# Primemester & Advanced Supplements For Fertility

**Aumatma Simmons, ND, FABNE, MS**
with **Cleopatra Kamperveen, PhD**

**Aumatma Simmons, ND, FABNE, MS**
I am excited to talk about all things fertility, specifically around epigenetics, which is just one of your babies. I feel like you talk about it a lot. You are kind of a researcher in this field. I'm very excited to hear about epigenetics and the role of epigenetics in this ability to conceive, or potentially making it easier to conceive when we know what we're dealing with.

**Cleopatra Kamperveen, PhD**
Yes. It's so good to be here with you, Dr. Aumatma. I thank you for having me. I'm excited to be here and to talk about epigenetics with you two and neutral genomics, which is the nutritional arm of epigenetics because it's not something that people are aware of or are talking about. We are at the Fertility and Pregnancy Institute, one of the only places talking about this. It's not just critical for our fertility and pregnancy outcomes; it's also critical for the health that we're setting up for future generations. We're in a crisis when it comes to the state of the health of children, the state of the health of adults in America and the Western world specifically, but also throughout the world, and these are things that we have control over to a large extent, and maybe I don't want to say control over, but the ability to shame to a large extent. I want people to know about this because it is powerful.

**Aumatma Simmons, ND, FABNE, MS**
I love that. You have the best term, called Super Baby.

**Cleopatra Kamperveen, PhD**
We love that. You can't help but smile when you say that word.

**Aumatma Simmons, ND, FABNE, MS**
It is just so good. I love that term. So is that what you're talking about in terms of shaping the health of your future, baby?

**Cleopatra Kamperveen, PhD**
Yes, you got it. I wanted to just back up and say, first and foremost, that when we talk about someone having their super baby, we mean their super baby. My super baby, your super baby. Not a super baby in the sense of one person's baby being better than others, because. That is. not what we mean. We mean that you get to have the healthiest, happiest, brightest, and most well-adjusted neurocognitive strength and resilience to the stresses of the modern world. Baby, you can have given your genome and your epigenome, which is how your genes express themselves and which is the part where you can pull levers. then that of the other person providing DNA for your baby. That's what we mean by super baby. It's about doing everything within our power. To. Create an epigenome or genetic expression that supports our healthiest fertility, our best pregnancy outcomes, and also the healthiest programming of the children we're creating. also our super-grandbabies, because we know that this process, it's called epigenetic inheritance, crosses at least two generations. We have scientific data to show this, and we think of more than two generations—three, four, maybe even beyond that. So when I think about any of us who want to have children, who want mamas, I'm going to assume that everybody listening falls into that camp of people. There is nothing more important in the world than getting to be a mama and then knowing how well our children are in mind, body, and spirit.

**Aumatma Simmons, ND, FABNE, MS**
It's like such a gift to eventually have that experience of motherhood and, like, creating this child and then watching this child grow. It's just like I started way before I had a child. After I had my kid, I was just, like, even the magnitude of doing is so incredible because we got to see that child grow.

**Cleopatra Kamperveen, PhD**
Dr. Aumatma, I'm with you. When you work in the space of fertility, you'll know that what you're doing every day of your life is so meaningful and so important. But until you have your super babies, I also started this work 27 and a half years ago, and my oldest super baby is ten and my youngest is five. anyone who's listening who's like, I'm an old mom. Did I wait too long? I had all three of mine in my late thirties, conceived on the first try using the  Primemester Protocol. They are the epitome of my super babies, and they make their dreams come true. You all know that what we're doing is meaningful and important. I've been completely obsessed since I was a five- or six-year-old girl. But then, when you have your super babies, you feel the magnitude so deeply because it's such a gift. They are such a gift. The work that you do to create your super babies is the gift that keeps on giving. Dr. Aumatma, I lost my mother at birth, which is how I became completely obsessed with reproduction so early in my life. It's such an odd thing to be a five- or six-year-old girl and be obsessed with observing every pregnant woman. Why does she look unhappy, what does she need and what has she been through? How do we help them? All of these things, including having that start to life, which was horrible and so rocky, just taught me that when reproduction doesn't go well, it's one of the most painful things in the world. I

remember a woman named Dr. Melissa Petersen, who's also an expert in AP genetics, saying to me, "What's so amazing about your life experience? You could have internalized that fertility, pregnancy, and birth are these scary, hard things, but instead, they have been so beautiful for you and in your life." I was like, "You're right about getting that. I was never afraid of being pregnant. I was never afraid of giving birth. Even though my mother passed away, giving birth to me." She was only 27 years old. that shouldn't have happened and meant it, and the fact is that even though I had this profound awareness that when reproduction goes wrong, it's one of the most painful things that can happen in life. I also deeply believe that it can go right and that when it does go right, it is one of the most magical and beautiful things we could ever experience. I am extremely grateful to be able to say that this has been my life experience. Now, a thousand men who have come to us, having struggled for up to two decades, have had 17 pregnancy losses, have an AMH level of zero, have been on no cycle for ten years, 15 years, and are being told that you are already in menopause, this isn't even possible for them. You're old; this isn't working. You have PCOS, which is impossible. My daily goal is to say, Let's do everything we can to be like we have to honor the rules of nature. But I want to push every boundary of what we once thought was humanly possible for human reproduction, especially female human reproduction, which all the messages are about how limited it is. I don't want that. I want that reality for that.

