(introductory music)

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MARYN: Welcome to Indie Birth's series of podcasts here on iTunes, *Taking Back Birth*. Good afternoon, everybody. This is Maryn continuing our podcast series here about finding our own power in birth and in pregnancy and exploring all kinds of topics that, hopefully, allow you to come closer to making the right choices for you because we'll all make different choices, but the information stays the same really. And I think today is no exception to that sort of rule.

I want to talk about meconium. How fun. Meconium during labor. I get a lot of questions about this topic. I think it doesn't matter. That's what I've found. It doesn't matter if you're birthing at home or in the hospital or with a midwife or unassisted. Meconium comes up a lot as a topic of fear really and lots of questions surrounding it. So I thought I'd cover what I know today. Share with you what I know and some of what I believe so that you have more resources to make your own choices.

So meconium. What is meconium? Most people know. Some people don't. So when the baby is still in the uterus, they start to fill up their intestines with a substance called meconium. So it's not poop as we know it later in life even as a newborn or certainly as an adult. But it's a unique, sterile substance that starts to appear in the fetal bowel between 10 and 12 weeks gestation. And it's basically the remains, so the concept is the same as it is for waste later in life. But the fetus swallows fluid as you know. And meconium is essentially what cannot be reabsorbed into the blood stream. So waste. And it is a mixture of a whole list of things. Some of which are bile salts, bile, cholesterol, hair of the fetus—that the fetus swallows in with the fluid, skin cells.

So, again, it's kind of this hodge podge of sterile stuff because the fetus isn't eating or drinking anything but amniotic fluid while it's in utero. He or she is in utero. So it's this black tarry substance that the fetus does excrete usually not until birth—after birth. And it's a unique substance then. So if you haven't had a newborn yet or have occasion to see meconium, then you'll just have to experience it for yourself. It does not smell. It's just really gooey and sticky, and it's like tar. But that's what's holding gut, essentially, open. Otherwise, if it wasn't held with meconium or fluid of some kind, then it would kind of collapse onto itself with the fetus was in utero. So it also kind of distends the fetal bowel to give it shape and then, of course, is excreted as the fetus usually gets colostrums from the breast. That is a laxative that helps the meconium expel.

But today's topic is about meconium being expelled while the fetus is still in utero, which we'll talk about. Is that common? Is it not? Why does it happen? Explore all of these topics since most people are taught that it's a big deal. It's a big scary deal for a baby in utero to pass meconium and for us to know that. And, of course, the only way we'd know that is if the waters open or the waters break or however you want to say it. If the waters open and we can see how that looks in the amniotic fluid on the outside. So we'll get there, but I just wanted to start with what meconium actually is so that we're clear on that.

So meconium being passed by the fetus in utero is a very fearful topic. There are so many stories out there. Some positive, some negative, some good, some bad. I think for the majority of situations that are comprised of what I would consider a normal situation—so normal, healthy baby and mom, a woman near term or at term in labor. So I'm not talking about any crazy preterm situation here or anything. Just sort of normal situation. Full term, healthy person in labor at term. Meconium can change the course of the labor and birth. And that's kind of a big deal especially if we're going to talk about fear being such an amazing and prominent part of such a subject. That's important. So so many women—and I know quite a few myself have had meconium in their waters during a normal labor, normal birth, and then, of course, their plans change. So they wind up at the hospital even of their own accord. Perhaps it's an unassisted birth, and that scares them. Or it's a midwife attended birth, and it's in the rules and regulations that if meconium is visible at all in the waters that the birth must—the labor must proceed at the hospital.

So we're going to talk about all of these things because I think meconium is a really big trigger for mamas and midwives as well. And I want you the mothers to have this information, again, so that you can kind of process your own feelings around it, do your own research. And should this happen to you, should your waters open during a normal labor, and you see meconium that maybe you take a deep breath and consider some of the factors involved. So as I said there are regulations around meconium at least here in Arizona around the licensed midwives. At least last time I checked. If there are meconium—if there is meconium in the waters at any point during labor, that it is a transfer of care. So that doesn't leave much gray area as most of the regulations don't.

