Friday Edition For Your Health Part 2

**Michael Heminger**

This is the Friday edition on KID E Hoopa Tribal Radio. We continue our discussion with Yolanda Latham and Doctor Robert Moore. As we covered quite a few topics For Your Health. We had talked in the preview about plastics, microplastics.

**Michael**

Now, that's something that you may have heard on TV and on the news, but we have it here.

**Dr. Moore**

Yeah. So, plastics are, are, are, are derived from petroleum So oil and there.

So, it's, that's what the, it's, that comes out of the ground as oil.

And one of the products in addition to gasoline is, is our plastics, they've been around for a little about 100 years or so.

So, they, when they were 1st developed, but there and there are many different types of plastics, vinyl and Styrofoam.

There are many, many some people are not sure when something is a plastic or not just by looking at it because natural products can look like plastics. Like rubber is, looks like a plastic, but it's a natural product. Latex is natural for instance.

But what we've started to find are two major issues with plastics. One is they last a long time in the environment and don't break down very well. Most of them, there are some that break down quicker, but most of the ones we worry about don't break down and they can cause a lot of environmental problems. We've known about that for a while.

We've heard about, there's a huge area of the Pacific where the, the plastics that are floating around tend to collect. And it's miles across and which is just really very sad that our ocean has, has that the, the plastics often come from rivers, they get carried down through the rivers.

And particularly if you look at a map across the entire world where the, that looks at the, the content of plastics it comes from in developing countries. There's a lot more rivers carrying plastics down. There's a lot less in, in around the North Atlantic Coast.

But it, but there is so it's not as associated with river waste, but there have been times when big when in an effort to not fill up landfill, cities will, will sell their plastic to a company that says they're going to send it off to China and recycle it and then it gets sort of dumped in the ocean and, and, and that accumulates there.

So that's a big issue that affects one of one of your very important sources of food and, and, and spiritual comfort, which is the salmon lives out in the ocean.

So they, they can absorb small and microplastics are when the plastic breaks down into smaller and smaller pieces, and, and they can be so small that you can barely see them. So the idea is it not just the big microplastics, like a big plastic milk jug, that's a problem that might see in an ocean. But if you just scoop clear looking ocean water up and analyze it, you'll find all sorts of little particles of plastic that are contaminating it. And again, it's related to its proximity to that source of plastic.

So it does dilute if you go in the middle of the ocean, it's more diluted, but it tends to be more, more near the sources of water. So before this year, we're sort of speculative whether there was a human health effect of, of plastics and microplastics, we knew about the environmental effect.

But this February in the, in one of the more prestigious medical journals, the New England Journal of Medicine, they published a study where cardiologists who were removing plaque from the inside of the heart, examined that plaque for the presence of microplastics. And they found that some of the some of the plaques from, some people had microplastics and other individuals did not.

Now, I will say that the plastics manufacturers found just like the tobacco manufacturers found people to say that smoking was fine. The plastics manufacturers have now said, oh, no, there were problems with that study.

But if, they're trying to sow doubt on, on the, on the veracity of this, but I'll just set that aside. They, then these cardiologists then looked at what were the outcomes of those patients who had the microplastics in their heart versus the ones who did not? And they found that the outcomes were worse for those patients who had the microplastics in their heart.

The big questions, there's a lot of questions that they're studying now that will be published in the next couple of years, which is what was the cause of some to have microplastics in their heart and some not that's not known yet. And I think it’s probably known, but they haven't published it yet. That's still to be determined.

And also, what was, what's the mechanism for this increased bad outcome? Does it, is it because there's more clots? Is it, does it cause more plaque production? We don't know that either but, but that was a bit concerning and to me, it's a bit of a wakeup call since plastics are bad for our environment, which is again, if we're trying to be stewards of our environment, then we want to figure out how can we reduce the use and production of plastics?

And now, now, also there's this health effect. So if, if it wasn't good enough that we should be cared for environment, we can worry about ourselves. So, so I would, I would, I would try encourage people to find ways to not to reuse the plastic containers rather than letting them get in the landfill.

