



## **Anthrolactology Podcast Season 1**

Episode 2: Milk Sharing & More with Dr. Aunchalee Palmquist

February 26, 2020

### **Episode summary**

In our second episode of *Anthrolactology*, Dr. EA Quinn interviews Dr. Aunchalee Palmquist about her research on human milk sharing in the United States. EA rants about how bad direct-to-consumer milk volume home-test kits are, and the two cringe over the marketing of a new company that claims it can “take the breast out of breastmilk.”

At the end of the transcript you’ll find links to blog posts and other resources mentioned in the podcast!

### **TRANSCRIPT**

**EA:** I've got a couple more minutes.

**Aunchalee:** That's fine, I'm not in a hurry [*laughing*]

**EA:** I was hoping my pump wasn't, it's under my desk under the trash can with blanket over it and you can still hear it. [*both laughing*]

*[Music] This is Anthrolactology, a podcast about breastfeeding, science, and society*

**EA:** Alright, hello and welcome to the February episode of Anthrolactology with your hosts Aunchalee and EA. This month we will be following up on what we did last month where we talked to me, that's EA, about my research. And, we're going to be interviewing Aunchalee about her research. And, I'm really excited to get to talk to you about your research, Aun, because you know, I think your research is awesome! And, I think our listeners are totally going to agree! So, the podcast will follow its usual format. We will interview Aun, we'll talk about some new things in the news, have a little technology rant. It should be a fantastic time! So, are you ready to do this Aun?

**Aunchalee:** I'm ready. Let's do this!

**EA:** Alright, excellent. So, tell us a little bit about your research and what you do in the world of anthropology?

**Aunchalee:** Ah, what I do in the world of anthropology, is, well I'm a medical anthropologist.

And, that is a subfield of anthropology, broadly interested in human health and well-being. Medical anthropologists study lots of different things, but, I guess one way to describe it is, the anthropological study of the body, different ways that people in different cultures and societies think of the body, think about health and illness, use different kinds of medicines and therapies to address illness and disease. And, as a medical anthropologist, I'm really also interested in understanding why some people stay healthy and some people get sick, in terms of the social factors that sort of determine different patterns of health and well-being.

**EA:** So, how does that connect with the world of lactation?

**Aunchalee:** So, I am, as a medical anthropologist, really interested in maternal and infant health and infant feeding practices. I should also mention that I'm trained as an international board-certified lactation consultant, as an IBCLC. An IBCLC is a health care professional that specializes in the clinical management of lactation and infant feeding. Although, IBCLCs also work in community settings and in private practice.

I'm interested in, you know, all issues related to understanding differences in ideas about lactation, about the body, the cultural ideas around infant feeding, why some mothers make more milk than others, different kinds of infant feeding practices, and different kinds of strategies and belief systems around infant feeding.

**EA:** Awesome! So, tell us a little bit about your research. So, what do you study within the world of anthrolactology?

**Aunchalee:** I study quite a number of things, but most of my work is centered on this thing called milk sharing. [*laughing*]

**EA:** Yes, let's define what milk sharing is. Yeah. Cause you know, I'm a huge proponent of it. So, tell us what is milk sharing, and why did you decide to study it?

**Aunchalee:** Milk sharing is a term that is used to talk about an infant feeding practice in which one parent who is lactating gives their milk to another parent who wants to use that milk to feed their baby. So, it's sort of a modern take on what historically, and in a very deep evolutionary sense, would have been cross-nursing or shared breastfeeding, and, and kind of uses modern technology and social media platforms and different things to facilitate this practice of giving milk to a baby to whom you did not give birth.

**EA:** So, why as an anthropologist do you study milk sharing?

**Aunchalee:** I got interested in milk sharing because I, well I learned about it by Googling.... I was using Google to find out some more information about tandem nursing. Sort of how do you breastfeed a baby when you're pregnant and how do you continue breastfeeding both babies after you give birth? 'Cause I was newly pregnant when my first child was only like 10 months old. So anyway, I was Googling about, about tandem nursing and stumbled across this article with a headline about milk sharing. And, I had never heard of it before, and it sort of caught my attention cause it was like, 'the FDA cautions mothers around sharing breast milk 'cause it's dangerous!' And, I got interested in, you know, for one thing, why is the FDA making a statement about,

you know, infant feeding, this sharing breast milk, and also why are people sharing breast milk, and what does that mean?