But that's a pretty big deal. So I think because it's a visual thing we are extra fearful sort of collectively just because it's something to see. And there is so much about birth—labor in particular—pregnancy in particular, right? We can't see the baby. We can't see the placenta. We can't see what's going on in there. And that is very unnerving to lots of people. Hence, the use of ultrasound and all kinds of trying to peer

in and figure out what's going on. But I think meconium is just another way to freak people out. If you've ever seen meconium in the waters, it's a color. And we'll talk more about that. So it can stain the color of the amniotic fluid. If a baby is breech and the waters are open and the baby passes meconium, then that's even more visually exciting to see the fresh meconium ooze out of somebody's body is quite the scene.

So, again, I think it's just a visual trigger for many of us. And because it's not something we're used to seeing—and, of course, most people aren't used to seeing birth at all, so add meconium to it, and it's just a visual disturbance, I think. So it's one sign, if you want to call it that that may or may not mean anything at all. So let's see. Some other signs that I can think of off the top of my head would be a breech baby for one. Does that mean anything? Is there something wrong? Or is that just a variation of normal? The waters opening before a real labor is established. Does that mean something? Does that mean something bad is happening or going to happen? Or is it just a variation of normal?

And I think there's so many examples of this. And meconium is one of them. So I want to, again, talk through today some things to think about because I don't think that just seeing meconium in the waters when they open during a normal labor is enough to mean anything at all. Does it mean fetal distress? That is the running theory with meconium. So I could just get that out there. Maybe you know that. Maybe you don't. Maybe you believe that. Maybe you don't. But that's sort of the running theme around town is that meconium in the waters during labor means the baby is stressed. And nobody wants a stressed baby, so we have to make it an emergency situation. So we're going to talk about that.

Meconium is just a piece of a potential puzzle. Again, like anything in birth. And that is why it pays to have a connection with your baby. It pays to practice your intuitive skills with yourself. If you do have an attendant at your birth, it pays to really know them well, to develop a relationship, and to have somebody that you can trust when making an assessment of any situation during your pregnancy and your labor because really I think most things that could happen are just pieces of a puzzle. And there are very few things that happen and are just 100% true emergency situations. There are clues sometimes. But, again, meconium may or may not be a clue.

So how is this? There are three different studies. One from 1975. That's Miller. Another one from 1987, Bachner. And 1992, Baker. And all of them said in quotes, "Meconium staining is not considered an indication for intervention." So there you have it. Meconium staining meaning the waters are a certain color. It's not the same as meconium aspiration syndrome. So we're going to talk more about all of these things.

But as clear as I can be right now, meconium staining is not considered an indication for intervention. And that is documented. So if that's true, which I believe it probably is, then what's going on? What's going on at all these home births even where there aren't any other indicators or problems? The waters open. The waters are slightly stained. And it becomes a big deal.

So meconium staining and meconium aspiration syndrome, otherwise known as MAS, might not be related at all. Are they related? The fear is—and I guess I can get this out there too—that meconium staining means fetal distress and also that somehow meconium staining indicates that the baby is going to aspirate meconium and develop meconium aspiration syndrome. And aspiration, of course, inhalation through the lungs. Now we want to inhale oxygen through the lungs, and the baby does too once the baby is on this side of the uterus. Earth side. But aspiration, we don't want anybody to aspirate anything. Breast milk, meconium, any kind of substance because that is dangerous. But, again, does stained waters mean that the baby will inhale meconium. And then develop meconium aspiration syndrome. That's kind of a stretch I think.