If you, if you do use them and if you have a choice between purchasing something in, in glass versus plastic to, to go with the glass option, there's often a lot less choices or aluminum cans are, are, are as well. Those are recyclable and they, they won't, you won't get the small amounts of that one.

Interesting little tidbit though. You know, the, the, the paper cups, if you go to a coffee store or something, they have paper cups that miraculously, the liquid doesn't go through the paper. Well, that's because there's a thin layer of plastic on the inside of all those paper cups and the plastic does come off a little bit into the cup. So, if you, you should, ideally, if it takes a little discipline and I'm, I'm not 100% myself, but I'm trying to be better is to get some kind of, like a metal seamless steel. Yeah, that's reusable.

And if you bring it to most coffee places are happy to, to use that you want to clean it out ahead of time.

6:09They'll, they'll, they'll prepare the drink in whatever, you know, container they have, but instead of pouring it into a paper cup, they'll pour it into your ceramic or, or, or insulated metal or glass and then hand it to you. And that's one way to help reduce your exposure to plastics and, and those paper cups when they go to compost, you just get a whole bunch of, of, they don't really compost. if you were to use that compost in your garden, it's just loaded with all those plastics that are on the inside of the paper cups.

**Yolanda**

That doesn't make me feel good because I buy a lot of coffee. I love my coffee and now I'm thinking

**Michael**

a cup in your car.

**Yolanda**

 I gotta keep a couple cups in my car. Now, I think that's a change that I'm going to be doing now.

**Michael**

I don't know if you notice I have an espresso machine here. So I, I get that taken care of, but when I'm out and about, I typically get the iced mocha. So that's at least that kind of plastic, whatever that is in the cup. That's just creepy. Maybe that, maybe that's it. Maybe that's where we're getting all the plastic from that.

**Dr. Moore**

That's one thought. I mean, it would be interesting. They have to do that. It's, yeah, I'm quite certain those cardiologists, they, at the end of their article, they said we need to study what the difference is.

But they, there's always a lead time. I'm sure they know the answer. They're just, it's cycling through its analysis and publishing cycle, but that will be published soon. That'll be interesting.

**Michael**

I predict that we will find out that it is,, it's in the fish and thing, as you said, it only breaks down just so far. It doesn't get down to a molecular level. It's pretty small but it's still there and it, it is in everything and we're going to be having some people, fewer and fewer who don't have plastics in their bodies and the majority of us will have plastics in our bodies. And I'm not just talking about the first world, second world, everybody, there will just be some people I think that don't know.

**DR. Moore**

And I think that getting, getting back to this value of being stewards of, of your environment which I so much admire in, in, in in American Indian culture that the one of the part, one part of that is to avoid the use of plastics.

And I've noticed when I'm out and about interacting that it seems to be a, a common, a more and more common phenomenon when we, when we were at the brush dance at Sug Mec Park, they, they were using very, the, the durable the kind of plastic that doesn't like come off in your food and stuff, but very durable, sort of fluorescent green plates, cups and forks. And they said we're going to wash all these and use them for future ceremonies. We're not gonna put them in any landfill. So at the end of that, the, you know, the napkins are biodegradable and all the food that was, so they had compost and we washed dishes and, and no landfill at all. It was really nice to see that.

8:50And I think that that's to be celebrated and, and, and and appreciated and and everyone should be proud when, when, when that value is, is, is sort of stated and demonstrated in your, in your, in your ceremonies.

**Michael**

Generally speaking as a culture, we don't really respect mental health very much. It's getting better, but it's probably not where it needs to be. Where would you see, what would, what would you say would needs to happen for people to get a better outcome in terms of their mental health, whether they have depression, anxiety? What do we do?

**Dr. Moore**

Yeah. So again, it gets to that prevention, early detection and treatment. There are, there are definitely excellent treatments.

The biggest, the biggest treatments for those are therapy and in some cases, medication in terms of treatment and there's other interesting I would call them ancillary treatments, exercise, trying to decrease the stress in your life, the sources of stress and so on. So those are ways to treat it on the prevention side.

