

**About Health TV with Jeanne Blake**  
**Fertility**  
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JEANNE BLAKE: Welcome to *About Health TV*. I'm Jeanne Blake. Imagine being desperate for a baby and finally, after trying everything that science has to offer, you find out you're pregnant. But not with one baby, with three, four, or even more babies. Recently, a Washington couple who fit that bill gave birth to septuplets, five boys and two girls. Is this a medical miracle or a medical disaster? On this edition of *About Health TV*, we're going to explore the ethical questions that surround multiple births with Richard Knox, the health and science correspondent from National Public Radio, and Dr. Mache Seibel, who is a fertility expert with the Fertility Center of New England. Welcome to both of you, and thanks for joining us to talk about this interesting topic. We've read the headlines lately, and Dr. Seibel, Dr. David Adamson, who serves on the board of Resolve, which is the national fertility association, said (I quote), "Ending up with seven babies is a bad outcome, even if the babies do very well." Do you agree?

DR. SEIBEL: Well, I agree completely. As a matter of fact, I would even take it further to say that I think it's very close to impossible that seven babies will end up well, because they're just so small at the time they're born. I think that any couple that has one child and tries to chase after it, or has two or three at different ages, can appreciate just from a practical point of view that just nurturing a child, giving it what it needs, is a pretty big task with seven.

JEANNE BLAKE: I'm curious how we – as a fertility expert – and I've written stories about this, I've reported on it, and I have to say that probably the science that I reported on a few years back has changed. I'm sure that technology has made things a lot more predictable. But can you help us, for those of us who aren't up to date, as a fertility expert, when you have an infertile couple coming in trying to get pregnant, how can you control for multiple births?

DR. SEIBEL: Well, first of all, the number of babies are problems of ovulation, when a woman releases an egg, is really only about 25 percent of fertility problems. And the drugs that are used to treat that have actually been around since the early '60s, although there have been some new refinements and so forth. But to answer your question, every month each woman makes about 10 or 20 eggs, and in the process of ovulating, or releasing one of those eggs, one will mature but the other ones will just simply be at the wrong place at the wrong time, they will just fall to the wayside. So you

end up with a selection process that one is chosen. When you add in fertility drugs, this internal method of selection is completely done away with, and you simply bring forward all of those eggs at once, or at least a number of them. So what happens is, you're always weighing the potential of increasing the chances for a single baby with minimizing the risk of a multiple, and accepting a low risk of a multiple. And there are a number of tricks that we have in order to do that.

JEANNE BLAKE: Before we go into that, because I want to hear what they are, I remember a report that you did, Dick, on NPR, on fertility. I think I'm remembering this correctly, you can jump in here. I'm wondering from what you just described, it was a great description, I could get the picture in my head, but when the body puts that one egg forward, is it naturally selecting out bad eggs?

DR. SEIBEL: No. I liken it to the concept of a surfer out in the bay, and they're waiting for the waves to come by, and the hormones are the waves. What ends up happening is, one of those individuals is going to be at the right place at the right time and catch that hormonal wave. So it doesn't necessarily say it's a "bad egg," because when we bring them forward for reproductive purposes, the other eggs have equal potential, for the most part.

JEANNE BLAKE: OK, so now let's go to how you can help not a whole surge of eggs come forward.

DR. SEIBEL: Well, there are a number of ways. First of all, we have to realize that multiple births occur in two different processes, and I'll divide them up. One is, a woman simply doesn't ovulate regularly, and so we give her medications to bring eggs to maturity, and then one of those naturally gets fertilized by her husband. So that would be one scenario. And the second scenario is in vitro fertilization, where the physician is putting a certain number of eggs back into the woman, having removed them first, fertilized them, and then puts them back in. So there are two conditions. In the first of those, with the multiple drugs, we can see the number of eggs that are developing because they're surrounded by a fluid-filled sac called a follicle. These are visible on ultrasound, and we can see them as small circles on the screen that are about the size of a dime, a nickel, or a quarter. When they get to be the size of that range, we know they're about mature, we get some blood tests, and we trigger those eggs with another medication called hCG, and that releases them. Without that final medication, those eggs will just stop at that point and they won't release. So we can simply not give the final medication should we see too many eggs coming. Alternatively, we can also go in, as though it were in vitro fertilization, and reduce the number of follicles that are there before that final shot is given. So what you

do is, you go in, see too many eggs coming, you reduce the number of eggs via a minor procedure – an egg retrieval, if you will – and then you give the hCG. It's called a follicle reduction.

JEANNE BLAKE: That's got to be a tough thing for a couple who wanted a baby desperately and suddenly they have all these eggs coming and they have to make a decision to either not go ahead that month – there's a real conflict, I would think, on an emotional level.