**Aumatma Simmons, ND, FABNE, MS**
Same, we are so like it. Let's get into the every day so that people are hungry for this knowledge. What is a simple, simplified level, what is epigenetics, and what role do you see in how it is going?

**Cleopatra Kamperveen, PhD**
I think you're right that people are hungry for this knowledge because people are hungry for new knowledge when it comes to fertility. We don't want to hear about just the fertility cleanse or the fertility diet, or that those things aren't components. We need new information; we need better information. I think that we are hungry for that. At the most fundamental level, epigenetics means above the genes, and you can think of it as thinking of your genetic expression as a light switch. Let's assume that the light switch flips. You can flip it on or off. It is also a dimmer, the little thing that you push. You can get the genes on. You can flip the genes off, you can dial them up, and you can dial them down. So that's the essence of epigenetics. So the importance of that for fertility, for pregnancy outcomes, and for the programming of our super babies, our super grandbabies, and beyond is that we want to dial down our genetic weaknesses and vulnerabilities, and we want to dial up our genetic strengths and privileges. We all have them, no matter who we are. We have this concept of super fertile that we teach. This is the idea of fertility. Well, it produces your super babies, of course. It has epigenetic underpinnings. But the point of it is that your fertility is so super that it works for you even when conditions are imperfect because guess what? Conditions are going to be imperfect for every single one of us, no matter who we are. No matter how genetically we look like we've won the

lottery, no matter how charmed our lives look to be, whatever it may be, and I use myself as an example, I follow what I teach, I'm super fertile because at a time in my life when I was supposed to have a 5% or less chance of conceiving in any one cycle and a 90% chance of miscarrying, I conceived all three of my super babies on the first try. I never had a pregnancy loss and have my super babies. I have the beta thalassemia trait, which puts me at risk for all kinds of fertility and pregnancy complications. I have a sluggish thyroid because my thyroid gland is too small for my stature. It's smaller than the average person, likely due to childhood poverty and illness. It's smaller than the average woman's thyroid. A lot bigger than the average woman. Taller, just bigger. It doesn't; there's nothing wrong with it, but it doesn't produce enough thyroid hormone. No matter what I did, I suffered insane poverty and abuse as a child. All of which put you at risk for having fertility challenges and pregnancy complications in adulthood. Women who are abused as children have, in some cases, a 30 to 40% greater likelihood of having fertility challenges in adulthood. I have had so many things working against me, yet because I'm super fertile, my fertility is working for me even without conditions being perfect. That's what we want to achieve with our fertility. That's the goal because conditions are not going to be perfect for anyone.

**Aumatma Simmons, ND, FABNE, MS**
We have our genes; we have the expressions or the things that are on top of the genes. then I'm curious if you feel like everyone across the board who's potentially planning to have a child should get their genetics tested, their epigenetics tested. I want to differentiate because there's a lot of confusion when people say, I've already done the genetic testing. I'm like,

**Cleopatra Kamperveen, PhD**
That's not what we do. Yes, exactly.

**Aumatma Simmons, ND, FABNE, MS**
Let's talk a little bit about the difference between what a conventional reproductive clinic might do as genetic testing versus kind SNP testing or epigenetic testing, which is what I'm assuming you're doing as well.

**Cleopatra Kamperveen, PhD**
There are a couple of questions in that. Let me go one by one. The first thing is, it's very different to do genetic testing and genetic counseling at a reproductive clinic, with a perinatal allergist, to assess risks that you could pass on because of traits or genes that you have, and you're the other person who's going to be providing DNA for your baby and how you combine. There are some instances in which a couple is genetically mismatched. That's heartbreaking when that happens because those kinds of fertility challenges have to overcome don't mean that they can be overcome, but it's certainly difficult. In the traditional kind of genetic testing, you're looking for diseases that are associated with one trait and one gene. For example, I said I have the beta-thalassemia trait. Thalassemia is considered the sickle cell of the Mediterranean. I'm 99%

Egyptian and 1% Ashkenazi Jewish, genetically. It makes perfect sense that I have the beta-thalassemia trait, and also that my parents were second or third cousins, which sounds crazy to our American sensibilities but is very common.

