Infertility from an IVF Expert: An Interview with Pat McShane, MD Transcript

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Podcast Introduction and Guest Welcome

Your genes hold the answers to your family's overall health. I'm Dr. Paula Kruppstadt and on the Get to the Root with Hope for Healing podcast, I sit down with experts in genetics, functional medicine, and family care to explore what's really going on beneath the surface so you can stop guessing and start healing.

From personalized insights to practical tools, we bring you whole family wellness that starts at the root. Welcome to the Get to The Root podcast. I'm your host, Dr.

Paula Krebstadt, and I am joined today by Dr Pat McShane. She is a retired fertility specialist with 40 years of experience in IVF. So welcome to our podcast!

Great to be with you. Thank you! Yeah. Well, Patricia, you have seen many, many things come and go. Is it all right if I call you Pat? Yes, for sure. Okay, great.

Please call me Paula. So I would love to ask you, we have a lot of women who come to our practice that have struggled with infertility, and I'd love Just off the top of your head, what are some of the things that you would look at as a fertility specialist to try to set them up for success?

Thank you, that's a great question. And folks come in often with a history of having tried for six months or a year, but they haven't really looked in the mirror at some of the lifestyle factors and medical conditions that really do impact fertility greatly.

So age is probably one of them, the big one that we can't do much about. And most women these days are terrified to turn 35 that their fertility is going down and so on.

And that's true for some people, but not for all.

Fertility Basics and When to Seek Help

But I would advise people don't wait too, too long. If you are over 35, see a specialist sooner rather than later. There's a kind of a current movement towards restorative.

I'm not sure what the right wordage is, an approach to fertility that doesn't involve the technology, which is fine. But again, if you're 39 years old and your cycles are changing and so on, it's probably a little bit late to do some of the restorative things that people advise you to try.

So if your 30, that's a different story. So that's number one. What do you mean by that terminology? Well, I haven't studied this in great detail because this has kind of come up since I have been retired, but there's a movement out there that says, you know, don't bother to go to those fertility specialists.

You can do this on your own. And I'm going to go through some of the things that we do recommend for people who are trying to get pregnant. You know, there's other problems that are not surmounted by a healthy lifestyle and husband or partner with good sperm and so on.

And those, you know if your periods come every three months or every two weeks, you know, probably that's not going to work for you. Or if you've had pelvic infections or a lot of surgeries, you can restore up to here and have perfect cycles and perfect sperm.

But if your tubes or your uterus aren't good, it's Thanks for helping me understand that. I get that now. And the other thing I want to say at the outset is that this technology is not for everybody.

One of the first things that I, as a fertility specialist, needed to check out with the couple really is, well, where are they in using these different technologies?

And sometimes one person would be, oh yeah, go for it, full speed ahead. And the other would like, whoa, you know, I have religious or various kinds of objections or concerns about using the different fertility technologies.

So at the beginning, I just want to say that I'm not advocating this for everybody. It's for most people, but not everybody, and people need to be kind of skating along at same pace with their partner, which can take some doing.

Sometimes the male partner is all gung-ho, her degree or, you know, somebody wants to do something else or they just don't, they're not ready for it. So that's a piece of fertility medicine that I think can be neglected at times.

We kind of assume everybody wants just to go full speed ahead. So making sure that the partners are congruent in their thinking and the timing is right.

And then you kind of parse through potential religious convictions or things that they're opposed to. Okay. All right. And multiple births is a big one.

Some of the early on fertility treatments like Clomid, for example, is the pill and it's widely used in general OB-GYN offices. It's wonderful for people whose periods are a little bit off or maybe they're 38 years old and if they ovulate two eggs, which is what Clomed will often do.

They have a double chance of getting pregnant, but then they have the chance for twins or even rarely triplets. So, you know, again, we have to kind of go through the pluses and minuses of the different treatments with the couple and see what their openness is to this.

So what are the types of various different technologies that say a high risk pregnancy or a fertility doctor would look into apart from say using Clomid that maybe your general OB-GYN might be doing?

Right. Right. Well, if there's borderline sperm count, and normally you have to establish that with more than one sperm analysis because one doesn't tell you the whole story.

Fertility Treatments and IUI Options

And if, there is a problem in the male partner, that should be taken care of. So they might need to see a specialist. But if there's a situation where their sperm count or their speed of the sperm or the percent that are moving is a little bit low, you can do intrauterine insemination, which is bypassing the cervical mucus and just placing the sperms up to the top of uterus, so they're basically getting a head start.

And obviously, this has to be timed with the woman's ovulation, and there's different ways of figuring out when the natural ovlation would be, or triggering ovulation when, the women's follicle in her ovary is at the correct situation and so on.