But that's the fear. Even if most people don't know it, even if they don't know what they're afraid of, that's what they're afraid of. That those things will happen. So when the waters open in labor whether it's before contractions or during or right at birth time when the baby is coming down, what do amniotic waters or fluid look like generally? Generally, if you don't know, the water is clear just like it should be. Just like it sounds like it should be. Clear and sometimes you can see specks of vernix, which, of course, is the coding that the baby has on the skin in utero. So pretty clear. But if you were to get some in a glass, it wouldn't be usually crystal clear. But with specks of stuff floating but not colored. Not colored specks. Vernix is usually whitish. So that's what I mean by clear.

And generally doesn't have a bad smell. It shouldn't have a bad smell. Normal, amniotic fluid is clear and odorless except for the smell that amniotic fluid has which, of course, I can't really communicate too well to you over a podcast. But I've heard it described as sweet. It is alkaline. It smells like amniotic fluid. Semen comes to mind, I guess, because semen is also an alkaline scent. But not a bad smell at all. Just sort of unique and not acidic like the way urine is. So it's definitely different. But that is typical. That's sort of what happens most of the time. But, occasionally, when the waters open, again, at various points in labor, if the fluid were to be caught, let's say, on a yellow—a blue pad, green pad, chux pad, whatever you want to call it, that there would be evidence of meconium staining in the fluid. And so if you catch that on a white pad, then it looks colored on the pad. It can look a little brown, which is considered old meconium staining. It can look yellow—yellowish to greenish, which is considered light

meconium staining. It can look super, super thick, and that's referred to as pea soup consistency and can be pea green color. It can be dark green.

Of course, fresh meconium like you would have a breech baby presenting—its bottom—would be black, tarry look just like does on the outside. So those are some variations of the way meconium can look. And, of course, differentiating it on occasion can be a challenge just because if the mom is also having blood show and there's mucous, one can be confused. Let's put it that way. If you haven't seen any births and it's your own situation and your home at an unassisted birth or whatever, then sometimes you have to look closely at what's coming out and figure out where it's come from because, again, bloody show would be different. And that's coming from the mom. But if you're sure it's amniotic fluid, you feel your waters open. Or you feel that you're leaking and the fluid coming out is able to be caught on a pad then, again, meconium can make it look any of those ways. So brownish, yellowish, greenish. And it can be, as I said, thick or thin.

So there's the color and then there's the consistency. And when it has particles, it's thick or thicker and, generally, newer. So Anne Frye, who is a midwife that wrote a couple textbooks for midwives, had a good thing in her book that I thought I would mention. She says that when you have moderate mec staining, if you were to smear that mec or fluid across newsprint, the newsprint would be pretty difficult to read. So that's in opposition to pretty light mec staining, which, again, would make the waters a little cloudy. But if you were to smear that over newsprint should you have newsprint around, you would still be able to read it. So just to give you a sense of what we're talking about.

Because, of course, when you hear these stories—read birth stories online or hear somebody else's story whether it was at home or the hospital and they do have a meconium experience, there are different ways it can look literally. So just to be clear on that. So, again, you want it—you want to kind of assess for yourself how clear or not the fluid is and then how thick the fluid is because waters that are clear and not stained generally aren't thick. Amniotic fluid isn't really any thicker than water although who knows? If someone put it in a lab test perhaps it is. But to the naked eye—let's put it that way. It's similar to just water.

Let's see. So here is something I wanted to share with you. So we have this idea in our heads or at least I did for so long that meconium is a big deal when we see it in the waters during labor because babies should not poop in utero. We are taught that they pee. We are taught that they do not poop. That there is no pooping allowed until the baby gets earth side and that pooping in uterus is a problem. But that is actually not true. Babies do poop in utero in normal, physiological situations. So there was a study

in 2003. And the authors of that study were Ramon, Cahall, and Martinez. And they used Doppler technology to show that between 12 and 41 weeks of pregnancy defecation or pooping by the fetus is physiological. So they actually observed these poor babies with Doppler and saw that they do, in fact, poop. Or most babies do, in fact, poop in utero. That's not at all what most of us think. We think that is illegal somehow. Peeing is okay. Not pooping.