**Aumatma Simmons, ND, FABNE, MS**
Yes.

**Cleopatra Kamperveen, PhD**
Even to this day, people want you to marry someone they trust, and relatives are the ones who trust each other the most. That happens often. But because of that, I have a couple of weird recessive traits, including the beta thalassemia trait and also at least one or two other ones. So I had to have genetic testing with my husband because he is very mixed, including North African and sub-Saharan African blood. It's as if I could not have children with someone who had any form of thalassemia trait or any form of sickle cell trait because that would mean combined to make a full-blown disease. which is fatal. The fourth thalassemia is fatal. That thing that they're looking at in the genetic testing—that's not what we're doing here. We're looking at a whole bunch of genetic snippets, and we're looking at what are the things in your genes that are working well that swap for advantages, and what are the things that are setting you up for disadvantages? The most commonly known example of this is the MTHFR, a buzzword in fertility. But there's so much more like that. Or so much more than that. Now every time I have MTHFR, we all have MTHFR. But what they're saying is that they have a higher risk variance, which puts them at risk for hypomethylation, and methylation is an epigenetic process. when you have a variant that causes hypomethylation, you have a higher chance of having fertility challenges, of having pregnancy complications, of experiencing pregnancy loss, and of having children with certain health problems. These same higher-risk MTHFR variants related to hypermethylation also put you at risk for compromised detoxification and compromised detoxification also contributes to those risks. This is an example of what we're doing when we're looking at epigenetic risks or what we can do epigenetically to dial up our genetic risk and our genetic strengths and privileges now. That's the difference. They are very different, and they are both important. One is like ensuring that there will be no emergencies, and you should rule out the possibility of emergencies. Now, if you have fallen in love with and married someone or partnered with someone who is, you're not genetically compatible with them. That's a big question. But you should be doing that, and you should be ruling that out.

**Aumatma Simmons, ND, FABNE, MS**
I will just say that there are ways around it. like the genetic counselor can talk to people and say, it's set you guys up for a high-risk pregnancy that maybe your child will have a genetic disorder. Maybe you want to consider a sperm donor, and in that case, they can work with you. It's not the end of the world. For those of you listening who are like, that's me. It's okay. It's not the end of the world. There are ways around it that you guys can just work through as a couple and talk with the counselor to figure out what you can do. But on the other side.

**Cleopatra Kamperveen, PhD**
It doesn't have to be. It is, in the end, a solution. It is a complex scenario with a lot of it. Thankfully, it doesn't happen that often. that's the beautiful thing. That's the good news. But that's one side now that, like our prime DNA service, is a much bigger understanding of what your genetic strengths and vulnerabilities are, not about specific disease risks from any one thing, but how your profile looks overall and many different things. What supplements might you need more or less depending on how you do with certain foods, whether it's what your gut microbiome is likely to look like, how you are going to respond to medications, how your hormones are, what your hormonal profile is likely to look like, or what's your better sleep and circadian rhythm? What's the best form of exercise and recovery for very different kinds of information about your body and what type of lifestyle and nutrition, etc., are best suited to your greatest genetic expression? Is it that you should be eating paleo, or does your specific body need more carbohydrates? Now, that being said, the other question you asked was, should everybody have this epigenetic testing? I believe that I'm a proponent, and I've done it for not just myself and my husband but also for my three super babies because to have that kind of information and knowledge of your body that early in life, is just amazing because you learn how to take care of yourself in a way that you wouldn't know otherwise. I'm a strong proponent of that. At the same time, we know that there is a specific epigenetic approach to improving fertility, overcoming infertility, reducing the risk of miscarriage, reducing the risk of adverse pregnancy outcomes, reducing the risk of autism and ADHD, and other health, mental and physical health, and neurocognitive health conditions in children. That applies across the board. If it's not within your means or desire to do this form of testing, that's fine. Follow the steps that we know work for everybody. If you're that person who wants that 10 to 20% personalization to dial up your genetic strengths and privileges and dial down your genetic weaknesses and vulnerabilities, then you have that tool available to you as well. To me, epigenetic testing is an add-on, not a replacement for the Primester Protocol, because the reality is that's got to be your foundation, and then you can get to it.

**Aumatma Simmons, ND, FABNE, MS**
In essence, all is going to support all of your epigenetic optimization in any way.

**Cleopatra Kamperveen, PhD**
Exactly.

**Aumatma Simmons, ND, FABNE, MS**
You want the information; if you want the tangible, like exactly what's happening in your body, that is helpful.