So there are different way to go about that. Intrauterine insemination is often performed as a solo technique or sometimes with the Clomid or even stronger fertility medications.

Question I have because this happened in my office and here I am a pediatrician but a functional medicine expert even seeing adults. I saw a younger mom, well I'll just say she was late 20s, early 30s and I had not seen her in 10 months, she was describing to me prior to doing this, but I put her on some progesterone in her luteal phase and she goes, oh yeah, Dr.

K, I got pregnant right away and this is baby number two and I'm like, whoa. So simple things that can be done, say when someone wants to conceive, but they're not to the point that they are panicking and going to a fertility specialist or a reproductive endocrinologist.

So what would you say to that young couple, late 20s, early 30s has one or two kids, they want another one, both mom and dad work, they're stressed out.

What would you do to try to optimize them conceiving without having to go see a fertility specialist? Sure, sure. Good question. One thing is to do basic hormone studies, and I know in your practice you'd do that because Thyroid, you know, simple.

You can be a little bit low on your thyroid and that can make a difference in both your chance of getting pregnant, but also your risk of miscarrying.

So, we're not just trying to get people pregnant but get them through the mis-carriage and then a healthy pregnancy. A healthy single pregnancy is typically the goal.

of a fertility practitioner with the couple or the single woman in some cases. So, checking basic hormones and then a good menstrual history. Again, I know in your practice, you're big on getting this full story on people, and people are different.

Women are a different young woman, maybe having 30-day cycles every month, but somebody else may be going 22 and 36. You know, those are two different, totally different situations.

Some people may be tracking their ovulation with urine kits on a, you know every month basis and trying, consistently three or four times a week. And others may just kind of, the only time we're together is Saturday night, but if you're ovulating on Tuesday, that might not work so well.

Lifestyle Factors That Affect Conception

So there's a lot of simple things like that, that with a little bit of teasing out of the history, again, what's the gynecologic history? Has this woman had infections?

What about after those pregnancies? Was there a problem with her periods or her infection or a difficult delivery, you know, things A lot of it is back to the history of the individual woman.

Some people need to, you know, run, do not walk to your fertility specialist, and others can be a lot more, easygoing about it. Yeah. Let's say someone lands on your door and they're struggling with the infertility.

You know, you had 40 years of experience with IVF. What has changed in the IVS world? And for our listening audience, can you define what that is? IVF is in vitro fertilization.

So that means in a test tube, in-vitro, and fertilisation of the egg. In normal reproduction, the fertilation of egg occurs in the tube—the fallopian tube of a woman, not in test tubes.

IVS means we're taking out eggs, usually multiple eggs from a women, putting them in dish with her partner's sperm. and then choosing embryos. And normally these days we put back one embryo, the healthiest one that either tests out as far as how it appears or genetically, which has even upped the odds of success for some groups of people.

So, so much has changed. When I first started doing in vitro, Which is when the world's first fertility IVF pregnancy occurred when I was in my OB-GYN residency in the late seventies, early eighties.

And then the first U. S. pregnancy, occurred, when, I, was, in, my fellowship. So this is, this was all brand new. We were still doing laparoscopies to retrieve eggs, which is a surgical procedure through the belly button where the woman has to go to sleep for, you know, 20 minutes or half hour.

and we would place a needle through the belly wall into the ovaries. We could see the egg follicles in most people. But if you had tubal problems or endometriosis or surgical adhesions from a different surgery, sometimes we

couldn't even see ovary and that was a whole other situation.

During my training, luckily we moved over to vaginal ultrasound guided egg retrieval. So that meant that the risk and the side effects profile, the amount of anesthesia that you need, and recovery diminished greatly.

So that was a huge win. The other thing that happened that really changed our pregnancy rates was we would often have, let's say, an average of 10 eggs from a typical IVF cycle.

And from that, you normally get about three or four good-looking embryos if you let them grow out to day five. Initially, we were only letting them grow out to day two and then day three because the culturing of human embryos hadn't been studied.

There was no research money for this. So we we're basing our culture conditions in the test tube with materials from mice and monkey embryo, not human, because it's very difficult to experiment on human.

We were kind of doing the best we could do, but over time we began to know more how to grow embryos successfully. And then the embryo sort themselves out.

It turns out that most human embryous that are created in the, even in, are not genetically normal. But they may be able to develop for two or three days on their own with just the material, the genetic material from the egg.

and the new embryonic genetic material hasn't taken charge yet. If you can let the embryo grow to day five, if you've got the correct culture conditions, then you get the best population.

And the ones that are not genetically normal mostly have stopped growing or they're fragmented, slow, things like that. So that's made a huge difference as well.