Trauma, trauma is a big is a major cause of that and there's multiple levels of trauma. One is a big one in Indian country. Is-- that what we, what we refer to now as transgenerational trauma when, when your grandparents had a huge amount of trauma that affected them, that, that's hard for that not to affect your parents and then you and then your kids that there, there's a, there's, there is a a change that is made in, in sort of the, the dialogue that goes on.

But furthermore, there's now studies to show there's something called epigenetic changes, which is, and it's not that your genes change. But if someone is exposed to severe trauma, the genes are, are proteins attached to the, the genes in such a way that they are now different and they express different and that can be translated from one generation to the next. Very interestingly. So, so that's, and so that's, that's difficult, the best way to get through that is through building resilience and, and trying to build self esteem and so on like we talked about earlier.

 Then the other kind of trauma, of course is childhood trauma. What we now have a term called adverse childhood events or ACES, and kids who go through various types of trauma, whether it's abuse, it could be physical abuse or sexual abuse, but it could also just be you know, divorce or in continuity of relationships, illness. So there's a variety of, of sources of, of that trauma, but that the child's brain is developing.

Actually. here's a little tidbit and I told my kids, your brain isn't kind of mostly developed until age 25. So when your kids think they know everything as teenagers, as a doctor would tell, no, no, you brain, you're still immature until you're 25. So just know that and then just, you know, accept that that that's the case and then we'll talk about why you need to listen to me.

**Michael**

So anyway, and you needed to go to school now because if you go later, it's gonna be hard, you're able to learn now. So take advantage.

**Dr. Moore**

That's very true because your brain has plasticity, you can learn more as a young person. But because of that Children who are exposed to trauma, their brains are affected by that. And so that and that can last into adulthood. So the residual effects of that trauma. So what does that mean?

We need to do? We need to try to reduce and minimize the exposure to trauma for kids as a prevention and also find ways to help build their resiliency if they've already had trauma or if you know that they will be exposed to trauma, build their resiliency so that they come out of that stronger rather than weaker and come out of that experience differently. So I think preventing and being sensitive to the different forms of trauma. And again, the two big ones, childhood trauma and transgenerational trauma are, are really,, are really, really critical and then building.

And then another prevention technique is just being busy. Physical activity, good, good diet and social interactions are, are, are good prevention as well.

**Michael**

So the idea that the medical establishment had in dealing with pain in the nineties meant, oh, well, let's give you some painkillers. Let's give you this wonderful new drug. Now, we're kind of paying for it because these drugs, you know, you know, are addictive and you have people who are, have addictive personalities that have been, they have been given these drugs. Now, they can't get the drugs anymore. They turn to heroin.

What do we do with addiction? How do you, how, how is the best way to,, approach addiction in a holistic fashion?

**Dr. Moore**

I don't know if I have the best way, but I let me just start with the, I'll start with just an affirmation of what you said. You know, I, I've been practicing medicine for about 30 years from, from finishing residency and,, the, when, when, I still remember with the, the drug reps coming to my office and telling me that, you know, that you can, you can use this brand new opioid. It's a, you know, it's a prescription opioid and there's no risk of addiction. And here's this, there's the study to prove it. It was in the New England Journal.

There was a study that showed that, that people don't get addicted to this. And then it was later found that it was the, the study they were quoting, didn't actually show that it was a, it was a, the study that was quoted was actually just a letter to the editor and it was,, it was a letter to the editor about hospitalized patients who are on opioids for short periods of time had nothing to do with it.

So the company deliberately had their reps misrepresent that and I was somebody who in retrospect was overprescribing opioids because I, you know, I, I didn't have the science to, to back me up and, and then, then I had to work to and unfortunately, the opioid was a gateway drug in the sense that once somebody is exposed to it, a certain percentage of people when exposed to an opioid will find that that opioid, it, it takes care of need. It's a, it's like a, it doesn't just help with physical pain, it helps with psychological pain.

So if they've had traumatic events in their childhood, the opioid makes them feel less bad and they don't. And they, and so then that then in turn leads to a physical and psychological addiction. So that was a gateway drug, unfortunately.

And more recently, the, so we did work hard to stop the, the overuse of prescription opioids and that's been very successful between around 2013 and 2017. The prescription opioids went down by 90% in, in our partnership population. So, but as you note, because it became harder to get the prescription opioids, people who were, who had gone from taking them as sort of a recreational drug to being addicted, they switched to, to heroin.

