

(introductory music)

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MARYN: Welcome to Indie Birth's series of podcasts here on iTunes, *Taking Back Birth*. Hi, everyone. Maryn here today with a postpartum topic that I don't think gets nearly enough discussion. I think home birthers, in particular, think that maybe this topic doesn't apply to them. And so maybe that's why I don't hear too much of in my circles. But today I want to talk about vitamin K supplementation of the newborn. So if you listen to these podcasts regularly, you know that probably my favorite thing to do is to call into question the things we think are routine. We've taught—we're taught that certain things in birth, pregnancy, and mothering and even life—there are just some things that are a way. And they have to be that way. And sometimes there's not a lot of questioning that goes on.

So when it comes to birth practices or in this case, postpartum practice, I want to know on a regular basis why we are deviating from the physiological practice that our bodies have upheld for centuries. I want to know the answers to those questions. And sometimes we have a really good reason why we're deviating. And sometimes—and we'll talk more about this—the reason is really that we've made so many other deviations that now we kind of have to put band aids where we can. But generally speaking, any time that we think we know better than nature I think we have to ask what is going on and look more closely at whatever the issue is. Why is vitamin K supplementation of the newborn routine? What factors, risks, and history make—may make us more or less at risk? Or really our babies more or less at risk?

So just in case you were confused or misinterpreting what I might be talking about, I was accused earlier today of trying to convince people not to do things such as vitamin K. And that is not at all what this is about. But that's a pretty close minded way of looking at any issue. Just try and tell someone that they're making someone do something by offering legitimate, factual information. But that's not intention at all. In fact, I hope you make the right decision that's best for you based on what you learn here and all that there is to learn out in the world about this issue and what your intuition and your baby tell you as far as this issue goes. There is no one answer. There is no one right answer. It's simply questioning this routine, which is so relevant and, again, the topic of so many of these podcasts. It's not that any of these issues standing completely alone for the one baby that needs it is what we're talking about. We're not. We're talking about it being completely routine.

But it's interesting, isn't it? That people really get upset with you when you try to shine light on a complex issue. And, again, this is just a little light shining here. This isn't a comprehensive overview or summary of vitamin K supplementation at all. It's a really big issue. And it would probably take me hours and a decent presentation. But it's so interesting to me that people think that it's terrible to question a routine procedure that yes, indeed, will save or fix one person while putting thousands, perhaps, or even more than that in some cases at risk later in life or maybe over the course of generations. So I guess I'm different in that way. It's really hard to think of the one person or one baby that is the statistic. Nobody wants that to be their baby. And we wish that didn't exist. I sure do. But here in nature, which is what birth and life and death are all part of, we don't really get to make that choice.

And so we do the best we can. But, again, it's calling into question a routine practice that may put many people at risk over a larger scope of time. And vitamin K is one of these issues. I'm not sure—I haven't seen in my research at all that we're sure this is safe. Yes. It can protect that one sick baby. And that's great. But is it safe over the bigger picture? Will it cause problems down the line? Several generations from now will we have something strange going on because we've messed with this normal, natural process? I don't have the answers either. But you can hear that my guess is probably that these things are not benign.

So another issue I want to bring up before I kind of get into the meat of vitamin K is, again, if we're talking about routine and what's right for this person over that person and we're making decisions for other people, not only do I think that that's a problem ultimately, but even those of us that are planning home births with midwives, for example—again, I said many home birthers think this doesn't apply to them because their midwife knows better. Or they think it's just not an issue for them. But many rules and regulations around midwifery, at least, here in Arizona are very, very clear in that the vitamin K must be offered, recommended, and/or administered. So the exact wording here in Arizona is, "The midwife must recommend or administer vitamin K under physician's orders to the newborn." So sure. We can play with the words there and say, "Well, she can just recommend it. She doesn't have to do it." But really? Just recommend it. That's not informed choice. That is not full disclosure. If she truly is just doing that to cover her own butt.