And, I think just kind of delving into these practices, thinking as an anthropologist, it's sort of like, you know, understanding those knee jerk reactions around how dangerous a practice might be without very much information. Because, at the time it was a lot of hearsay about what was happening and you know, none of the guidance was really coming from a place where people were informed about what was happening.

**EA:** And when was this?

**Aunchalee:** This was like 2010.

**EA:** Okay.

**Aunchalee:** Yeah, I wanted to know what milk sharing was. I wanted to understand what was happening. I wanted to really, I wanted to get to the heart of why some mothers who were choosing to breastfeed or provide milk for their own baby were able to do so, and not just have enough milk to feed their own baby, but have enough milk to donate to a milk bank or to share with other parents, like sometimes, you know, enough surplus of milk to feed two or three other babies. And, then why some mothers and parents, um, were seeking breast milk.

**EA:** And so, when you're talking about milk sharing, what you're talking about is peer-to-peer milk sharing, not women who choose to donate to banks, correct? Or did you also study women that are choosing to donate to milk banks? And, can you just kind of briefly tell our listeners what the difference is between donating to a bank and donating through like a peer to peer network is?

**Aunchalee:** Sure, donating to a milk bank is similar in a sense to donating blood to a blood bank. And, these are places that collect, donations of human milk, pools the milk together, pasteurizes it, and typically, sends it to neonatal intensive care units so that very medically fragile babies may receive human milk in a case where their mother/ birthing parent is not able to provide enough milk to meet their nutritional needs. And, for this really fragile population, human milk is a life-saving therapeutic intervention, because very preterm infants and fragile babies, low, very low birth weight babies don't tolerate formula. They can develop a serious and deadly illness called necrotizing enterocolitis. So, milk banking really supports this population of highly vulnerable infants. And then, milk sharing is a related, but different kind of practice because it, it involves a relationship between parents, who are negotiating a gift exchange of human milk.

**EA:** So, before we go on, let's just for clarity, go over all the different terms. So, we've got milk banking, which is largely a non-profit enterprise whereby women who have an abundance of milk donate to a milk bank, they're screened like blood donors, and all the milk is pooled together and given primarily to medically fragile infants.

**Aunchalee:** Yes.

**EA:** Then we've got for profit entities that are compensating donors, a.k.a. buying milk and producing a product for NICUs.

**Aunchalee:** Yes, but for-profit companies, they may make things like human milk-based products. So, not necessarily, pasteurized donor human milk for the NICU. But, they may do other things with that milk.

**EA:** OK, good point of clarity. Then we've got milk sharing, which is peer-to-peer gifts of milk, which is primarily what you're gonna be talking about. And, then we have like selling of milk. Like Craigslist, 'give me your coffee table and I'll give you some breast milk?'

**Aunchalee:** Yeah, exactly. *[laughing]* Or no, I mean, yeah, there are lots of different markets and different reasons why people might want to purchase human milk, for reasons other than infant feeding.... So, yeah, there are markets on Craigslist for, I mean there, yeah, for lots of different purposes....

**EA:** I was interviewed on the news one about weightlifting men who were drinking breast milk. It's like the only time the news has ever called and wanted to talk to me about breast milk. I was like -

**Aunchalee:** Yeah, yeah. So, it has become quite an interesting commodity for different kinds of markets. I'm most interested in this milk exchange between infant caregivers and the use of human milk for infant feeding. But, certainly, there is - it's like.... we can have, you know, conversations about all the different things that people do with human milk. *[laughing]*

**EA:** Absolutely! And, we will totally do that on a future episode. But for now, let's come back to your really cool research on this peer-to-peer milk sharing. What would you say are kind of some of the major findings, 'cause it sounds like you've been studying this for the better part of a decade. What are some of the major findings, and what are some of the changes you've seen over the course of the decade and in this practice?