However, the activity—the anal activity, shall we say—does decrease at term. And is also a smaller volume. So pooping in utero is physiological, but also it is self protective to do less of that as the baby gets closer to being born. And I think that makes perfect sense too. But 50% of babies born past 42 weeks will have stained fluid. So why would it be normal or physiological for a fetus to poop in the uterus? Why? So there's a couple reasons. So there is a hormone called motilin. I hope I'm pronouncing that right. And it triggers peristalsis and defecation. So we all know what that is, right? It's the bowel moving itself along and squeezing out what's in the bowel. So the hormone is present even when the baby is in utero. And this hormone rises as the fetus matures. And that's a great thing too, right? Because when our babies are ready to be born, we want those mechanisms to be ready to work so that the baby can poop on the outside here and get the bowel moving.

So another reason would be as the nervous system matures the digestive system matures. And that's also really important. So we want babies on the outside that are term to have everything ready to go. We talk so much about the lungs maturing. But, obviously, we want everything to be ready, so that's another reason, of course, that we want babies that are ready to be born and not forced out and not preterm because not only do their lungs need to work but their digestive systems and their nervous systems need to work. And these things are all maturing in the last couple weeks.

Lastly, and there are probably other reasons as well, but these are a couple. There are biological triggers for pooping, and they become more active as the baby nears term. So, again, I think that's sort of common sense if you think about it for a second that we want these things to happen. We want the baby to be able to take in breast milk and expel the meconium. That's just a normal part of being a healthy baby. And we want everything to be in order, so that that can work when the baby is born. So the babies have to practice. And they do.

So another normal reason that babies could poop in utero and do poop in utero is cord compression. So there is a vagal response meaning that the brain is wired that when oxygen gets cut off the anal sphincter opens, and meconium is expelled. So somehow we have it in our heads that that's bad. And sure, that's bad on a longer, bigger scale.

Nobody wants a baby to lose oxygen to their brain or long time. But when a baby is in utero and grabbing their own cord and just fooling around and spinning and twirling, they can, of course, squeeze their own umbilical cord, cut off oxygen supply to their—to themselves and release meconium.

So this is what their bodies should do. And this is how they practice using their reflexes. And also I bet it's the way they practice kind of getting ready for labor when oxygen does change, when there are shortages as contractions build and let up. The baby has all these protective mechanisms. So I don't think that that's a problem. At least it hasn't been shown for that to be a problem for babies to play around with cord compression in utero to create a normal vagal response. And really we can't say how much compression happens during a normal pregnancy of a healthy baby. Babies have reserves during pregnancy. They have reserves during labor. Normal healthy babies are meant to handle this. And I'm sure there's a million other reasons why and how a baby would practice such a thing that we don't even understand or pay attention to.

And, again, how many times would a baby do this—a normal, healthy baby do this during a normal, healthy pregnancy? We have no idea because we're not watching our babies, hopefully, with Doppler for nine months. We're not watching what they do and how they squeeze the cord and listening to their heart rate continuously. Gosh, I hope not for very much time at all. So we can't even say what's a normal amount of defecation by a baby or a fetus in utero. We just can't say. But we know, again, from studies that babies do do it. So if you have any inkling in your brain that, again, it was abnormal for a baby to pass meconium in utero, it's not.

But if a baby passes meconium in utero just practicing or whatever, grabs its cord at, let's say, 36 weeks—or heck. It could be 39 weeks. That the amniotic fluid is going to essentially clean itself and replenish, and there isn't going to be evidence of that meconium in the waters at birth especially if that woman doesn't birth until 40, 41, 42 weeks. So, again, it's happening. We just don't know it in most situations. So to make myself even more clear, we can theorize then that meconium in utero leaving the baby's body is in and of itself normal. So a baby may be stressed when we see stained fluid, but it may not be as we will discuss. And another reason that we're not quite sure when we see meconium in sort of a normal, healthy situation in the waters is because when babies are stressed they may swallow less. So that's all to say whatever I've already said which is meconium may or may not be a normal response. But we can't tell just from meconium stained fluid. We can't tell. We don't know exactly why that baby did that. Was it just normal? Was baby just practicing? Or did the baby stop swallowing because it was stressed? Right. It's hard to know.