And now we often will test the embryo for the genetics because even the beautiful, what we call a blastocyst, which is a ball with a lot of cells and then a clump of cell inside this cells with the little fluid in it, cyst blastocist.

they may look perfectly normal, but a certain percentage of them will be genetically abnormal, maybe not as abnormal as the ones that died two days earlier, and as we get older, one single gene is all it takes to get you a pregnancy that doesn't take or a miscarriage or child with congenital issues like Down syndrome.

So nowadays, oftentimes, the embryo will be tested and usually that means that it needs to be frozen and then put back in a later cycle back into the uterus.

We've also gotten way better at putting them into the uterus with using an ultrasound to guide exactly where that soft plastic tubing is going and putting it in a precise manner.

Okay. So with some of the complications from IVF from years gone by, the seeing multiple births has gone way down. And then we talked to congenital cardiac issues also has gotten well, Yeah, it's very hard to separate out congenital anomalies because people with infertility tend to have a higher chance of having birth defects in their babies.

So teasing that all out, is it the medication? Is it in vitro? Or just the fact of infertilty has been very, very difficult. And I would say for the most part, If there are risks to these technologies, pretty small and there's no kind of particular screening that we do recommend for the babies that is different than what you would do for otherwise normal, you know, normally conceived pregnancy for most babies.

IVF Advances and Embryo Testing

I appreciate that more information, a little more in depth there. What are some of the other things that are associated with miscarriages that you're looking for, that an infertility specialist would be looking?

For one thing, I can think of something called the antiphospholipid antibody syndrome of pregnancy. But the common things, like you mentioned, optimize the hormones, look at the thyroid infertility specialists to prevent those miscarriages, what are you thinking of?

What are some of the things? I'd like to thank Fagran Genomics for sponsoring our podcast. Without knowing what your precision genetics are, you don't have a roadmap.

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The main culprit is the uterus itself, and that can be a common factor for infertility and miscarriage. So let's say fibroid. Many, many women, I think the numbers, 20 large number, have a fibroid, which is a muscle, quote-unquote, tumor, but it's not invasive.

It's just an overgrowth of muscle tissue within the wall of the urethra. If it's more in the cavity of the uterus, if it is poking into the cavities where the embryo is supposed to implant, it can, number one, prevent the umbrero from implanting, or number two, the umbrella may implant and then find an inhospitable environment and miscarry, even if its normal.

embryo. So the first thing that fertility specialists do if we're going to invoke the higher tech things is check on the uterine cavity, which can be done a number of different ways.

Ultrasound just with a little bit of fluid being placed into to open up the top and the bottom wall of the urethra so we can see the shape of oftentimes see whether the fluid has come out of the fallopian tubes to make sure that the tubes are open, because sometimes someone will have blocked tubes and not realize it.

So that's the number one culprit is the uterus. Fibroids is a big one. Scar tissue in the urethra, sometimes from a procedure or an infection or a miscarriage.

And polyps, which may come and go. Sometimes someone will know they have a polyp and often they don't. They may not have any symptoms. Abnormal shapes.

You can have heart shape uterus and not a more of a, you know, flat on the top triangular shape. So that, again, people typically don't have symptoms from having that.

But that can impact on their pregnancy rate and their chance of miscarriage dramatically. So, that's kind of where we start. I appreciate it at the very beginning of the discussion you were talking about men, you know, and a low sperm count.

Now with functional medicine, I think about all the other little tools in our arsenal in that if we can decrease the global inflammation in the body by providing a body with optimal nutrition, an anti-inflammatory food plan, good sleep schedule, You know, there's also ways to check, you know B vitamins and antioxidants.

It's interesting. We do IV therapy here in our office and we have something we call the nurture and nourish strip. And we've used that for women trying to conceive.

women who are pregnant, women are lactating and for postpartum periods. We had a mom tell us, she said, this is baby number three and this has by far been the easiest pregnancy or recovery afterwards.

And we just did a series of four and This drip just has all the basics in it, minerals, vitamins, amino acids. There may be some carnitine in there too for mitochondrial assistance and just the plethora of the bees and some magnesium because everybody's stressed out and has type muzzled.

If you're trying to nurse a baby. That is so helpful. You said you start with basically your geography of looking at the uterus for scarring, fibroid.

And then what are some of the metabolic things or biochemical things? We know people talk about methylation, but what about clotting disorders or things like that that might cause people to lose pregnancies?

Well, normally if someone has one or two miscarriages and it's fairly early on, that is a function of abnormal embryos that were a little bit abnormal, normal enough to implant, but not to hold.

Okay. And again, this would be in an otherwise healthy person. If you have someone you know that their uterus has been operated on multiple times or, you That's kind of a different story.

For most people, with one or two miscarriages, the finding will be no greater than if you just tested everyone in your office for any particular problems.