**Aunchalee:** You know milk sharing on the surface it can seem like, "Oh, this person is seeking milk and this person is giving milk." When in reality, like the reasons why and sort of the background, and the meaning of all of that is really, really diverse, and interesting, and complex.

**EA:** Awesome. I mean, what are some of the kind of things you found about those meanings and that complexity that you think really provide important insights into why people engage in this practice? That, right? It sounds like the FDA is warning against, and yet, cause you saw people are choosing to engage in this practice anyway.

**Aunchalee:** Yeah, so the, you know, the FDA and others who are really concerned about milk sharing were concerned about disease transmission. So, you know, there being pathogens in milk that could be transmitted from a donor to a recipient infant, because with milk sharing, the milk is often, it's most often not pasteurized, right? It's just from my freezer to your freezer, kinds of things. So, really concerned about the safety issues. You know, if milk is given to a milk bank, it's pasteurized, so it's considered safe for even the most vulnerable preterm, medically fragile infants.

But, with milk sharing, they are really concerned that without these - sort of without pasteurization, and serological screening being done by third party, that there could be risks. Another risk that people are really concerned about is contamination by improper storage and handling, or unhygienic, pumping, and storage and feeding practices.

So, it wasn't that the concerns weren't grounded, right? They're sort of reasonable public health concerns. But, one of the things we wanted to figure out is what, you know, if parents were aware of what the risks were, and were they doing anything to mitigate those risks?

**EA:** And, what did you find?

**Aunchalee:** Yeah, so what we found is that parents were pretty well informed about what the risks were! They're really well informed. They had strategies for ensuring that what they were doing was safe for their baby. A lot of the reactions against milk sharing were really highly stigmatizing, and didn't account for you know, just how, how concerned both donors and recipient parents were about ensuring that it was safe.

So, they would employ, you know, serological testing, and they would ask questions about diet and medications, and recreational substance use. They would ask about pumping hygiene. They would often share with people who they knew, sometimes very close family or friends. We didn't see a lot of evidence of people just kind of anonymously going online and trying to find milk to feed their baby, just assuming that it was safe. There was a lot of, there - you know, conversations and time spent with one another and really thoughtful, thoughtful thinking about health and safety on the parents, on the, on the part of recipient parents.

We also found that donors, you know, in many cases donors would say, 'well, 'cause I was already donating to a baby for a long amount of time, or I was donating to a baby who had special needs, I made sure that I used, like, even more stringent hygiene practices when I was sharing my milk.' So, we see lots of, you know, lots of nuances in the things that people are - sort of the practices that they're doing.

I think another really significant finding is that milk sharing is so much more about parents' relationships with one another, in particular mothers' relationships with one another, and supportive relationships that involve caring for the wellbeing of mothers and infants and of families. And, it's not only about this nutrition like trying to give my baby the best nutrition, although that's certainly a piece of it. You know, one of the ways we framed milk sharing in some of our analyses is really thinking about how this reflects a fundamental need for mothers and birthing parents to have community around them as they're taking care of their babies and feeding their babies. And, that feeding and sharing milk is one part of this sort of community care package that we have.

**EA:** I mean, I have to be honest, this like this makes my heart warm, because as you know, I am engaged in milk sharing. I've received donor milk and most of the women who have been our milk donors have come from mom groups that I'm a part of, which I

joined looking for community, and then have become part of this. So, it like, makes my heart warm.

**Aunchalee:** I love your milk sharing story. And I think it reflects, you know, it's very similar to many other stories we had where, you know, a mother who experienced a traumatic birth or had just complications with birth, and recovery from birth, and postpartum issues really - they had a strong intention to breastfeed or provide their own milk for their baby, and then unforeseen things happen and they're in a situation where they have to think about like, 'how am I going to feed my baby, if I'm not able to meet all of their needs?'