So here's more about what I was saying earlier. Once meconium has been passed, it takes four to six hours to stain. So that would be the placenta, the baby, the waters. If you've ever seen a meconium stained placenta, that's interesting. I'm sure you can Google an image or something. Or a baby. Sometimes their skin actually gets yellowish from being stained from the meconium. So the percentage of babies that have stained fluid would be about 5%, and I'm assuming that this is at term, obviously, because we're talking about labor here. So stained fluid 5%. That's a decent amount really. But other sources say that it's as high as 15 to 20% staining of fluid. That's quite a different statistic there. And yet another source says stained fluid, baby, or placenta between 5 or 10%. So pretty big variable there. I guess choose what you will anywhere between 5 and 20%, which is huge.

But, of course, if you're including more than the fluid then perhaps that's why there is a higher percentage according to some sources. But I think the point I'm trying to make is just that it's really not that rare. So we're not talking 0.1% or even 1% here. We're talking, at the very least, 5% of waters opening during labor being stained with meconium. So to further our discussion here, is staining a problem? And what does it mean? Since this is the most typical situation and, obviously, is pretty common. So, again, waters open in labor, and there is staining meaning the fluid is discolored. It's yellowish, greenish, brownish. Is the baby in distress? Of course, we know that that's not always what meconium means. And it's probably safe to say that it doesn't mean that at all in most situations. But it's okay to ask ourselves that question and then perhaps try and figure out if we can get an answer to that.

So when I'm doing my own research here, is the baby in distress when there is meconium? You should see the difference of answers based on sources. And I would say for sure that the older sources—meaning the older textbooks—say that yes. For sure. That if there is meconium staining a baby is definitely in distress. Some sources say maybe. And I think maybe is always a good answer. And definitely some of the newer sources say that no. Probably not. It probably does not mean distress. It could mean the baby was in distress, which, of course, is different than the baby being in distress right at this moment. But I think that's definitely something to consider especially for unassisted birthers whose waters open and there is meconium. That it could mean that the baby was in distress. But that could have been awhile ago. So what does it mean at this moment? And how do we figure that out so we know if we need to deal with something at this moment?

So here is an interesting tidbit. We all think of—or used to think of—meconium meaning fetal distress. But what if I said that fetal distress can happen without meconium, right? So meconium could happen without fetal distress. And in studies, babies that were

allegedly in true fetal distress whether they were delivered by cesarean section or not, show no evidence of meconium. So go figure that one. It's a tricky situation. So I think for sure let's dispel the myth that says meconium equals trouble. Again, it's not to say that the baby isn't trying to tell us something, but it's our job to discern what that is. But let's not, across the board, assume any more that meconium equals trouble. Let's say that we need to know more. We need to know more info about the situation.

So we can't know all of the answers for sure. But we can ask ourselves some questions, and I would advise looking at the whole picture. So when it's your own birth, sometimes it's harder to do. But for sure, if you're attending births or whatever, then you know. You have to look at the whole picture. So first of all, is the baby post dates? If the baby is post dates, then the chances of meconium in the waters are just higher, and that really has nothing to do with distress. Is the baby breech? And we talked about that earlier. If the waters are open and the baby is breech, then meconium is just a really normal physiological situation as the bottom of the baby gets squeezed.

What is the heart rate of the baby? So when the waters open and the fluid is stained, not a bad time to take a listen. Listen through a contraction. Do you hear that the baby is stressed? And, of course, there is more to that discussion for sure. But these are just sort of basics. How is the fetal movement? Is it normal? Is it not normal? Meaning is it not happening at all? Has the movement stopped or slowed? Or is the movement really frantic and crazy? Either of those could be indication of a problem. Or are there signs or symptoms of infection in the mom or the baby? So mom not feeling well, having a fever, fast pulse. Again, infection in the baby could mean a really fast heart rate. It could just mean lots of strange things going on with the heart rate. But heart rate is kind of a separate discussion. But just know that that would be part of the picture when looking at meconium stained fluids.