So yet another way that rules and regulations discourage people from research and digging deeper and looking at the bigger picture and understanding the physiological process. We do not know the long term effects of treatments like vitamin K. And there is many here. I don't think we know the long term effects of ultrasound or epidurals or antibiotics in labor. And we have a clue. We think we understand a little bit about how some of those things can affect the baby immediately. But I'm talking the big picture here. So with vitamin K supplementation, I think we are playing with fire administering

this routinely. We have no idea what the effects will be on generations down the road or even on this baby, who is receiving a mega dose of a vitamin intramuscularly. We don't know.

So what I'm asking you here—and, again, I am going to get into the actual meat of this discussion is to not be blindly in fear. Don't just assume that because it's a vitamin that it's natural. Don't just assume that because your midwife recommends that it's benign or fine or that you need it. That your baby needs it. There is so much more to every issue than what we are told and taught. And I was thinking about how the world kind of wants us to have this no questioning reaction. That would really screw things up, wouldn't it? If people started questioning everything. Not even birth related. So, again, it brings up that same question for me and for you. And we don't necessarily have to agree. I'm just posing it that are we really going to keep unnecessarily treating all babies the same. Is it acceptable that they may be at risk versus the one that may be saved? Is that an effective plan for the future? And I'm not going to say more about that. But you can think about how you feel about that because that applies to lots of the issues nowadays.

So with vitamin K, there are the issues of first, understanding what it is, from what premise it has arisen, and mostly, that the premise and routine come out of a disrupted birth process. So, again, in the end, does this mean that every person should choose no vitamin K for their baby? No. That's not at all what it means. But I think the women that are choosing home births, they are planning undisturbed births, will feel comforted by this information because many of them—and these are the women that I mostly see—have an intuitive response to something like this vitamin K. Meaning they know if their babies need it or not. So yes. Education and all of that is important especially prenatally. I really urge people to research these issues prenatally. And then once the baby is here, they do have to rethink. They can ask questions. They do ultimately have to make a choice. But the groundwork has been done.

Despite the groundwork of intellectual knowledge, my experience has been that most families after birth know what they want. And some will say, "Yes. We're going to do it. Let's do the oral drops." Some will say, "No. I absolutely am not interested in that." So there's a lot goes into a decision. Here is the thing. We can't make birth perfect.

But when we control it and mess with it and add this interference and this one and this intervention and that one, then we must recognize that there is a need or could be a need for damage control like vitamin K. So actually what I love about subjects like this is they're so rich. To have a discussion only about vitamin K is really superficial. So anybody that wants to engage in that, try to take them a little bit deeper. It's not is it necessary or is it not. Because really we have to take it on a case by case basis. And, like I just said, if we understand how when we're messing with the birth process, there

may be a legitimate need for this supplement for some babies then that makes for a really rich discussion. And people that are open and willing to learn, I hope, then it turns into not this yes or no thing about a choice after birth. It becomes, “Oh, okay. Then I see how every little bit contributes to the whole. And if I’m striving for a physiological birth and if I understand the benefits of that, then this is kind of one of the rewards, hopefully, is that the baby is healthy and the process has been left untouched.” And that in those situations something like vitamin K supplementation is probably very unnecessary.

But, again, that’s just to say that I’m not saying it’s unnecessary when births have been medically managed. Babies that have been pulled out by forceps or had antibiotics in labor. And we’ll go through some other risk factors. Those babies may be smart. Their parents may be smart to have vitamin K administered to them. But it’s about so much more than that. If I just talked about those decisions, this wouldn’t be very fun. So let’s see. Let’s talk in detail now about vitamin K or as much detail as I’m going to go into for today since this is just a podcast. Vitamin K is responsible for clotting, and that’s really the most notable action that it has when we’re talking about supplementation. So the belief is—well, it’s not a belief actually. The fact is that a baby is born with lower levels of vitamin K than an adult.