And, for many parents, formula is just not, not an option that they want to use. OR we have several recipient families talk to us about going through formula brand by formula brand, like trying almost every formula that they could, and their baby was getting sick off of it and, you know, not thriving, and having a lot of formula intolerance.

But, you know, for the most of human, sort of our species' existence on the planet when there was a need to provide another source of food for an infant, it came from another mother, you know? And, we have pretty good evidence that that was a really common way of dealing with things like, a delay in milk coming in or inadequate milk supply or, if a mother was sick or, or died. And so, in a sense like milk sharing may seem sort of like really new and modern, you know, sort of like this fringe practice where people are using Facebook or using the internet to facilitate these exchanges. In some ways it is different now than it used to be, but in many ways, it's just reflective of a strategy that we've always used to try to keep babies alive and take care of mothers.

**EA:** And, I really want to kind of follow up on that last piece where you talk about it as taking care of mothers. I think that's such a fascinating piece of milk sharing that really - doesn't come across when you read the things like FDA, you know, 'don't share milk!' But, it really ties in nicely with some of these kinds of emerging understandings of how important it is to care for mothers as well. Can you talk a little bit more about that?

**Aunchalee:** Part of the whole milk sharing picture, too, is that there is, you know, a large number of mothers who are struggling to provide milk for their baby. And, I think we understand that this is a very complex issue, that there are lots of complicating factors that shape what lactation looks like.

I think milk sharing is one way to sort of remove the isolation that many new mothers, in particular, feel after giving birth, especially when they're struggling. And, we know lots of mothers struggle. They struggle either with their health. They struggle with isolation with mental health issues, because we don't do a good job of, of sort of supporting community around the postpartum period. And, we also don't do a great job of providing medical care and health services, in this period, either. You know a lot of people who give birth have to return to work very shortly after giving birth, because we don't have paid family leave policies, in our country that are sort of federally mandated. And so, depending on those circumstances, you have, you know, an additional stressor that really disrupts the nursing relationship and creates just

like a number of different kinds of economic factors that shape differences in lactation outcomes.

So yeah, I mean, all of these things are sort of related. And, when you talk to people who have been in sort of longer-term milk sharing relationships, you know, they talk a lot about how important those friendships are. And recipients, say so many times how important it was to meet another parent who understood how hard it was, who would listen, to be able to share their experience, and who would do something that they view as like just this incredibly - just a really important gift, a gift of their time, and their energy, and their effort. Just like mothers who receive milk just have this incredible sense of the value, in terms of the importance of that relationship and helping them to just feel less alone, above and beyond sort of the importance of milk and the importance that they ascribe to milk in keeping their baby healthy. But, really just - just reducing the loneliness around how isolating it can feel if you can't make enough milk for your baby or you are just really, really struggling. So yeah, I would think that, I think that's a really important aspect of milk sharing.

**EA:** And, I just love that because you know, it so humanizes this process.

**Aunchalee:** With this anthropological research I really wanted to get to the heart of, what are those human stories? Because, when we start from there, we can understand more around why people would be willing to “take risks,” right, in feeding a baby, and just really understand that it's just so much more complex and interesting than what may appear as a very strange way to feed your baby on the surface.

**EA:** Excellent. Yeah. I mean it's, it's so nice to hear that there has been so much momentum around - if I say de-stigmatizing the practice, do you, do you think that's an accurate perception or would you say there's still a lot of stigma?

**Aunchalee:** I think there still is probably in the general public a level of stigma around it when people first hear about, like they don't understand. I would say in the lactation profession and peer support community there is this, I think, a momentum towards de-stigmatizing in favor of providing information to help parents make more informed decisions. So, that informed decision-making support, I think people can really, regardless of what they think about it personally, can get on board with that. 'Cause that's what that, you know, that's our role as health professionals and supporters of families.

And, we're seeing these models of like health provider- facilitated milk sharing happening, even like within birthing and midwifery and lactation practices, where sort of healthcare providers are taking a more active role in screening and helping parents sort of mitigate those potential risks as well.