So what's the mom's intuition? I've seen myself with moms where their waters open even early in labor, and there is some staining. And the moms know for sure if there is a problem or not. So just one thing to consider when looking at the whole picture. And when in labor the waters open. So I just said I've seen waters open before labor with staining and the mom not being concerned and it going on to be a normal, healthy, wonderful birth. That's definitely not true in every situation. And I would say, as a general rule, the farther the mom is from labor and the farther she is from the baby being born then the more serious meconium may need to be taken. Maybe not. But, again, it's just another question to ask yourself.

So, again, the worry is that the baby is stressed or distressed and/or the worry that the baby will inhale meconium at birth. We're going to talk more about that. So very

important part of this discussion for me doing these podcasts focused on undisturbed birth or physiological birth—when we're talking about meconium, we can't just talk about it in a vacuum. It's just one of these things that happens that we really don't play a part in because most of the time we do because most women aren't having undisturbed physiological births.

So we're talking about stress and worry and a baby releasing meconium possibly because they're losing oxygen which is—it can be a big deal. So are we doing anything to stress the mom or the baby? Are we? Great question, isn't it? Hmm. Are we? Are we doing anything in normal birth situations here in the U.S. to stress mom or babies? Hmm. Yes. I think we are. And it's safe to say that we are doing this at home births. And there is nobody that is safe really from having to answer that question. So yes. We are. We are stressing moms and babies out in normal labors at hospitals and at home. We are introducing a lot of fear into their labors whether it's because there are rules and regulations to follow, or we've got our own fear or who knows what. There is lots of fear at birth. It is safe to say that. So consider the role of fear in a labor and consider how moms and babies react. And that's sort of meconium aside. But meconium is a very real part of that.

Hmm. What else are we doing to stress moms or babies in labor? How about induction, right? So we're inducing—I should stop saying we, right? Because I do not induce. I refuse. I am not part of that world at all. Women are being induced of their own accord or from somebody else's plan. And it is being done with drugs, pharmaceuticals. Did you know that Cytotec, which is used—of course, it's not approved for—but it's used for induction in hospital situations—that Cytotec really does have a higher rate of meconium stained fluid associated with it? Now duh. I mean, of course, right? Because we're stressing the mom. We're stressing the baby. But that's actually documented. So there is the conundrum, right? We're getting moms that go to 42 weeks. That's not allowed. That's bad. And that's a whole other podcast.

But we're inducing them. So we're taking a mom that—her baby isn't ready to come, may or may not already have meconium just because she's post dates, and then we're including her. We're stressing her out more. We're stressing her baby out more. And we're upping the chance that her baby will pass more meconium during birth. So go figure that one. Rupture of membranes. Artificial rupture of membranes, which means we are—not we. Women are having their waters broken. And I usually like to say waters open. That sounds more gentle. But in this case, it's not gentle. It's broken. Women are getting their waters broken as part of home births even because. Because they are taking too long. Because, because, because, because, because. That is adding stress and tension to mom and baby.

Now how would you feel if you were that baby in the uterus surrounded by your lovely protective bad of waters and someone broke them while you were going through this process of labor? That's stressful. So if babies release meconium when they're stressed, well, there you go. Epidurals. Coached pushing. There are a million and one reasons why we are adding to the problem. Coached pushing is a great example. And, again, this is happening at home. This is happening at the hospital. We are not allowing the fetal ejection reflux to happen. Women are not allowing their bodies to push their babies out. They are allowing themselves to be told that they are 10 centimeters. It is time to push, and they are forcing their babies out. And, again, stressing mom and baby.