So that right there can get people interested in this whole thing and question their own beliefs. The medical world routinely tells us that newborns are deficient in vitamin K. So you really have to think about what that means for you. Do you think them having a lower level than you do as a functioning adult is a deficiency? Or do you believe that that’s probably how it was made to be and that we should quit calling it deficient and just say the fact? Which is it’s a lower level than we have as adults. And like I said, probably great reason for that. And, again, in compromised baby, vitamin K supplementation might be necessary. The vitamin K really starts to get produced by the baby once the gut is colonized. So at first, there is meconium in the gut, and that’s sterile. The meconium has to be expelled. The baby is getting colostrums. There’s not a whole lot of vitamin K in colostrum.

But the baby is going to just naturally start to make his own. We do get vitamin K from food sources. But a good deal of vitamin K is made in the liver and the gut. So assuming the baby has optimal function of those organs, there really shouldn’t be a problem. So the three types of vitamin K that are possible to give—and gosh. I might butcher these names. But let me try. Vitamin K1 or phylloquinone. I don’t really know if that’s how you say it. Phylloquinone or quinone. That’s the plant version of vitamin K especially in green vegetables. It goes directly to your liver and helps you maintain healthy blood clotting. So we’ll talk more about the oral form of vitamin K, but that is that. The oral form is K1 from plants. Botanical.

Vitamin K2 is called menaquinone or quinone. Is made by the bacteria that line the gastrointestinal tract. K2 goes straight to your blood vessel walls, bones, and tissues other than your liver. So that's kind of cool, right? And that illustrates what I just said which is our bodies know how to do it. Even a baby. They may do it at a different pace or not make as much as we're making at any given time when they're early newborns. But their bodies know how. So that even just brings the question to my mind if we're supplementing with say K1—that's not helping the manufacturing of K2. So, again, we want to make sure that this baby is in as good health as possible. And the gastrointestinal tract is a huge issue.

The third kind is Vitamin K3 or menadione. It's a synthetic form. It's important to know that toxicity has occurred in infants injected with this synthetic vitamin K3. And those three definitions came from Dr. Mercola. I thought he was pretty precise with those. So those are the forms of vitamin K. And, again, with the newborn, we have the choice—well, hopefully the choice of the oral or the injectable or intramuscular version, which is usually K3. I think it can also be K1, the botanical version. The plant version. But my guess is that you would have to make sure that's what you were getting and probably go to some extent to order that if that's what you wanted.

So some interesting fact I found—and I think this was also on Dr. Mercola's site. He had an interview with a vitamin K expert that I will talk more about. But the vitamin K expert, a doctor from the Netherlands, said that the vitamin K status of the mother actually drops at the end of pregnancy. That's interesting. I'll have to look more into that because we think we want her to be able to clot efficiently. But I'm sure—I really do believe—although it's not going to stop me from looking it up—that our bodies know what to do. And probably maybe that lower level of vitamin K is so she doesn't over clot after the birth process and in birthing the placenta and all that. So just interesting. We don't know everything. And most days I think we don't know anything at all. So we just kind of take what we've got.

So vitamin K in excess, which is what supplementation is, is probably a really simplistic solution. Meaning that the babies that are truly sick that can be saved from an injection of vitamin K—it's hard to say what came first. The chicken or the egg. Sarah Wickham, who is a midwife in the UK has a really great PDF about vitamin K that I like. And I'm going to totally blank on the name. But you can email me if you want.

But I liked her quote here. She says, "Even if giving vitamin K to these babies could prevent the development of HDN, which is hemorrhagic disease of the newborn, we should not be saying that they have HDN because they were not given vitamin K. This just confuses and confounds the issue and is a bit like saying that someone who is hit on the head by a block of wood has a headache because they weren't given an aspirin. The idea of giving vitamin K to all babies may then be akin to the suggestion that we

should all take an aspirin before going outside just in case we are hit on the head by a block of wood.” I thought that was a really great analogy. So in case I kind of skipped over it and you’re a little confused, babies, again, have a lower level than adults of vitamin K at birth. And the belief is if we don’t help them out, if we don’t supplement them, they may bleed. They may bleed somewhere we can’t see internally, and they won’t have efficient clotting. And nobody wants anybody to hemorrhage. So that’s the fear, if you were wondering. And she’s saying that’s a very simplistic solution.