And, I think fundamentally it's that a lot of people really strongly believe that formula shouldn't be like the default first-line alternative that, that shouldn't be the only thing that parents have. That human milk, donor human milk is a viable infant feeding alternative. But, in our current context, in our country where we still have a relatively small milk banking system, trying to figure out how to balance that with a need and sort of the demand for human milk for infant feeding is still a challenge.

**EA:** Awesome. All right. Is there anything else you would like to tell our audience about your research?

**Aunchalee:** I'm doing some research around human milk banking. We're trying to grow some research around understanding milk sharing in communities of color in the United States. I have sort of newer area of research on how we can promote more integrative trauma informed care in humanitarian settings. So yeah, hopefully, we'll have some chances to talk to others in the fields who are doing great research on all of these topics and yeah [*laughing*]

**EA:** Yes, I cannot wait. That'll be awesome.

**EA:** [*Music*]

Alright, well then, I think it's probably good here we will segue into our reoccurring segment on breast feeding technologies and what's new or old in the world of breastfeeding technologies.

**Aunchalee:** So, the last time we spoke last month we talked a little bit about milk testing kits, and then we shared a link to a blog post that you had written about a product called Milk Sense.

**EA:** So, the milk sense is a - it's basically a product that was put on the market a few years ago, and what it proposes to do, it's a breast milk monitor, and it's considered a personal breast milk monitor. Basically, the idea is that it's a device that's going to tell you how much milk the infant is getting when they nurse.

And so, there's been this huge rise in what we'll call like breast-milk-volume-monitoring supplies. And, the two I talked about in the blog posts that we wanted to feature today were the milk sense and some volume test strips that were produced by UpSpring. Both of these products now as far as I can tell are no longer on the market. Unless you count eBay, the Milk Senses are being dumped on eBay and these products when they first came out, I mean I'm looking on eBay and they're \$44 or \$60 now on eBay. When they first came out there were \$200 or \$300 for these kinds of personal...

**Aunchalee:** Wow, that's expensive!

**EA:** They were really expensive, and basically, well the, the Milk Sense, was the breast milk test strips, I don't actually remember how much they were, because they didn't stay on the market very long. They got a lot of really highly accurate negative attention, because of how kind of problematic they were.

**Aunchalee:** How did those work? Like what are they measuring? Do you, like you pump into a cup, and like I don't [*laughing*] dip the strip, I don't know how they work.

**EA:** I never understood the mechanism behind them.

**Aunchalee:** So, it's like a dip strip? You dip it into the milk, and it's supposed to project like your volume, total volume of milk?

**EA:** Yeah. Basically you, I think part of what it did was it also calculated based on how much you pumped in a time, your average pump.

**Aunchalee:** Okay.

**EA:** So, so like, you know, if you pumped four ounces, you dip the strips in and then you told the calculator, 'Oh, I pump eight times a day,' it's gonna tell you, 'Oh, you're making 32 ounces of milk a day,' which is just *math*.

And, I mean, these things were wildly inaccurate. And basically, the conclusion we came to with this thing was that if you put some numbers up on a dark board and you threw a dart at it while nursing, it was probably about as accurate. I mean quite literally, you could never tell if it was going to be dead on or you know, 200 mLs off and 200 mLs is what, five, six ounces? You could never predict which direction it was going to go.

**Aunchalee:** So, tell me why - do you know how these kinds of products can get to market?

**EA:** Well, there's a lot of these products don't actually require FDA approval.

**Aunchalee:** Why not?

**EA:** Because they're direct to consumer devices, and so, they're not, they're not medical devices. They can kind of get around this because, what it's functionally saying is, 'oh well, it's not claiming to be anything'....

**Aunchalee:** Oh! So, they're not, they're not a medical device - ohhhh, okay, oh that's very tricky! *[laughing]*

**EA:** And, there's also like the Momsense, which is, it's basically like a stethoscope that's attached to the infant's cheek and you listen for sounds of swallowing and then you can predict, how much the baby's getting.

