into the oil that leeches into the water because these things act like they're like hormones. They float on water, they prefer to be in a fatty liquid, does that make sense?

**[0:37:54.8] AVH:** Yes.

**[0:37:56.0] AJ:** So that's why for example when we have testosterone, these sex hormones, testosterone and estrogen, they require a protein to get around our blood stream because if you put testosterone or estrogen, natural estrogen I'm talking about, in water it floats on the top. It doesn't go into the water and our blood is like water. It's aqueous so you need a big protein, it's called sex hormone binding globulin, SHBG.

I call it in my book, I call it the limo service of hormones because it literally the hormone goes in there and it just drives around through your blood, but that's how it's able to do that. It's able to get in your blood because it goes into the limo but if you just had it in a glass of water again it would float. So these hormones they actually prefer if you put them in oil they would go right in. So there is more leeching in the fats and that's a huge issue because when we do scientific research, what do we do?

We store oils and fats, we give them to mice and we do research. We store oils and plastics, excuse me, and then we give them to mice and then who's to say that we're not studying the health problems of plastics or these other chemicals like with bacon. These pigs are on these terrible diets, they are eating moldy grains or eating all kinds of these artificial estrogen, you know soy, all kinds of chemicals and who's to say that bacon isn't healthy, right?

But when they do the studies what do they use? They use industrial bacon, they use bacon that's loaded with toxins. Again, when I say loaded, I am talking about nanograms per liter levels but these are relevant levels because that's where our hormones are at. So it's hard to detect unless you have really excellent technology and machines but they're there. Every time you do a study with good quality equipment, you pick them up and yeah, it's a huge issue with scientific research there.

**[0:39:42.4] AVH:** Yeah, I appreciated that you spent some time at the beginning of this book talking about the problems with studies and publication bias and errors and all of these things because while again this can add to the frustration and the fear that we feel as consumers and people who are just in the world being exposed to all of these stuff, it also is a reminder to just be very, very thoughtful and mindful and do your research before you purchase things and before you put things in and on your body right?

**[0:40:13.7] AJ:** Yeah, thanks for bringing that up. When I wrote the book, I wrote that chapter out of frustration because it's such a reality. There is so much bias within science. There is so much corporate influence and I needed to bring that up because that is the reason a lot of these artificial estrogens are so prevalent and a lot of them are touted as healthy. Soy, people have often told that soy is healthy and it's crazy to me and it's frustrating.

So I wrote a chapter but I thought the editors are going to take it out. I had a bunch of editors and only one of them was a PHD scientist, the rest were normal people because the book was supposed to be readable for normal people. I mean normal in a good way but –

**[0:40:53.4] AVH:** We all know PHD people, we know they're not normal.

**[0:40:56.3] AJ:** Yeah but I thought they were going to pull the chapter and actually almost all of them came back and said that was their favorite chapter which shocked me but I was glad because again, it's something most people don't realize. One of the examples in there I talked about and you'll probably remember this was that when you – with my PHD obviously I have published pre-reviewed papers in scientific journals and my PHD is in biochemistry for people who don't know.

But when I publish papers when anybody publishes papers, you go on these websites now and you submit your paper but when you do that, there's obviously forms you have to fill out with your name and your information and all of this. And one of the necessary required aspects of the application to submit a paper is you have to tell the journal who should review your paper. You personally select five people to review your paper and that's just crazy because you can literary stack the deck.

You can pick your buddies and yeah, maybe they are from Iowa and then one is from Virginia and one is from Florida, whatever but these scientists, we get paid by the government through these grants to go to conferences. So the world is small enough now where we can – these are our friends, these are our buddies, these are people that are like-minded and so let's say I love soy and I think it's beneficial or maybe some corporation influenced me to think that or whatever.

Let's say I just pull a bunch of other people that are like-minded and we can get a paper published because the reviewers that I select are all these of like-mind and that's an issue, right? So there's a lot of issues like that.

**[0:42:32.8] AVH:** It makes no sense. That makes no sense. That's like putting all of your friends on a jury. It's so weird.