And then more recently, fentanyl is a lot cheaper than heroin. But the problem with fentanyl is that the dose, a tiny difference in dose can be fatal versus, you know, equal to heroin versus not effective. And it's literally, you know, a AAA size a piece of an amount of fentanyl, the size of a grain of rice can kill you. I mean, it's super potent.

And so, so unfortunately, that's been the bigger increase of overdose deaths has been due to fentanyl. It does have its roots going back to the over prescription, which again, we've solved the over prescription, but now we're, we're living with this residual effect. And it's very difficult, Medication Assisted Therapy for at least for opioid addiction is the best way. So what we do with Medication Assisted Therapy is you take a type of opioid buprenorphine which is not susceptible to overdose. It's, it's almost impossible to overdose on that. It does give your brain enough of the opioid effect that you don't feel the withdrawals. But more importantly, it's not, you don't get the highs and the respiratory suppression as much. So you don't die from it.

And people on a chronic dose of buprenorphine can function well, there are people in Medication Assisted Therapy who go get their dose and they're working all day long, they're working as receptionists, they're working, they're able to hold down jobs and. So, Medication Assisted Therapy for at least opioid addiction is helpful.

Unfortunately, the other drug that's, that's come on the scene in parallel with fentanyl and heroin, which is much harder to treat is methamphetamines and methamphetamines are also produced inexpensively. They used to be produced in like meth labs, but now it's so cheap to get it from Mexico that the distribution system is so widespread. People are blowing themselves up if they were trying to make it themselves. So it's a lot easier to just buy it from a dealer.

Methamphetamine has a more powerful effect on the brain and is really difficult. If you had the best possible treatment. If you had great therapy and put every everything that you have, to bear on a methamphetamine addicted population, you'll be lucky to get 30% off of methamphetamine. It is hard and it is pretty devastating.

There's a part of the brain that is the pleasure center of the brain and dopamine is the chemical you've probably heard about that. This is the chemical that is released when something makes you feel happy, you get a little tiny dose of dopamine. If you have something that tastes good, you get a little dose of dopamine. And if someone says something nice to you, you get a little dose. Well, the dose of dopamine that happens with the use of methamphetamine is 100,000 times higher than those little doses we get every day. So it wipes out your ability to feel that pleasure of all those everyday things and it becomes very difficult to get people off.

So the best we have would be treatment through substance use treatment programs on the medical side. But I have to say that in the end of the day, there's a lot of other factors that can help people get free of methamphetamines. It can be family, it can be culture, it can be community. And so there's other factors that everyone is individual, but we need to come together, But unfortunately…

Medication Assisted Therapy for opioids, that's the best way to go. Clearly, you can get 90% plus remission and control and people can live normal lives, but with methamphetamines it's going to take a wider approach to really help with that.

**Michael**

How do the happy pills? How do they, do they deal with serotonin or do they deal with dopamine?

**Yolanda**

Like the Prozac? And I wanna say Prozac, there's other ones.

**Dr. Moore**

Yeah. Yeah. No, not, it doesn't make you, it doesn't stimulate the dopamine. And so that's why it's not addictive really.

**Michael**

So, because of that, because of the, that's where …

**Dr. Moore**

The dopamine is the pleasure, pleasure hormone. Yeah, there's other, there's other hormones that make you feel good. But the dopamine is the one that's, is the really powerful one that's involved in addiction.

It's an addiction of any sort, addiction to gambling. You get a dopamine rush when you win but then a gambler, interestingly, as opposed to. So if, if Yolanda who's not, doesn't have an addiction to gambling, I don't think. But if she were to go and play a little blackjack and she won, she'd feel a little dopamine rush and if she lost she wouldn't, she'd feel sad.

But interestingly, a person who's addicted to gambling gets a dopamine rush if they win or lose. So, yeah, they get, they get the dopamine rush either way. So that's, it changes the way their brain chemistry is.