**Cleopatra Kamperveen, PhD**
I would say that you put it another way; it's like the Primester Protocol. Everybody needs it, and whether you're having fertility challenges or you just want to make sure you have your super

baby or healthy, as happy as the brightest, most well-adjusted baby, that's going to give everybody 80 to 90% of what they need epigenetically. For most people, that's sufficient. I'm not going to tell you to get epigenetic testing. Just so we can bring in more money for the epigenetic testing that's going to give you 80 to 90%. For most people, that is sufficient. If you need that additional 10 to 20%, if you need it because of the complexity that you're facing because you don't feel well, or because you are someone like me, you love data, you want to know, you want to take what you're doing for yourself to the maximum heights, what you're doing for your super babies, then that's who that's for. Either you need it or you want it because you're just a lover of data, you're into biohacking, and you want to know the specifics and the ins and outs of your body as completely as possible. If it's within your resources, it's a great thing to have. But most people can be successful with their super baby without having that last 10 to 20%.

**Aumatma Simmons, ND, FABNE, MS**
You mentioned methylation a little while ago; it's like becoming a buzzword. Let's dive into, like, what is methylation and what does it do in our bodies?

**Cleopatra Kamperveen, PhD**
Methylation is important because it is very closely related to detoxification. When you talk about the MTHFR variant, for example, it is all about methylation and the detoxification pathways. When you think about it, as we get older, part of the aging process is a process of becoming more hypomethylated, and that's why I believe that we talk about hypomethylation and the MTHFR variants very much in the context of fertility because this affects many outcomes; it can affect cancer risks, it can affect mental health risks, etc. It has a wide range of effects. But when you think about it in terms of fertility, who are the people with fertility challenges? They are the people who, maybe, they're wanting to start their families later on in life. Maybe they're 30 plus, maybe they're 35 plus, maybe they're plus, and as we're getting older, we're becoming more prone to hypomethylation as it is. If you add on this factor of aging, we're all aging every single day, so just because we're 30 doesn't mean that we're old, but we are aging everything all day. You add on the factor of aging, and then you add on these genetic predispositions toward even greater hypomethylation. The compound effect is greater when it comes to fertility and pregnancy. It raises a very interesting issue, Dr. Aumatma, which is the role of fertility—pardon me, the role of age and fertility. I think that's a big one for people, and I'm sure it's a big one for a lot of the people listening to us. I'm sure that you're hearing this every single day. I'm worried about my fertility because, of how old I am. What I want is age is critical for fertility. Age is the strongest predictor of fertility. You are never going to hear me say that age is not important. What I will say is that age is also the strongest predictor of getting cancer, of dying, and of a lot of other things. The minute someone turns 50, their risk of being diagnosed with cancer skyrockets compared to being under 50 and then turning 80. A woman, I should say, specifically a woman in the United States of America, turns 80. Her risk of dying skyrockets compared to before the age of 80, because the average life expectancy of a woman in the United States of

America is 80 years old. But just because age is the strongest predictor of getting cancer and dying doesn't mean that you're going to say, I just. Have two kids. Don't you remember when they were constantly bombarded with these messages about age and fertility? What you have to remember is that I'm a scientist, so I'm going to use some scientific terms, but I'll try to make them simple. We're talking about the normal curve. Who remembers the normal curve? The normal curve represents the average in the average population. Here's what the fertility pattern looks like for a female. She goes through puberty around that, which is much earlier than it used to be, which has implications for fertility as well. We can put a pin in that and come back to it. She goes through puberty around the age of 11. Her fertility peaks somewhere between the ages of 24 and 32, which is a lot older than most people think. Fertility peaks. But as soon as that peak is hit, there starts to be a precipitous decline. That decline gets even greater after 35, but especially after 37, 38, and again after 40, and even more after 42. That's what the normal curve of fertility looks like for the average population. Now, just like lifespan, as we all know instinctively, the average life expectancy for a woman in the United States of America used to be 81 years old post-pandemic. It's declined to 80 years old. We know that some people live longer than 80, and we know that there are lots of people who live much longer than 80 years. The same thing is true with our reproductive span, which is what I call the period within which we can reproduce biologically. Here's the key to this: The key is to be biologically younger than your chronological age. If you have your chronological age, your age in years, you don't have control over that. You were born when you were a baby.