So, if we look at like the milk sense - pulling up the website: "the milk sense monitor measures changes in the milk and the alveoli in order to determine the amount of milk the baby receives from the breast. The monitor transmits 40 kilo Hertz and 20 kilohertz signals to the breast tissue at an electric current of about a 0.5MA and measures the response signals via electrodes." So, you're basically measuring the speed in which the current is transmitted through the tissue and then that gives you a *GUESS* of how much milk is in the mammary gland. Except it's going to be sensitive to things like hydration; differences in mammary tissue density; probably how much milk is in the breast is going to impact that; where you put the monitor on the breast, if you place it correctly versus not. I mean, I can think just of, you know, a hundred different things that are going to impact how effectively this Milksense works. But I think your point that these are direct-to-consumer marketing is really, really important because they're preying on really bigger cultural ideas about, as I kind of said in the intro, wanting to know volume, needing to know volume.

Oh, okay. So, seeing also there's this new milk measuring device called the Coroflow. And it's a nipple shield that has a flow sensor over it. I don't know. I kind of, I kind of want to order all these products but then that's starting to get to be a lot of money.

**Aunchalee:** Well someday when we set up our Patreon maybe we can get some listener support to evaluate and,

**EA:** Oh, you can only get the Coro in Ireland right now.

**Aunchalee:** Oh, okay. And also, you know, we could interview people who have used them too. I mean do it in an anthropological way. Get a user experience perspective.

**EA:** It's very anthropological to experiment on myself!

**Aunchalee:** No. Yeah, I mean you know, companies are figuring out how to cultivate new markets that have to do with lactation and feeding, and they're, you know, they're really savvy and it's interesting to see. I just, I think it would be really interesting to talk to parents who buy these products, and kind of understand what they think about them and why?

**EA:** So, if you're a parent, and you bought any of these products, email us at...

**Aunchalee:** Anthrolactology at proton mail dot com

**EA:** Because, we would love to talk to you about why you chose to do this and how accurate you found it to be!

**Aunchalee:** *Music*

Okay. So, there is this article you sent me EA,

**EA:** I think you actually sent it to me.

**Aunchalee:** Did I send this to you?

**EA:** Yeah, you sent it to me over, over the Slack channel.

**Aunchalee:** "These two women are taking the quote unquote 'breast' out of 'breast milk.'"

Hmm.

So, this is BioMilk. It's a biotech company. 'Seeking to optimize,' I'm reading from the article, 'optimize a human's milk by culturing it in a bio-reactor rather than a breast.'

**EA:** I have so many strong reactions and like cringes and I mean just reading the article I'm just like cringing!!

So, you know, the next line in the ad: 'we can confirm that our samples contain both casein and lactose, the predominant protein and sugar components found in breast milk.'

Well, okay. Yeah, sure, yeah. I can go down to the lab and add a few drops of stuff and I can confirm that it contains casein and lactose! It's not, these are not unique to human milk. These are pretty common. I mean, granted, if you've got like seal milk and it contains lactose and you're like, 'Oh, probably something weird is going on here.' But I mean, I, I think the next paragraph is really the one that just makes me like kind of tying back in with your work on, on milk sharing. I mean, I really kind of see this as really relevant to the milk sharing.

So, if we look at the next quote, 'We're the first company to produce vital components of milk together within the same system.' So, they're not producing milk, they producing *components* of milk. 'Using a process that is sterile from start to finish and free of all contamination.' Like, what are we saying here?! Right?! That we think women are dirty?! Women are a risk to their own milk? Babies deserve breast milk, but moms are a risk to their breast milk. I mean, that's really what, what this kind of press release says. And, that's awful!

**Aunchalee:** It's very much that same conversation the assumption is that human milk has to be sterile in order to be safe for a baby. And we know that no, like you talked about in our first episode, human milk has all of these important components including bacteria that are really important for a healthy microbiome and sort of programming the immune system, and...