So what would mess with a baby’s ability to make vitamin K or to clot? There are risk factors. And, again, vitamin K supplementation may be completely appropriate in these cases. Or at least the best we can do. So preterm babies, antibiotic use in labor because, as I said, that disrupts the gut and that’s where that baby is going to make K2, oxygen deprivation at birth, sepsis or infection. And that makes sense too. Just a baby that’s sick and struggling is probably going to put all its energy towards vital function. Unusual jaundice. And here is my favorite. Immediate cord clamping. So I’m sure you see the irony here. I wish the medical world did. But they’re doing immediate cord clamping all of the time. Like 99% of the time. And that is the perfect illustration of an intervention that is creating the need for more interventions.

So something like immediate cord clamping is directly related to the supposed need for vitamin K supplementation. Just like I’ve said a million times. A baby that has some of those risk factors, maybe more than one, preterm, antibiotics, and then on top of it has their cord immediately clamped probably should get some vitamin K help even if that’s not really the problem. Because we know that immediate cord clamping messes with the hemostatic system so the way blood is flowing, the way it’s distributed through the body. And when a baby loses a third of his blood volume because the cord was clamped immediately, then that blood is missing, right? So less platelets. Less of everything. Less red blood cells. And less ability to make vitamin K. And last, but not least, the most, I think, relevant part of immediate cord clamping is that the liver doesn’t get perfused properly nor does the gut.

So the baby is deprived of its own blood volume. And if the liver is responsible for making vitamin K and so is the gut and both of these systems are deprived, then, again, the baby might need some help or so we think because they aren’t going to make the normal—the normal newborn that’s born in a beautiful undisturbed physiological birth, that standard of vitamin K making say at day 2. The baby with immediate cord clamp does not have that. That’s true. So I think that is just enormously helpful to illustrate. And, again, illustrate that these birth practices are harming us. Not just in the moment. Not just in the moment of this baby losing the blood volume but in the bigger picture. So the liver isn’t going to work as well. Perhaps for the baby’s whole life. We don’t know. The baby’s gut. And all of the other organs and systems that are deprived. So really when you look at it like that, it’s both simple and complicated. Simple in that if we just

left things alone we wouldn't need things like vitamin K hardly ever. And then complicated because it's such a big issue to get people to take an issue like vitamin K all the way back to the beginning and all the way back to the beginning of a pregnancy and how someone even prepares for a birth that's not messed with.

So, again, birth practices like this which are completely standard largely around the world, immediate cord clamping, make a baby more likely to (a) bleed internally and (b) unable to clot efficiently. The baby has had a third of its blood volume taken, so the whole system is thrown off. And, again, so much we don't know but it makes sense to my brain that babies deprived of that definitely could have some issues. And, again, if that baby does bleed internally we're not going to know. And so perhaps, it is a choice that people should make when they're already choosing such a medically managed birth.

So there are a couple types of disease essentially that would cause a true need for the vitamin K supplementation. Hemorrhagic disease of the newborn is sort of the older name. Nowadays it's vitamin K deficiency of the newborn. And you might see both acronyms. But Sarah Wickham in her document said that there is late onset of this disease process. There is an early onset. And she says, "What is the likelihood of a baby developing hemorrhagic disease of the newborn if a woman declines vitamin K? A figure for this was calculated by von Kries and Hanawa, 1983, who suggested that the risk of late onset HDN without vitamin K is between 1 in 10,000 and 1 in 25,000." Late onset HDN may be a serious condition for those babies who develop it. But if between 10,000 and 25,000 babies have to be given vitamin K in order to prevent 1 case, we have to ask whether it is worth it. So beautiful said, Sarah Wickham.

So the options even at a home birth are the intramuscular vitamin K or the oral plant based K1. I know even with the women I see I certainly don't carry the intramuscular because that's prescription. And so we have this discussion before birth. And if they're interested in the intramuscular, if they think that's going to be something they want, then they have to order it from a pediatrician. So here's the benefit, I guess you could say, of the IM injection of vitamin K. It truly does stop active neonatal hemorrhage with the injection. So I'm saying it as well that it can be life saving for that 1 in 25,000 babies.