Cutting cord as soon as possible can, obviously, stress the baby and mom. And so if the baby has inhaled meconium in utero, which, of course, is really when it's going to happen. And we'll talk about that in a minute cutting the cord and forcing this baby to breathe when it's not ready and then taking this baby away from mom or interfering with this bonding process, obviously, makes the risk of meconium aspiration syndrome more because you've got a stressed baby that defenses are down. And any risk of infection, I think, and I'm sure it's been documented does go up when this is not honored. So all through the birthing process, there are many ways, shapes, and forms that we are actually increasing our chances of meconium staining. We are increasing the chances of meconium aspiration syndrome. And then, of course, in true western medical fashion, these are all problems that need to be fixed once the baby is here. Excuse me.

So my point is think how many things we are actually in control of. And for women out there that are planning normal, physiological, undisturbed births, I'm just giving you some food for thought. That if your waters open and you do see stained fluids that there is lots to think about, and there's a lot that you have an effect on. And there's a lot of information that we are not handing women. We are not educating them on, so it just seems like this big, scary thing that we need to fix. So moving on here, meconium aspiration syndrome is what people are afraid of. They think they're scared of a stained fluid, and, again, maybe that's the visual picture. But what they're really afraid of even if they don't know is that the meconium somehow is in the baby's lungs, and that the baby will try and inhale it and get sick and that, of course, is bad.

But to be clear, I think the focus has gotten sort of messed up. People don't even know what they're afraid of. They just see meconium and somehow it's bad, bad, bad. The baby will inhale it. So the truth is if a baby were to pass pretty serious meconium in utero because the baby was stressed and did gasp that would be the time that the meconium did get into the lungs. And we'll talk more about stimulation of the baby and

such in a minute. But, actually, aspirating meconium in the postpartum period is less likely unless, of course, someone does stimulate the baby or suction them when they don't need to be. And then they're going to inhale that meconium that's in the lungs. But, again, postpartum aspiration has been proven to be pretty unlikely. And in the olden days or the eighties even—ha, ha—that was the fear. People didn't understand at that point that it was really—it's really the in utero gasping of meconium that creates meconium aspiration syndrome. It's not the postpartum thing.

A normal, healthy baby that could potentially have some meconium in the lungs will more likely spit it out or swallow it in the postpartum period rather than gasp it in and become sick. And, of course, along the lines of physiological birth, that makes the most sense, right? Because as a species I do believe we're set up to live in most cases. So it would be pretty rare that a baby would do anything to sort of self destruct. Again, a normal, healthy baby. So, again, we know that meconium aspiration syndrome is a result of baby getting meconium in lungs prior to birth. And let's see. 20% of all infants with medium to thick meconium will potentially aspirate that and get meconium aspiration syndrome. But 2 to 5%--okay, follow me here. 2 to 5% of the 15 to 20% of the babies with mec staining—okay. So if 15 to 20% of babies have mec staining, then 2 to 5% of those will have meconium aspiration syndrome. But then—stay with me. Of that 2 to 5%, 3 to 5% of those babies—so a very, very, very, very small percentage here will die from meconium aspiration syndrome.

So tributes there to Rachel Reed, who is a wonderful midwife in Australia, who has a great blog. I got those statistics from her blog. And she cleared that up for me because it starts to get a little fuzzy the percentage of the percentage of the percentage. So all to say there that meconium aspiration syndrome is serious potentially, and babies do die. But it is a very, very small percentage. And, again, reflect back on how we might be causing such a thing to happen. I think that is a very important part to put the focus. So, again, meconium aspiration syndrome is rare because most babies at term will slow their breathing in utero and make inhalation less probable. However, if a baby does become hypoxic or lose oxygen and has meconium, then meconium aspiration syndrome could occur. But it's not just one of those things. So it's not just having meconium that would cause a baby to inhale it and become sick later.