DR. SEIBEL: Well, there is. There is for a couple of reasons. How it happens most in this scenario, some of it is religious based, but some of it is financial based. What happens is, maybe insurance doesn't cover their drugs, which cost thousands of dollars, and their ultrasounds, which cost thousands of dollars, and what happens is, maybe they do have insurance that pays for one cycle. So what they do is say, "Doc, don't let me down. Make sure I get a baby." And of course, if you have an individual or a couple who can't have one, it's very hard for them to envision that they can have too many. I mean, you don't have enough, how can you have too many? Because of that, there is a disbelief, and what the patient will always say is, they'll always look at each other and kind of chuckle and say, "Well, twins wouldn't be so bad." No matter what you say, there is nothing that penetrates "twins won't be so bad," that the higher order couldn't happen for me. Because of that, the patient is lulled into a false sense of security. And in fairness to the medical practitioner, many eggs does not many babies make. In other words, it is very typical to see three eggs on an ultrasound, or three follicles I should say, and end up with none or one baby. That is the usual outcome. Or even four or five. So it isn't that you're definitely cruising for a bruising in this situation.

JEANNE BLAKE: With the septuplets – and Dick, your brain is going a hundred miles an hour there, I know you've got a lot of questions, you've done a lot of work on this topic too, so I want you to jump in right after I ask this question. The poor guy, the doctor who delivered these, we're now going to talk about cruising for a bruising, we're just going to talk about him, OK? He didn't do that. He didn't do the ultrasound. What do you think?

DR. SEIBEL: I don't know the details of the case to comment on it from that point of view, but it is standard in America now, most places will do an ultrasound, because that helps you to know how many eggs are developing, and it also tells you how big the follicles are, which is an index of when to give this last medication, and that optimizes your success. So most places know it's coming as a possibility. But again, it is a possibility, and you have to do kind of an actuarial thing – you know, the patient's already invested all this money, you hate to pull out, what's the risk that they're going to really end up with a multiple birth?

JEANNE BLAKE: In this case, I do know – I did read that the odds were against their ending up with this many babies, and then when they found out, it was against their religious and moral beliefs to do any selective reduction, which is getting rid of some of the fertilized eggs.

DR. SEIBEL: That's why I would advocate getting rid of the eggs before they're fertilized, because every month nature is doing that for the woman. It's already automatically selecting one and letting the others not make it. So I see that as part of a "augmented natural process," and I don't put a weightedness, and ethical weightedness with that at all.

RICHARD: Are fertility clinics these days, just by their ability to prevent these higher order births, is it sort of a black mark when this happens?

DR. SEIBEL: I think we've seen an evolution in what's happening. When you were first covering it, when I was doing the first one in Boston, and Jeanne was covering that as well, a success at all was quite great, and a 4 percent success rate ... quite spectacular. And now expectations are that you can get 25, 30 percent success rate, and even higher in some situations, for one cycle. So now there's been more of a focus on the quality of the outcome, and by that I mean the sort of point you made. For instance, we know now that with improvements in the culture broth, the fluids that nurture the egg and the sperm as they're fertilized, we know now that if we refine that further, which has been done, we can now allow these fertilized eggs to go from dividing once or twice to dozens of times, and end up with a much more advanced embryo. So when we put it back in, it's like any race, the one that's in the front near the end of the race is most likely to win. So you can select and say, That one looks like it's going to succeed, and you only put in one or two now, and it's rare to put in three. Whereas 20 years ago, when I started, it was not uncommon to put in five. And yes, as a matter of fact, in countries such as England, it's forbidden and against the law to put in more than, I think it's two. In this country we don't have laws, we have guidelines that are now focusing more on that point. So yes, people are seeing it as not necessarily a great thing, even from the medical side, the societal side, and so forth.

RICHARD: How often in your practice do you, despite the precautions that you take with regard to the hormone manipulation and the egg reduction, how often does it happen that you find a pregnancy with three or more embryos in there?

DR. SEIBEL: Are you talking about outcomes with triplets or more?

RICHARD: I'm thinking about the earlier stage, when you're monitoring the woman's pregnancy and you discover, Uh-oh, there are four in there –

JEANNE BLAKE: Fertilized or not, Dick?

RICHARD: Fertilized. Embryos developing.

DR. SEIBEL: I'd say that's routine. You routinely will find that there may be 10 or 12 eggs, and so what's happened is that the process of freezing of embryos has evolved, so if a woman and a man wanted to take advantage, they would take some of those embryos and put them in, and the rest would be frozen. Which is another byproduct, and another issue –

RICHARD: And another show.