The amount of vitamin K injected into the newborn is 20,000 times the needed dose. And the intramuscular injection contains additives and toxins such as phenol, propylene glycol, and castor oil. So it's highly toxic. And, last but not least, there is the issue of pain and trauma. And that's another podcast. But let's agree that newborns feel. It doesn't mean that as their parents we won't make certain decisions for their health. But let's not act like they're not going to feel this injection. It really boggles my mind when midwives—midwives—say things like, "Oh, it's no big deal. Oh, the newborn screen.

Oh, the vitamin K shot. It's no big deal. They don't feel it. They just nurse." Nope. I don't agree.

So on to the next option, the oral plant based K1. I forget the trade name, honestly, of the one that I'm familiar with. But if you Googled it, there's probably a couple. And you could probably just order yourself. So the way I like to do it or suggest to parents if they want the oral version is a drop per day for the first week. If you are familiar with like biblical recommendations of circumcision, you will know that that is advised on the seventh or eighth day. And that is because that's when the baby really starts to manufacture his own vitamin K. So supplementing for the first week makes sense to me. And it's just a drop per day. And on a clean finger, mom or dad just put a drop. Let the baby suck it off. They get the bonus of your bacteria as well to help colonize their gut.

But there are a million ways. I really think there's a million ways to do this. So that's the way I've decided on based on what I've read. But there's a million other ways. And allegedly, it's not toxic. It's not possible to overdose on the oral version. The Cochrane Collaboration has determined this dosage schedule, which is 1 milligram of the liquid weekly or 0.25 milligram liquid daily. So I don't know about that. But that is an option. Definitely one of the drawbacks of the oral, if there are any besides it still being a supplementation of a possibly unnecessary vitamin, is that you just have to remember. And that sounds silly. But often in the first week after birth, lots of people don't remember to keep it up, and then it's no good. Not effective.

So there was a study out of Denmark. Boy, the Danish people are on this vitamin K thing. It was called *Weekly Oral Vitamin K Prophylaxis in Denmark*. And they were trying to figure out—let's see. How the oral administration worked and how effective it was until three months of age. So they looked at a total of 507,850 live babies born in Denmark. And they recommended weekly oral prophylaxis as long as they were mainly breastfed. No cases of the vitamin K deficiency were revealed. And let's see. A dose was regarded as having been given if the infant received a drop of vitamin K or was mostly formula fed that week. Of course, formula is rich in vitamin K or richer than breast milk. And the prophylaxis was regarded as complete. Compliance was good with 94% of the infants completing the course. The conclusion of the study was that the weekly oral vitamin K supplementation during the first three months of life was an effective prophylaxis against vitamin K deficiency of the newborn. Parental compliance with the regimen was good.

So I like that study just because if you've ever been up against medical people with this issue they'll poo poo the oral version because, of course, really they're probably afraid of a plant being able to do the same, number one. And there is that trust issue, right? Of making sure the parents administer this for a week. So if someone is at the hospital

and they had their baby there, it's certainly easier, and they can cover their own butts just to give the injection and be done with it. Nobody wants to be responsible. But, again, I appreciated that study because for so long I had been hearing, "Oh, it's not effective. Oh, the oral is a waste of time. Oh, don't bother." Whereas now I feel like that's a really good study to present to parents if that's an option they would consider. It is effective if, of course, you keep on it.

So another risk that I think is pretty anecdotal at this point. Sarah Wickham reported it in her PDF document. Is that some midwives have reported unusual jaundice with the oral vitamin K. Jaundice on day eight or nine of life, which is highly unusual. And I don't know. I don't have any more information about that. But, again, it is in excess. You decide if you're willing to take the risk of that excess for whatever risk factors you might have. But it's still excess.