**Aumatma Simmons, ND, FABNE, MS**
Your birthdays come in every year, and it's okay.

**Cleopatra Kamperveen, PhD**
Exactly. Your birthday is coming every year, and that's a blessing. If I remember, I'll never forget my big address in 2010. The first thing I said was that if we're so fortunate, we all will age. That's the truth. But we want to age internally, biologically, and epigenetically. I shouldn't say just internally, because you can see it on the outside as well. As slowly as possible. We don't have any leverage when it comes to chronological age, just like we have no leverage when it comes to our genes. All of our leverage is in our epigenome, which is our genetic expression. This is one of the levers, the primary levers that we can pull to stay biologically young. That's critical. I'll never forget that I had this blood workup recently, and the doctor said that at 44 years old, you are not in perimenopause yet. Congratulations. That's unheard of because of people who don't know. The average age of menopause today is, again, somewhere around 49 years old. The last study I looked at, and by the way, it was a little bit later, no, I'm sorry. I'm wrong that the age at menarche or first period was earlier. It looks like we have a longer period within which to reproduce. But there's some nuance to it. As I said, we can come back to when the average age of menopause is 50 years old and perimenopause begins seven to 10 years before that. Remember, that's the average, the normal curve. People are going through menopause at 40 or 45, and we see that every day. I see that every day at the Fertility and Pregnancy Institute

because they're coming to us for help getting pregnant. They're also coming to us for help for other reasons because it's associated with longevity, which I want to mention in just a second. Even for somebody who's like, I'm not interested in having children or I'm finished having children there, there are good reasons beyond having children that you want to stay as biologically and reproductively young as humanly possible for as long as humanly possible. Not that we're trying.

**Aumatma Simmons, ND, FABNE, MS**
We're not. No, I don't want to have a child at 60. I'm okay with that.

**Cleopatra Kamperveen, PhD**
But yes. It's not a question for someone aged 30 or 35 to start to experience perimenopausal symptoms. That's one of the reasons why there's so much talk about having difficulty getting pregnant at 30 or 35 because you're within a reasonable range of perimenopausal symptoms, hormones begin to change, and remember that the reproductive system is a mirror of the larger organism. The larger system is affected by the whole system. We call that the fertility and pregnancy system. It's not our fertility or pregnancy health. There is not just in our ovaries, our uterus, or our eggs. They're affected by digestion, the microbiome, the brain, the central nervous system, and the hypothalamic pituitary adrenal cortical axis. I could go on and on and remember that the reproductive system is a mirror of the larger system, and it is the first system to begin aging at an accelerated pace. After that, you'll see the cardio-metabolic system beginning to age at a more rapid pace. So that's why we call fertility challenges like type two diabetes fertility. then type two diabetes. You start to see that with blood sugar, insulin resistance metabolic inflexibility, metabolic high blood pressure, etc., and then the central nervous system and the brain begin to age at an accelerated rate in about. This is happening around the second or third decade of diabetes. Then you've got your type two diabetes, which starts to happen around the fourth decade, and then around the sixth decade of life, the accelerated aging of the brain, type three diabetes. If you're seeing your reproductive system aging earlier than most earlier than average or even just kind of on par with that normal curve, that's a clue that also these other systems are going to start aging at an accelerated rate on par with the average. We don't want that because what's happening on average might be normal, but it is not normal yet. We have massive problems that are happening. So we are not just for our fertility but also the health, longevity, and fertility of our super babies and our super grandbabies. We want to be pulling these epigenetic levers, but we also want to be doing this for our longevity. There are a couple of fascinating lines of evidence from the scientific literature that show these intimate ties between fertility and longevity. I just showed you some of them in talking about things like aging and how accelerated aging is happening. But we also know that a woman who has children after the age of 33 is twice as likely to live to the age of 95. As a woman who had her last child by the age of 30. We also know that women who have long and erratic menstrual cycles are more likely to die prematurely, meaning before the age of 70. These are all, and women who experience diminished ovarian reserve earlier in life also have a greater risk for many health problems and

earlier death. So we want to address our menstrual cycles and our fertility, even if we're not seeking to have a baby right now or we're not seeking to have a baby ever.

**Aumatma Simmons, ND, FABNE, MS**
I think it just goes to the point that our fertility or our menstrual cycles are more of an indicator of what's happening in the rest of our body. How's our body responding? Every cycle is an indicator of the last 32 days of your life. If you have a shitty cycle, you have a painful menstrual cycle. You have headaches, whatever. All of that is a reflection of what happened in the four weeks before that. Using our menstrual cycle as a marker of what's happening month to month, and it's going to be the fastest thing to change. People are always surprised, like December and January are the two months that everyone's hormones are out of whack, and I'm like, "Well, that's no surprise. I see it on your temperature chart. You fell off your diet." They're like, "I did eat a ton of cake over Christmas." Like, it's shows. It's okay, but it shows. It's like the fastest feed you had.