**EA:** And, we've got a link on the, on the blog, we've got an article on, why, why, M-O-M milk, milk from own mother is really important in ah NICU settings, *because* of the bacteria it contains.

**Aunchalee:** Yeah. So, I mean, one of the, this goes back, to that sort of understanding the social context of these messages and sort of the way different socio-cultural ideas get into science. Because the, the *Pediatrics* study that first reported on the contamination of milk talked about it as milk sharing. But, what they did was actually buy milk anonymously from milk sellers online. [*laughing*] So, you know you can imagine the kinds of confusion that this stigmatizing language creates. And then, I mean, more to your point is that when we talk about milk as dirty, it's re-enforcing all of these really deeply ingrained ideas about birthing bodies, and in fact, we call them leaky bodies, right? Sort of these bodies that bleed, that lactate, that birth, as being problematic, as being dirty, intrinsically contaminating and polluting. Those ideas get into these kinds of infant feeding topics in the media, particularly around milk and breastfeeding...

**EA:** Oh yeah.

**Aunchalee:** and milk sharing.

**EA:** So, if we kind of circle back to the BioMilk, the product that was in the headlines earlier, the first week of February, on their website, 'Nutrition of breast milk. Practicality of formula. We're done making tradeoffs between our baby's health, our well-being, and the environment.'

Oh. I – I need to cringe so much here. Oh, 'Creating formula from cows adds 3,000 metric tons of CO2 and uses 80oz, 80 tons of freshwater per person.' I would like to know the unit of measurement there. I mean, so you gotta feed these cells in the lab.

Okay. Anybody who's ever done lab work knows that we, we create a fair amount of waste in the laboratory.

**Aunchalee:** I'm interested here in this, 'A loving father's milk.' Oh no! And, 'Breast milk for adults!' You have something to say about that? I remember, didn't you give an interview?

**EA:** I did. I was interviewed about athlete's um buying milk off Craigslist and I guess if somebody is going to be buying the highly contaminated milk off Craigslist 50-year old weightlifters, probably the target audience.

[laughing]

**Aunchalee:** So, what, what do we know about the potential impact of human milk on adults?

I mean is it good for...?

**EA:** I mean, is it there's, so there's a lab out of Europe that is looking at using breast milk as supplements during cancer treatment, because the hypothesis is that some of the stuff in the breast milk, specifically like epidermal growth factor, and HAMLET, may be useful in helping the body to fight off cancer, which is *super cool*, right!! To think that there's these like cancer fighting properties in breast milk, but that's very different than consuming breast milk, because you think it's a superior form of protein for weightlifting.

**Aunchalee:** Yeah. I, we interviewed, some people who were providing milk, for like a family member who was undergoing chemotherapy.

**EA:** But, ok, let's go back though to this, 'A loving father's milk.' 'BioMilk is looking to go down the line of personalization even to the point where fathers can produce milk for their children.'

So, are they're proposing that they're going to harvest lactocytes that is the milk producing cells from individuals and then grow them in culture, and those cultures of lactocytes are going to produce milk?

**Aunchalee:** They don't really say, but that's the implication here, I think.

**EA:** Or, that they're going to have like immortal strands of lactocytes in labs that just produce milk.

And, I mean, when we think about stuff like all that wonderful data on how milk composition changes when an infant is sick and the immune factors go up - you're not getting that feedback loop then. So, what about everything else that's in the mammary gland? Because, the lactocytes themselves are not the only things that are involved in the production of milk.

We know, for example, um, that B cells and um, lymphocytes and fat cells in the mammary gland are all involved in milk synthesis and are making different stuff. Some of the hormones, you know, we're pretty sure they're coming in from elsewhere. The insulin in milk is definitely coming in from elsewhere. You know,

there's, there's pretty good argument that probably the fat cells in the mammary gland are making a significant portion of some of the metabolic hormones. Some of the immune cells actually migrate from the gut to the mammary gland during early lactation and are producing immune factors. So, how are you getting those in the milk without the whole kind of tissue model that it's more than just those lactocytes?