**[0:42:40.5] AJ:** Exactly and people don't know right? I mean it's amazing how few people realize that because nobody wants to admit it within the scientific world because it's like a dirty secret. It's politics.

**[0:42:53.6] AVH:** Yeah, well if you change it then things are going to get a lot more difficult for a lot more people so.

**[0:42:56.9] AJ:** That's right especially people that are really well connected and really political at these major institutions and that's the frustrating thing and even grants are like that. There is a lot of politics within grants and funding. So you can be a phenomenal researcher and just get axed or just lose your funding steadily. Just bleed all of your money away because of the politics or never get funded. That's a problem because there's a lot of studies that need to be done.

Especially on artificial estrogens but you know what I mean, let's be honest, there's a lot of different areas here in our health within our country. Things need to be brought to light and some of these excellent researchers aren't even able to do that. You get your hands tied behind your back, politically.

**[0:43:41.6] AVH:** Right, so you've mentioned before like it's basically in the world we live in now, it's basically impossible to erase these estrogens completely right? Chances are you're going to come into contact with it in some shape or form, maybe even every day. You mentioned those three levels of commitment, the bronze, silver and gold lists of how to avoid this stuff in your life, depending on your level of investment and your level of need.

I thought that was interesting and even for example for the gold level plans, for those people who are being really into it and maybe athletes or whatever, it's not just charcoal filtered water

for drinking. It's for showering too and eliminating all kinds of things but I wonder if you could speak to us on a high level about the bronze, the introductory level plan. Maybe for folks who are just learning about this and are concerned and want to know more but aren't –

Or not like going full boar yet and maybe talk about – and you have mentioned a couple of things but talk about just some general high level takeaways, what we can do right now to start being healthier and getting some of these estrogens out of our daily life.

**[0:45:00.4] AJ:** Yes, some of these things I don't compromise on and one of those would be sunscreen because again, you are rubbing that directly on your skin. I also think the personal care products are pretty small price to pay for the health benefits. So everybody should be avoiding parabens and phthalates in their personal care products. I don't care what brand you use. I don't get money from anything with personal care products, with all of that.

But I do have a kind of suggestion page on my website. It's [ajconsultingcompany.com/whatiuse](http://ajconsultingcompany.com/whatiuse). It's all one word and I frequently point people to that because it's what I use. It's what I personally use. Again, I don't get money from any of it but it doesn't mean it's an exhaustive list. Every product that is out there that's good is on that list. So that would be a fulltime job and I don't have time for that.

**[0:45:47.7] AVH:** We'll make sure that is in the show notes too though because I feel pretty strongly about the skin care thing too because that's one of my side passions. I guess it might be the girly part of me that I indulge in but I know through my work and through my own research, a lot of natural and healthy skin care companies that are doing really, really good things. So that's out there. You don't have to compromise.

You don't have to say, "Well if I can't use this fancy stuff I am not going to have good skin care" that is absolutely not the truth so.

**[0:46:16.5] AJ:** Right, yeah exactly. So that's one of the things. I mean people eat corn but I don't think anybody should compromise on – everybody, if you are going to eat corn you should always eat organic corn. I don't care if you are struggling with fertility or not or if you have depression or not. By the way, it just came into my mind. It's random but one of the reasons a lot

of these artificial estrogens are ties to depression, they are associated with depression is because just think about pregnancy and how much fluctuation there is with the emotions and all of this.

I mean these hormones act in your brain and that's why these artificial ones they throw that delicate balance off. So it just came into my mind. I know it's totally random off topic but you know –

**[0:46:59.6] AVH:** No, that's good. That's all the good stuff.

**[0:47:01.6] AJ:** With a lot of these you find that parallel, you find the parallel between natural estrogens, high levels of natural estrogen with pregnancy and then how you can disrupt that with these artificial estrogens. Regarding which products you should and shouldn't, the priority of some of these things, I also think nobody should use red food coloring. There is no excuse, no artificial red food dyes. You can use beet juice if you want to color your products.

It's not that difficult to avoid but it's amazing how many people are eating red candies or even salmon. Sometimes they put Red 40, red food coloring in salmon.