Miscarriage Causes and Uterine Factors

And again, we've mostly, in a fertility practice, pre-screened them for thyroid abnormalities and so on. It's really when somebody has three miscarriages that we start to get particularly concerned about them, whether it's from fertility pregnancies or a spontaneously occurring pregnancy.

For that, there's a whole set of hormones and, again, age is a big factor here. If you're over 40, it's not unusual to have a miscarriage. It's over, you know, I don't recall the exact numbers, but somewhere 30 to 50 percent of pregnancies will mis-carry.

So, that's, not as uncommon. Just to go back to what you said at the beginning about healthy lifestyle, we kind of ran through that pretty quick, but when someone comes in, even if they don't have a history of infertility, the first thing we will do is tell if either partner is smoking cigarettes, stop.

That's very negative for both fertility and miscarriage and for male sperm. And of course, passive smoking, if the husband is still smoking but the wife doesn't and he's smoking in the car, you know, she's being exposed and the children will be also.

So we start there. Normal weight, weight for men and women. is associated with their reproductive outcomes. So, underweight is for some women, they're just not eating the right type and amount of food.

Others are over-exercising or actively dieting or anorexic. You have to tease out, and again, back to your premise and your practice that every person's different, you have go through this, what's going on here.

Overweight, obviously, is much more common, and again, has a whole list of associated issues with fertility and reduced success with IVF. It impacts sperm quality as well.

Recreational drug usage is not good for male or female fertility, of course, not in pregnancy, people are pregnant before they know they're pregnant. even alcohol, I would tell somebody, well, if you want to have a glass of wine for the first two weeks of your cycle, go for it.

But after that, you're not sure whether you are pregnant or not if your not using contraception and you re sexually active, so don't drink in the second half of the cycle etc.

So, again, this is the kind of information that we, in a fertility practice, try to tease out. And in the regular OB-GYN office, often they will do that as well.

More and more people are screening for genetic issues, because cystic fibrosis, for example, white population or sickle disease in a black population, or folks with a family history of muscular dystrophy or something like that.

There's genetic panels that are now, you know, $100 or $200 that you can get for genetically inherited diseases. Not about the woman's own genetics, but about her risk in her gametes, her eggs, or his sperm.

Advocate testing one person, and if there's nothing that comes up on that, then the other partner doesn't need to be tested. But if, let's say, cystic fibrosis does show up in the women's testing, that's important to know if the partner has it, because then you have a one in four chance of passing that genetics down to the child.

So that's another piece that doesn't impact your fertility so much, but again, the birth of a healthy child, one healthy, that that is our goal as gynecologists typically.

Love that. Well, thank you so, much Pat for just giving us just an overview of what an infertility specialist would look at.

Adoption, Natural Conception, and Closing Advice

how things have kind of changed a little bit and just for us to remember too that with recurrent miscarriage it's typically three and then other things are looked for.

All those lifestyle things that you brought up that is par for the course for an OB-GYN or then an infertility specialist to get out on the table and understand.

Do you want to just Our time's almost up here, but just one of the things through the years, did you see this where people had gone through infertility, then they decide to adopt, and then, they conceived naturally?

Like, Did you that over and over again? Well, adoption is so difficult now. Again, people say, oh, why don't they just adopt? It's like, it's very hard.

It is almost as hard emotionally and financially. And it is very burdensome as well. The studies have shown that it doesn't impact on your fertility to adopt.

And many people with even unexplained infertility or sometimes even severe problems can and do get pregnant on their own. You know, there's a lot of mythology around fertility.

Obviously, it's one of our basic human experience. So stories can arise. Yes. Well, thanks for setting me straight on that. It's just, you hear these things and you're like, okay, whatever.

All right. I really appreciate your time and thanks from unpacking that, that there's so many people that the reproductive organs especially now that we've gone through COVID and a lot of folks struggling because the reproductive organs hold on to a lots of the mRNA and spike and it's become a real thing now and so some of reports that we weren't hearing during COVID.

And so we just want to encourage people that you can conceive and then like Pat said, get in to see an infertility specialist earlier rather than later, like run.

You know, the older you are, it's like, let's keep the health of those eggs up. And, you know men, they just make more sperm, but women, your eggs are aging.

So we love life and we'd love children. As a pediatrician, I always tell folks, there's no convenient time to have a baby. But man, when your heart is crying out for one and you're able to, It's such a joy and a blessing because children are blessing from the Lord.

Amen to that. Yes, yes and you know when you get to hold them in your arms and they're different personalities and from the moment they pop out of the womb, this is going to be a spicy one here.

Well, great to talk with you. Thanks for having me. Yes. Thank you so much. And Pat's Dr. Talks platform and podcast, because she's a fellow podcaster too, will be in our show notes.

So have a great day and thanks for your time. Take care. Thanks for joining us at Get to the Root with Hope for

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