So Anne Frye talks about some homeopathic ways to help with clotting. And really the information is out there other than her book anyway just because it's pretty basic homeopathy. So arnica and bellis can be given preventatively. So both of those or either. They're two separate homeopathic remedies. And that could be the plan for some families who don't want to do the oral, don't want to do the intramuscular but feel like they want to do something. No studies on that, of course. Vitamin K in the mom's diet. Sure. Go for it. We know though that colostrums is pretty low and breast milk is also very low in vitamin K. My brain says that's for a good reason since babies are supposed to be breastfed. So I don't know how much I would mess with that. But a good diet is a good diet. And more leafy greens and other sources of natural plant based vitamin K could only be good so sure. I think that's great.

Other than that, I think there is obviously lots of education to be done around this issue even with home birthers, so that they don't feel like (a) it's no big deal or (b) it doesn't apply to them or (c) they don't have these options. Because really everybody should have these options which is, again, intramuscular, the oral, or nothing and then maybe a fourth option is some of the more natural treatments. But planning birth to be as physiological as we can, which, of course, is a huge topic and what all these podcasts are about, is a huge defense. It's a huge defense in having a healthy baby. And really when we look at the babies that aren't clotting well—so that 1 in 10 to 25,000 babies, this is a baby that has risk factors most of the time. And, again, a lot of those risk factors are coming from medically managed birth. And we could argue even though it's not been studied that some of those risk factors are coming from just not a healthy situation.

A baby that is born to a mom on certain kinds of medication is going to have trouble possibly clotting. So what can we do? We can do the best that we know how to do. Feed ourselves well during pregnancy. Try and do our best to just make the healthiest

baby possible. And, again, strive for that physiological birth at term. So with a birth situation like that, there's not going to be those other traumas that we know are risky, like I mentioned. Like forceps or vacuum or anything that will create bruising. So some things to be aware of though if—even when you have a home birth and you've done all these things and everything seems perfect and wonderful, a baby that may possibly need this intramuscular shot is a baby, again, that's sick really. That's what we're talking about. And this baby may have unusual bruising.

So that's kind of a point of contention in some ways. Some people will say, "Oh, if the baby had a terrible shoulder dystocia and is all bruised, they definitely need vitamin K." Well, the other side says, "No. That's normal bruising for that baby and normal clotting." It's the baby that has unusual bruising, that had a perfectly peaceful easy birth, and suddenly develops bruises or is bleeding more than the drop when you cut the umbilical cord. Bleeding from its umbilicus or strange stuff like that. That is what we should be aware of.

According to what I've read, there are—or there is what they call a warning bleed. So a baby that may bleed internally, which, of course, is everybody's worst nightmare, often has a warning bleed. So something happens externally. Again, whether it's that strange bruising pattern or maybe some bleeding that kind of gives the tipoff that this baby is really have trouble clotting and needs some help. So really in that really, really, really rare circumstance, that baby needs the injection of vitamin K. And I have to laugh because I'm working with a mom here who needs to get the vitamin K injection just as a matter of course because it's required for the baby to be seen for a tongue tie assessment. So that's required just to be seen. Because if they have to do the clip of the tongue tie, they want to cover their butts by making sure that the baby has absolutely, positively no clotting issues at all.

So anyway, it's not funny. But I was just amused by how hard it's been for her to get a hold of the injection. And that's curious to me because it's kind of a life saving thing for that rare baby. And if you had a baby that had unusual bleeding or bruising and you wanted to rush them into your pediatrician, you would hope that they had this injection actually available because that's when you would actually need it. So lots of ironies with situations like this. It's there when you don't need it. It's not there when you need it. But any of those situations, obviously, refer to a pediatrician and get that baby some help.

So hopefully, that helps you understand vitamin K supplementation of the newborn. Such a long subject there. You know your options. You know a little bit more about how this came to be routine. You know a little bit more about risk factors. And hopefully, you can make a really informed choice for yourself and your baby. Thanks so much for listening. And be sure to check our Indie Birth site. Last but not least, we

have an amazing conference coming up here in January 2016. And I'd love to meet you then. So check out the details.

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