**[0:47:46.3] AVH:** It's insane.

**[0:47:49.1] AJ:** I know. It drives me crazy yeah.

**[0:47:50.4] AVH:** And that's the kind of thing that people would never assume. It's one thing if you are buying cool aid and stuff like that, you know that's not coming from nature but when you are buying fish, you're probably assuming that there isn't added dye. How do you figure that out? You have to look, you have to find an ingredient list on salmon now to make sure that there's no dye in it?

**[0:48:10.4] AJ:** You do, yeah. You've got to check the ingredients yeah.

**[0:48:13.2] AVH:** What a world we're living in.

**[0:48:15.1] AJ:** I know and it helps if you get the wild caught stuff. So it's already pink and people should be getting wild cut salmon anyways because the farm raised they're just eating a bunch of soy and then all of the bad fats from corn and soy and all of that, they just end up in them. So instead of eating DHA like you would if you are eating wild caught salmon you end up just eating corn and soy fats with the farm raised salmon.

So there's all these other problems too. So you know hopefully people already are buying wild caught salmon but yeah, it's nuttier. That means you have to check the ingredients. You always have to worry about mold these days because our food industry, we store things in bigger and bigger silos and storage facilities so there is actually more and more mold and I personally am convinced that at least one of the biggest reasons we have so much allergies.

Especially peanut allergies and things like that because we are causing leaky gut and these molds are causing our immune system dysfunctions including the mold estrogens and the grains are a big problem. I mean you need to think to yourself, "Can this be moldy? Can this product have mold contamination?" If it can you want to be a little more careful with it even if you're not a professional athlete. Even if you're not struggling with fertility or whatever. I think in general people should be avoiding grains.

**[0:49:34.3] AVH:** So that's why we also have to be really on top of our two favorite things in life, coffee and chocolate because those two are the things that can really carry a lot of mold. I think you recommend in a lot of these on the list to go for this higher quality for both of those thing because they are pretty bad culprits in terms of mold right?

**[0:49:54.2] AJ:** Yeah, for sure and I was going to say the children's products. You do want to watch out for those especially. Anything you are exposing your kids to whether it be chocolate, whatever, anything grains, all of these stuff. I think in the case of children you want to be more vigilant because their hormones are even more sensitive. I was just thinking coffee of course, you don't have to worry about that with the children but you know what I mean. In general all of these things, you want to take it up a notch with the children too.

**[0:50:24.0] AVH:** Yeah, got it. Okay, all right so if folks want to hear more and I am sure they will because I actually remember I posted this book on social media, on my Instagram page saying,

“I’m reading this, I am going to interview this guy soon” and people are like, “Oh boy this book I need to get on this. This is scary but I can’t, I need to read it.” So I think this is striking a core with people and I think that people are ready to hear it.

You told us your website before but where can we find you online, on social media and where can folks get this book?

**[0:50:56.3] AJ:** Yeah, thanks and thanks for posting it. That was before I was even on Instagram.

**[0:51:00.3] AVH:** Yeah, we’ve got to be friends here on Instagram and get things going. I got to see the fish video, you know?

**[0:51:05.8] AJ:** Yeah, I think I linked up now because I just started the page but yeah I am Anthony G Jay on Instagram. I love it. I’m @anthonygjay on Twitter, that’s all one word of course. I have the consulting company, I do a YouTube channel every week where I just talk about – I try to simplify one or two scientific research papers and not just any topic. I feel inspired to talk about, it might be grains, it might be salmon, anything.

Whatever it is in the news, whatever I feel like I just talk about it for a few minutes and try to make it relevant to people. I just have fun with that. I loved your comment by the way. Before we sign off here, I loved your comment about my book. I can’t remember exactly what you said but at least you emailed me personally and said something like, “It’s the most frightening thing that I have ever seen but it’s also...” I can’t remember exactly how you worded it.