**Yolanda**

So after, I guess I have a question, if someone,, you know, has long term,, you know, they start using opioids,, I don't know if I read it in a magazine but are there changes to the brain after long term use? And, you know, are they like a, is it a nervous system impact or like comprehension impact? Like what, what impacts to the brain occur for long term? Like, so you, you were addicted for a period of time in your youth? You know, how do you, how do you, how does that….?

**Dr. Moore**

It's a great, it's a great question. I would, I'm gonna do an analogy that may help, but it definitely changes your brain. Let's say you have a grassy field. Ok? And you walk across that grassy field, you're the first person to walk across it, the grass. You know, if you look back, you might see a few footsteps, by the next day, you don't notice any steps. But if you were to get 100,000 people all walking in that grassy field, single file, you're gonna have a trail with no grass and dirt there, it's gonna be devoid of any grass. And then if you were to stop the people, you're still gonna have that trail there for maybe a few years afterwards. That trail is well built. Well, when your brain, when you're addicted certain pathways in the brain get kind of used excessively. And when you stop using them, when you try to go off drugs, it's there ready to be reactivated. It's like that trail that's still present. You can look at the field and say there's my addiction trail ready for me to walk on. It looks so easy for me to just walk across that field on that trail rather than through the tall grass. So your brain is ready.

So you have people who are, who are and most people who are former addicts really realize this. That they’re one step away from falling back into that path. And, and sometimes the pathway relapse is because they don't try to talk themselves out of the fact that they will relapse that they'll avoid the path.

So yeah, that definitely changes and it means that you have to be very vigilant. Some folks feel that over time just like that grassy field will eventually grow over that, that that pathway does heal over time, but it takes weeks to months to years, it gets better and better over time.

**Yolanda**

That's good to know.

**Michael**

Yeah, we covered so many things. Is there anything that you wanted to bring up in particular?

**Dr. Moore**

 Yolanda?

**Yolanda**

I just like to, to tell anyone out there that's doing public health work. Thank you for doing all the work that you've done, especially all those that work through the pandemic. I always say we, we earn stripes that we probably won't ever see pinned to our lapels.

But, you know, doing the work for health care during that time was really tough. But more importantly, prevention, anyone out there wants to help Indian country or, you know, do you know, improve the health of American Indians, prevention, prevention, prevention, prevention and education, prevention and tactical skills. Everything revolves around prevention.

Get it, get it in early, get it in often and share as much as possible. There's never enough prevention, especially in media campaigns. And with our young people, you know, start them young, you know, preschool age, start the prevention campaigns, just start them, never stop them.

If you're going to find something, fund prevention that, that is so important. People need to read it, see it and almost say I'm sick of it then, you know, you've done your job if they're like, I'm sick of seeing that sign and it's like, I'm glad we're having this discussion.

Tell me more. Tell me more why this is a problem because, you know, then, you know,, I always say, you know, if you're having that discussion, then you've kind of done your job, you know, 1%

**Dr. Moore**

just to build on that also, you don't have to necessarily, I mean, we work in a whole health care delivery system on a big level and we're making changes that will impact lots of people. But every single person has a family group or a social group or neighbors that they can help and knowing that they, that any one of us just by being kind to each other is helping with their mental health and with their prevention.

So finding ways to look at your environment and to be involved and to really lean in. I remember when I first met Yolanda, she told me a story. This was during COVID and she said that, oh yeah, one of, an elder who's in your family came over and chatted and she made tea and they talked for three hours and at the end, he agreed to go get his vaccine.

So she, it took three hours to talk him into it, but she's willing to invest that time. So we all have the ability to influence those around us.We just have to make that a part of our, our commitment to our lives is to really help the in our, in the people immediately around us to do to do what we can.

And if, we all did that, then those of us who work in the health care delivery system on the top, we're gonna have a lot easier time. If the rest of the community is, is doing that, that advance work for us.

**Michael**

Yolanda Latham and Doctor Robert Moore, thank you for joining us on the Friday edition this week.

**Yolanda**

Thank you, Michael.

**Dr. Moore**

Thank you.

**Michael**

Thank you for joining us for the Friday edition, a public affairs presentation of KID E Hoopa Tribal Radio. We thank you for listening.