The baby would really have to have meconium in the waters and become hypoxic and then, of course, have a bunch of other things happen and et cetera, et cetera for that to happen. So that's where the really small percentage comes from. Funny enough or it's not really funny. But ironically, meconium aspiration may also happen in babies who have no evidence of meconium. So that could mean that—who knows? They pass meconium earlier in gestation, and somehow it got into the lungs. It can just be a name

for meconium aspiration syndrome that is for any kind of obstruction. So a baby goes into respiratory distress after birth. Something is seen in the lung x-ray. We assume it's meconium. It may not be. Who knows what kind of obstruction it is? So my point is there's all kinds of things that can kind of get intertwined and can be blamed on meconium. It could be blamed on meconium staining. It could be blamed on meconium aspiration syndrome when that isn't at all what happened.

So back just a minute before I end here, it is important to know, I think, especially if you're having your own baby at home with nobody else that there are sort of protocols on suctioning the baby or not. Now it used to be, again, back in the olden days and by that I mean the eighties and really not that long ago. I feel like ten years ago even I was taught that all babies with meconium are to be suctioned meaning with the bulb syringe. But that is not the case anymore because, again, we know that the meconium, if it is in the lungs, that it's happening in utero. So when a baby is freshly born, the last thing we want to do is stimulate them to suck that meconium deeper into their lungs. We do not want to do that.

So if you have meconium stained fluid and everything feels right or checks out right for you to proceed to have your baby normally and healthily at home whether someone is attending you or not, you don't want to suction that baby. Most babies born even through meconium stained fluid are going to be vigorous and healthy meaning their color is good at birth. Their tone is good. Their heart rates are over 100. Leave that baby alone. Don't over stimulate that baby. Definitely don't suction that baby as a matter of course because you saw meconium in the fluid. Do not do it. This baby is fine. This baby is fine.

We are taught that if there is really thick meconium—particulate we call it—meaning it has stuff in it—that deep suction is required. But there is actually no evidence that supports suctioning guidelines on the consistency of meconium. So I can see intellectually where that came from. That, "Oh, geez. If it's really thick, we want to get something down there to suck it up," but there's actually no science to support that. So it's not to say that that's not necessary for some babies with really thick mec. But it's not warranted to do as a matter, of course. And, again, if that baby is vigorous and healthy with a heart rate over 100 or at 100 or over, leave the baby alone. If the baby really does need to be resuscitated, mec or not, but especially if you did see stained fluid—and that means the heart rate is 60 or under—then suction the baby first.

So if it's your baby and no one is there with you and, again, the fluids were stained either before birth or at birth and the baby isn't coming around—the baby is limp. The baby is not pinking up. The baby has a heart rate of 60 or under then you want to

suction the baby first because you don't want to just put your mouth on that baby and give the baby mouth to mouth. You don't want to allow whatever mec might be left in the mouth to get down in there with an inhalation breath. You want to get it out of the mouth and nose first. So, hopefully, that's clear.

But, again, most normal, healthy babies born in normal, healthy situations, as high as 20%, allegedly, may be born through meconium stained fluid. And, obviously, we have the research to support that that's really okay in most cases. In most cases, it's going to turn out okay. And that we don't need to suction and stimulate. We don't need to panic. We don't need to transport. Again, consider all of the variables but make your own choices. And have this information for if you do have someone attending you whether it's at home or in hospital because they will have their regulations and their ways of doing things. And, unfortunately, their regulations and rules don't often keep up with the most current information. And often they don't have all these things on their checklist, so it's your job if it's your birth and your waters open and there is meconium stained fluid to say, "Can we check these things out? Can we listen to my baby? Let's go through these other factors before we make an immediate transfer?"

So there you go. Meconium during labor. Hope you enjoyed it. And as always, check out indiebirth.com. We've got tons of podcasts like this. Probably over 40 at this point. Classes. Our How to Have an Indie Birth series of five classes. It's all online. You can do it at your own pace. And we just have a really great women—group of women—excuse me. For you to connect with as well should you enroll in that class. Last but not least we do free consults on Mondays, so check the website for that. And, as always, thanks for listening.

(closing music)