**Cleopatra Kamperveen, PhD**
It's a vital sign, as we've heard before. But you're right that it is almost this immediate feedback loop, and that's incredible. I think we talked about a lot of factors that affect this feedback loop and this vital sign, but the inner factors are as critical or more critical, and that is easy to overlook. I always say to people that it's more about setting up your food than it is to cleaning up your thoughts, and your thoughts are powerful because every thought we have and every emotion we have has a biochemical underpinning, this biochemical cascade that affects the signaling of our genes, those marks on top of our genes. That is critical for our genetic expression. While I think it's easy for people to get hyper-focused on every bit of food that they're putting in their mouth, every food choice they're making, the supplements, everybody. Of course, I believe in supplements. I created a supplement line because I believe so much in the role of supplements in healthy fertility and pregnancy. Our super-baby nutraceuticals and supplements are like 1/1000 of the Primester Protocol. They're 1/1000 of the picture. Yet it's they're the thing that people fixate on the most. I think it's because it's natural and it feels like it's doable. We want a pill that's easier to fix things with a pill and having to do this psychological excavation to figure out how we can choose the hypothalamic pituitary adrenal cortical axis, the body stress response system, how we can turn off the reptilian brain and stop having the amygdala constantly as if we're living in a chronic state of emergency, because the body and the brain, they're so wise that they struggle to prioritize reproduction when they perceive that we are barely surviving and we're living in a constant state of threat, that we're not safe because they are designed to focus in on every possible harm, every possible danger, every possible threat, and hone in on anything that could be a threat to our safety and our survival. They're designed to prioritize our safety and survival above and beyond anything else. In all of their elegance and wisdom, that's what they do. That makes it harder to have a normal menstrual cycle can interfere with ovulation, makes it harder to get pregnant, and makes it harder to stay pregnant. It makes it harder to have the hormonal profile that supports a pregnancy being sustained. It makes it

harder to program our super babies for health and beyond for their entire lifespan. I think it's critical for us to do things and to take care of our food and ourselves, but also to take care of our internal states, which can be so much harder. I think that's an incredible feature of what we do at the Primester Protocol because we are so focused on psycho-neuro-immunology and the feedback loops between our psychology and our fertility, which are many and intricate and have profound impacts. I will say that we use the fertility pyramid, and we can provide us with an image of that if it's helpful for people to see it as shorthand for the complex. that makes up our fertility and pregnancy systems. At the base of the pyramid is what we call the psychosexual level, which has to do with our psychology, our sexuality, or our sensuality. It's the base because it's the foundation for all of the other levels; it runs throughout all of the other levels, just like it's artificial to make a distinction between mental and physical health. It has components of that, but it is so much bigger than that. But also because, after 27 and a half years of doing this work now, I can say with utmost confidence that no matter what the tangible challenges someone faces are, the keys to unlocking our innate fertility are already within us. We don't need anyone to give it to us. We just need the keys to unlock them. It is always at the psychosexual level. It can be that your AMH is essentially zero. You can know that you have poor egg or sperm quality because you've done IVF in your embryos. Genetically, you can have PCOS, fibroids, or whatever it may be, and yet, always, without fail, the days to unlocking are at the cycles of it's just amazing, and we don't talk about that enough, and I think it's because people are afraid to. First of all, if fertility is psychological, what does that mean? Does it mean that I can get you just? I mean that there are these intricate feedback loops between our psychology and our fertility, and that is the base system. But also, it's because, like I said, it's easier to do a cleanse. It's easier to follow a diet. It's easier to take supplements. But if you go to an IVF clinic, they don't want to know about your psychological and emotional state because what are they doing?

**Aumatma Simmons, ND, FABNE, MS**
They're going to say you need therapy, like going to a therapist. That could be okay. But, like, I think it sounds to me like doing is in the sense of, like, how much our neurology, like what's happening in our brain, is influencing our reproduction to center, and like, how much of it, how much time overall am I spending in the fight or flight survival mode versus shifting into that I am safe in this world, and it's safe to bring a child into this world.

**Cleopatra Kamperveen, PhD**
We have a term for this, and it sounds like a very spirit, and it does have a spiritual component, very much an epigenetic term. We call it leaving the porch light on for our super babies and making it as bright as humanly possible. It's like you're going to a house you've never been to at night, and there are no street lights because it's a rural area, let's say. If there are no lights and the porch light isn't on for the house, you might be in the vicinity, but you can't find it. You can't see. It's dark, and there are cars behind you, so you're blinded by the headlights, and you can't slow down enough. You can't identify which one is the house, but in the same scenario, they have the porch light on and it's bright, and maybe they have the door open, and you're like,

That's the house. There's someone there. They're expecting me. They're saying, Come on in. That's what we want to do for our super babies. I'm like, Here is your house. The porch light is on. When you come in, those are the signals—the biochemical and epigenetic signals—that we want to be sending. There's a very reliable set of factors that enable us to do that, thankfully.