**[0:51:55.1] AVH:** I mean you laughed to. It scared me and made me laugh. That’s the best you could hope for in this world today right? Along with the terror, you get a little bit of the humor and I know, I appreciate that. It makes it very human and I will say this book is a scary book and I think sometimes knowledge is scary but it’s very human and it’s hopeful and it gives you lots to do with it. It doesn’t just say, “Here’s how messed up our world is, we’re all going to die”.

It says, “Here’s how messed up our world is but here are all the things that you can do to take control of that.” I think that that’s really important to thank you for doing that and tell us again a little bit about the new book and when can we expect that to be out?

**[0:52:38.5] AJ:** I am actually writing a book about Epigenetics right now and that’s a shorter book. It’s actually written as a discussion like a chat. I’ve got a fake character I named Skeptic and I –

**[0:52:49.1] AVH:** This is going to be super entertaining. I can’t wait for this one.

**[0:52:51.7] AJ:** Yeah, so I just go back and forth with Skeptic. So that’s going to be a really quick book and I am going to come out with that within the next six months but my *Blubber Brain* book is going to be another one that is similar to this *Estrogenation* we’ve been talking about. It’s in that same series, that’s going to be a bigger book. Not huge obviously just a normal size book I should say. Just not a small book and that *Blubber Brain* is going to be probably about a year from now. So hopefully we can talk again soon.

**[0:53:18.0] AVH:** Yeah, I will definitely get you back on the podcast for that one. I actually might do some fishing this summer. So I am going to keep you posted and you can give me some pointers and see if I can learn a thing or two.

**[0:53:29.0] AJ:** Yeah, that’s the way to go.

**[0:53:30.8] AVH:** Alright Anthony, thank you very much for your time and enjoy the rest of your day.

**[0:53:33.6] AJ:** Thanks Ashleigh.

[END OF INTERVIEW]

**[0:53:35.5] AVH:** Alright, that was the author of *Estrogenation*, Dr. Anthony G Jay with a useful reminder that just because something is “natural” doesn’t make it healthy which is something worth remembering for us paleo folks I think. Who would have thought lavender,

seems like such an innocuous thing could have such a nasty effect on our hormones or marijuana for that matter? Thank goodness he didn't say we couldn't drink coffee.

I mean he does say we've got to have good mold-free stuff which is smart but if he said we couldn't drink coffee that might have been too much to bear. But he does give us hope right? Which is good and that reminds me if you haven't picked up our copy of the August-September issue of Paleo Magazine, make sure you do. There's lots of great articles in this one including a piece on how to get the most out of your coffee, which makes sense because we're all going to be drinking it.

We are all slave to it anyway, you might as well figure out how to make the best of it, pick the best stuff so that's a great article and we've got lots of other articles about biohacking and technology, from folks like Mark Sisen and Ben Greenfield in there too. So go pick up a copy or you can subscribe at [paleomagonline.com](http://paleomagonline.com). If you have any questions on this podcast or any others or have suggestions about any future podcast guest, please feel free to send us a message on social media @paleomagazine.

Or my personal Instagram account @themusclemaven because we love to hear from you and another shout out to our show sponsor, Clean Maid Market and Clean Food Fest. If you want to check out this awesome two-day health and wellness event that's happening this October in LA, check it out at [cleanfoodfest.com](http://cleanfoodfest.com) and you can learn more there. Next week we are talking to Chef Sarah Russo. She's a private chef and also the culinary manager at Pre-Brands.

Which is a company that offers grass fed, grass finished beef. She specializes in cooking for people with food allergies, dietary restrictions and other wellness goals. She's been a personal chef for professional athletes so maybe I will bug her and try to get her to give up some details because of course, that's what we want to hear and I had a chance to talk with Sarah once already at Paleo (F)X. She's so knowledgeable and friendly. I know this podcast is going to be a great one. So make sure you're subscribed to Paleo Magazine Radio on iTunes or Stitcher so you don't miss out.

[OUTRO]

**[0:55:48.2] AV:** Paleo Magazine Radio is brought to you by the Paleo Media Group and is produced by We Edit Podcasts. Our show music features the song *Light It Up*, by Morgan Heritage and Jo Mersa Marley, and on behalf of everyone at Paleo Magazine, thank you for listening.

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