**Aunchalee:** I don't think that they're claiming to replicate human milk, but they're definitely edging towards that.

“Overcoming gender or physical limitations. “ Interesting. I mean, men can lactate, and transgender parents can lactate

**EA:** Oh! I just love the conclusion. ‘We're not going to have a milk and tell,’ when asked about specifics about the product.

And on that note! We probably should wrap up today, because I think we both need to be writing! *[laughing]*

**Aunchalee:** We would love to hear from you! So, if you drop us a line at *anthrolactology at proton mail dot com*, we'll also put the email address in our show notes, we'd love to hear your ideas for new episodes, science that you'd like us to talk about. And, next month we're going to be interviewing the third co-host, our third co-blogger, Cecilia Tomori about her work relating to breastsleeping - breastfeeding and sleep, which is super fascinating. We'll have a new segment for the technology. I think we're going to get into freeze dried milk maybe.

**EA:** Ooh, or maybe alcohol test strips and milk?

**Aunchalee:** Okay. Okay.

**EA:** I ordered a bunch from a couple of different companies.

**Aunchalee:** Okay

**EA:** Or baby bottles and some of the marketing going on around those. There's just so much to talk about!!

**Aunchalee:** Yeah. Alrighty.

**EA:** All right, thanks.

**Aunchalee:** Thanks, EA!

**EA:** Thank you.

**Aunchalee:** Until next time everyone, bye!

**EA:** Bye!

**Aunchalee:** *[Music]*

*You've been listening to Anthrolactology. It's a podcast about breastfeeding, science, and society!*

*Anthrolactology is hosted by me, Aunchalee Palmquist, EA Quinn, and Cecilia Tomori.*

*Check out our blog at [Anthrolactology.com](http://Anthrolactology.com) and follow us on Twitter @Anthrolactology!*

[Music]

-END-

*Recorded: February 10, 2020*

**Email us at [Anthrolactology@ProtonMail.com](mailto:Anthrolactology@ProtonMail.com)**

### **Credits**

Artwork by Aunchalee Palmquist

Editorial Advisor: Owen Palmquist

Audio Editing by Vitaliy at [makesomenoise](http://makesomenoise)

Title music, "Big Plans", by Grace Mesa

**Download episodes of the podcast on your favorite app:**

<https://anthrolactology.buzzsprout.com/>

### **Episode Links:**

Dr. Aunchalee Palmquist's [faculty profile](#) at the Gillings School of Global Public Health, University of North Carolina at Chapel Hill and the [Carolina Global Breastfeeding Institute](#).

Find a summary of Dr. Palmquist's newer work related [infant and young child feeding and emergencies and humanitarian settings](#). Other publications/projects can be found [here](#) and [here](#)

Here are a few popular [Anthrolactology Blog](#) posts on milk sharing and donor human milk!

- [5 Milk Sharing Myths Busted](#)
- [Who is sharing milk online?](#)
- [Milk for Lucia](#)
- [Nothing beats M-O-M: changing donor milk microbiota using an infant's mother's milk](#)

If you're into Anthrolactology, you might enjoy our book, [Breastfeeding: New Anthropological Approaches](#) (Tomori, Palmquist, Quinn, Eds.)

**Interested in other anthropological studies on milk sharing?** Check these out! (Fingers crossed, they will join us in the future as podcast guests!!)

[Others' Milk](#) by Kristin J. Wilson

[White Gold](#) by Susan Falls

[Banking on milk: An ethnography of donor human milk relations](#) by Tanya Cassidy and Fiona Dykes

[Liquid gold or Russian roulette? Risk and human milk sharing in the US new and media](#) [by Carter, Reyes-Foster, and Rogers]

[“That’s not the milk sharing I’m doing”: Responses to a Pediatrics article from women who milk share](#) [Reyes-Foster and Carter]

[Contested moral landscapes: negotiating breastfeeding stigma in breastmilk sharing, nighttime breastfeeding, and long-term breastfeeding in the U.S. and the U.K.](#) [by Tomori, Palmquist, and Dowling.]