**Aumatma Simmons, ND, FABNE, MS**
I love it.

**Cleopatra Kamperveen, PhD**
Another thing I want to point out to people is that, again, you don't have to be an outlier. We want to be a positive outlier, which means that we stay fertile for a lot longer than average. More and more people are becoming negative outliers in the sense that they're not staying fertile. There's something that stunted people earlier in life. We're seeing fertility challenges growing across age groups and growing even faster among younger age groups than among older age groups. we've got massive work to do. This is in the general population, not just in the quote-unquote-inferred population. We already know we want to be a positive outlier. But also, there is one way in which the role of age in predicting fertility success and possibilities or potential is inflated. Here's what it is for most: Most people are imperfect pre-pregnancy at some point in their lives. Most people who are fertile, very fertile, and imperfect at preventing pregnancy at some point in their lives, which is almost everybody, have an unplanned pregnancy. I mean, with all the fertility challenges that we have in the world today, with 1.86 million people walking around with the diagnosis of infertile and hundreds of millions more who are sub-fertile, meaning they don't have a formal diagnosis, but their fertility is weak as an individual or as a couple, there are still almost 50% of unplanned pregnancies. It's hard for people who are struggling with fertility to imagine that, but that is the reality in the United States, not to exclude other regions. I'm just having more of the data from America in my head. We studied families, women, and families all over the world. We now have super babies on all continents in over 43 countries. We help people all over the world, and the statistics I can pull out most quickly are often in America. What happens is that a woman might start getting serious about wanting to have a baby at 35 or 40 because she's afraid she's running out of time. She's been told that. Then she goes, and she's having trouble. She's told it's because of her age. But for many of those women, the role of age is inflated because they more than likely have had weaker fertility all along, which is why they have not unintentionally gotten pregnant before this point. We role at some level, some percentage of already weak fertility at earlier ages, into the role of age because of that dynamic of people going along and getting more serious about intentionally having a baby once they reach. I think it's important for us to know that there is some inflated estimate. The estimate of the role of age in fertility is inflated to some degree.

**Aumatma Simmons, ND, FABNE, MS**
The whole age and fertility conversation is always very interesting, and I feel like many women are inundated with these messages from fertility doctors who don't give control text or don't

even allow space for anything outside of that. Like, you're 32; you're too old. I read that she was 32 years old, and she started her fertility journey three years before that. She was essentially 29 when she started, then went through nine IVF cycles with three different clinics, so three cycles at each clinic, and they just kept moving clinics every time. So I'm like running through the numbers with her, and she was like, "What's happening? What's the reason?" She's like, they're saying it's unexplained infertility due to age. I'm like, You started this at 29. What does this have to do with age? Let's just put that aside.

Then we're going, and everything mine had to do with the introduction of sperm. As soon as they introduce the sperm to the embryos, they fall apart.

**Cleopatra Kamperveen, PhD**
Which is completely crazy. Is it not infuriating? It is infuriating.

**Aumatma Simmons, ND, FABNE, MS**
It's like not resting in this jest of age because I feel like you made your point so clearly when you're talking about, people dying on average at 80. That doesn't mean that as soon as you turn 80, you're dead. No, that's not how it works.

**Cleopatra Kamperveen, PhD**
I think we need more. The work we do is like you're pregnant with hope. It's still full of hope. I mean, one of the things people feel when they find hope is that I feel hope again where I thought there would never be hope again. I'm age-funded and published, and I believe and hope that having two feet on the ground is grounded in reality. That's so critical to me, and I will be the first to acknowledge like I said, that age plays a role and we need to be having a much more nuanced discussion about this because I'm now 45 years old and biologically and reproductively, I'm younger than probably the average 30-year-old, if not younger than that. We need to be having nuanced discussions about this. We can't just say that because you're this age, this is what's going to happen. I think that's not a good idea for people, and that doesn't help; that doesn't support it.

**Aumatma Simmons, ND, FABNE, MS**
It puts us in a stressed-out place. If we buy into the belief that I'm 35 and that it's over for me, or even, like I've talked to plenty of 33- and 34-year-olds, start working out a little bit because I'm like, I don't have the perfect partner yet, or he has it. He's not ready for a kid yet. It's like, okay, that's okay. Let's just do it, love. Let's figure out where you're at and not freak out about it.

**Cleopatra Kamperveen, PhD**
I think it's easy for us to say with our expertise, though, wisdom, I think, having had the 30,000-foot view over so many families, you can't help. I can't help but carry the wisdom. It helps me to be a little bit more calm about that. But the message is that there's so much hype out

there, and I think that's an issue. One of the consequences of that that I see every day is that women settle for a partner who they wouldn't otherwise settle for and with because they're afraid that they're running out of time. I will say that, while the role of age can be malleable and you can slow reproductive aging, having and raising a child with the wrong person will always be. The reason for that is that I have a front-row seat for so many couples. It's so obvious that it's one of the hardest things to do. Who you will choose for your partner is one of the most important decisions you'll ever make in your life. And if you have children with them, you're with your choice. If it's not an easy relationship, you're in for a difficult time. I think it's so harmful to make decisions based on feeling that biological clock pressure, and so we need to be talking about it.

**Aumatma Simmons, ND, FABNE, MS**
That's why the impetus for me to get into fertility was being with the wrong partner; he wanted to have a child, and I was like, shit. I could hear what my uterus was like, No. I was, and that's very good.

**Cleopatra Kamperveen, PhD**
Thank God you listened, because I think sometimes it's ticking so loud. It's hard to listen. It's hard to hear it.

**Aumatma Simmons, ND, FABNE, MS**
But looking at my child now, and every time I look at her, I'm like, Thank God, I did not have a child with that person. It's like that amount was immense. Just knowing that we have the child that I love so much, and of course, you're going to love your child either way. But to have that child with the wrong person would have been a complete shift in life plan. And your body, we could just talk about that because I could hear my uterus. I could also feel every single cycle is the most painful cycle. I didn't have cervical mucus my reproductive system was at its peak. I was going to just let you agree.

**Cleopatra Kamperveen, PhD**
But the body's wisdom is just incredible, and I have to say that all I had and you had this with the person it ended up being with and having your child with. But when I met my husband, my DNA was like it was supposed to combine with him. My husband always said to me, I knew. I have to tell you, my super babies, all this time, all academy at eight years old, it's the best youth development soccer league in the world, in Europe. We spend most of our time outside of America because of that. It's just that I say, Don't let your children in because people always want to identify someone as athletic. A person is going to do that. I'm here to say to you, that we do have to check a box and fit neatly into that box, and neither do our super babies. We need to protect them from society's tendency to do that because your super babies can be amazing athletic. They can. Match tennis and amazing social-emotional functioning. I will never forget that my baby, his teacher said, is a beast on that. He's like the Incredible Hulk on the soccer field.

He got the highest match score of anybody. Like, how is that possible? Normally a child is either physically advanced or verbally advanced, and you have three, and they're all both. How, like, are you guys doing this? But we're not special. That is possible for you, too. I want you to resist the urge to put your super babies in a box. I want you to, like, f-off when somebody tries to do that to them because they can be everything that they want to be.

**Aumatma Simmons, ND, FABNE, MS**
Love it. Thank you so much for joining me and just having this chat. It's been fun.

**Cleopatra Kamperveen, PhD**
Fun. Yes. I hope it is blessed. The people who need it the most.

**Aumatma Simmons, ND, FABNE, MS**
Those of you listening have gotten some wisdom and some pearls. Most of all, I am not going to put words into your mouth, Dr. Cleopatra, but for me, I hope that it shifted a perspective that helps you have a little more hope grounded in science.

**Cleopatra Kamperveen, PhD**
Yes, 100%; that is, our motto, our driving force. I want to close this talk, which has been nourishing by saying that in the hands of life, there is a significant difference between playing and playing to not lose And you can feel the energy of that because there's like a control fear. I don't want to lose.

**Aumatma Simmons, ND, FABNE, MS**
I don't like its fear mode versus like I'm owning this ship.

**Cleopatra Kamperveen, PhD**
I'm going to start with my fertile power and self-authority, and I'm going to do everything in my power to lay that strong epigenetic foundation for my fertility, for my pregnancy, and for my super babies and my super grandbabies. I'm so proud of the legacy that I'm passing on to them. It's not going to be perfect. I'm going to be perfect. They're not going to be perfect. But that's not the point. The point is, I'm going to know that I played to win, that I showed them that example, that I stepped up to give them the best of me, and that I do that every day, not just in the role of Primester  Protocol. But just to conceive, not just to have them. Not just yet. But every day. I would say it's the thing I'm most proud of as a mama, just like the way my super babies are beasts in the best way because they're so sweet, smart, and playful. But physically, they are beasts—all three of them. I am a beast in the way that I like to show up. I am always the loudest mommy in the room. I don't care if I look foolish, and I don't care if people make fun of me. All I care about is that they know I'm there. They know I'm their number one fan is me, and they hear me cheering. They will always remember how I showed up for them in a big way. That's what

Primester is all about—making our super babies. It doesn't just end with making them and getting them in our arms every day; raising them forever.

**Aumatma Simmons, ND, FABNE, MS**
Much with them. You're such a wonderful mama, so thank you for the work you're doing and the reading that you're bringing into the world.

**Cleopatra Kamperveen, PhD**
Thank you so much. I appreciate it.

**Aumatma Simmons, ND, FABNE, MS**
Thanks to everyone joining us. I hope you enjoyed this. We'll see you next time.