DR. SEIBEL: In this country there are tens of thousands, about 120,000 frozen embryos, and in some places – I know that, for instance, in Israel, they did an investigation into how many embryos there were, and there were some 80,000 embryos, where they couldn't find who owned them. By that I mean they'd lost track of them and so forth, so the government ended up taking them over. You can see where there's a number of issues. There again, if the number of eggs are kept to a minimum in the first place, you can reduce that as a future –

JEANNE BLAKE: It brings up all kinds of issues, as you said. My mind, as a journalist, is going wild here thinking about other programs, and the dilemmas down the road. We saw the couple testifying before Congress with their twin boys. They were embryos that they had adopted. I just think it's a slippery slope.

DR. SEIBEL: I can tell you it is. For instance, I had a couple come in who had gone through in vitro fertilization, and then they ended up having twins, and they knew they didn't want any more, and they had a number of embryos that were frozen. So they came in to me and said, "Look, we have a next-door neighbor. The woman is not making any eggs, the man doesn't have any sperm, they're going to have to adopt anyway. Let's give them some of our embryos and they'll be next door. And of course, everyone will win." I said, "Wait a minute. I mean, now the neighbor has the sibling of yours ..." How does this work? We had an advisory board, which I established over a decade ago, to weigh some of these individual issues, because I felt I couldn't do it as an individual, and I didn't want the task of being the sole decider.

JEANNE BLAKE: Can you imagine the conflict of how the child's being raised – oh my god!

RICHARD: So what did you do in that case?

DR. SEIBEL: I declined. I declined because –

RICHARD: You made them move.

DR. SEIBEL: I really felt that this was an inappropriate social situation, and it was helpful to have a –

JEANNE BLAKE: So what did they do with the embryos?

DR. SEIBEL: The embryos are still frozen.

JEANNE BLAKE: How many years ago?

DR. SEIBEL: A dozen?

JEANNE BLAKE: So they didn't just take them and go to another fertility expert.

DR. SEIBEL: No, they were not –

JEANNE BLAKE: They listened to you.

DR. SEIBEL: Well, it was enough to stop them, and that's why I felt a committee was helpful to have, so it isn't – I don't want to be a policeman.

JEANNE BLAKE: Who sits on this committee?

DR. SEIBEL: Ethicist, clergy, attorney, pediatrician – because we're dealing with children yet to be – and so forth. Mental health person. And medical people.

RICHARD: Does that committee get involved when you have an issue of whether to do selective reduction, actually destroying some of the embryos that are in excess of what would be desirable for the baby or the mother?

DR. SEIBEL: The committee really doesn't make a decision in terms of what is acceptable in terms of standard of care, because that's being done routinely – I mean, I'm not involved in that. It's too

emotionally wrenching to me to get things started and then to go the other way, so I'm not involved with that. Were it necessary, I would refer that person. But it is a standard procedure that's done around the country, so no, they wouldn't do that. But there are so many situations that do come up in the process, because technology outpaces society regularly, and you've got to be able to adjust the sails so that you're in a position to deal with an individual's dilemma – which will not wait for society, because all of these are time limited – and my belief is that you've got to be able to do this in kind of an ongoing way. At least that's the best way I have found to do it.

JEANNE BLAKE: When you say adjust the sails, you mean s-a-i-l-s, and not s-a-l-e-s.

DR. SEIBEL: Absolutely. Trim the sails. ...

RICHARD: I'm still trying to understand how someone in your specialty gets to the situation in which you have to be confronted with the wrenching decision – someone does – of selective embryo reduction or fetal reduction, because, as you said earlier, you can identify how many embryos are developing in there and you can take out some and freeze them. So what goes wrong to produce that selective reduction dilemma?

DR. SEIBEL: Let me preface by saying that that's an infrequent problem, but when it happens, of course, it's a big one. It happens in the following ways. Remember, I said there are two ways in which this could evolve. One is with fertility drugs and one is with the insertion of embryos. I remember the first time I was confronted with this, maybe 20 years ago, it was a Catholic woman who had something which has a terrible name, it's called an incompetent cervix, which simply means – it's an awful term for, the muscle that closes the womb is weak, and she had lost twins in the past, because it just naturally opens and the babies come out prematurely. Some of the fertility drugs at that time were still being investigated and were brand new. She ended up with a quintuplet pregnancy, and she understood what was going on, and she ended up having a selective reduction because she would have lost them all. And this was a huge ethical quagmire for this individual person. On the other hand, many times a couple will make embryos that look less than likely to succeed. As a matter of fact, I can remember very well attending one of the national fertility meetings, and there was a very prominent fertility specialist, and he showed a slide of an embryo. He had an individual who was supposed to be the world authority on embryos sitting there, and he says, "Now, is this a good one or a bad one?" And the guy says, "Well, anybody can see that's not a good one." Of course, you know what the next slide was, was the baby that came as a result of that single embryo going back. So my contention is that all we can see through a microscope is the likelihood for success, not success or failure. As a result, when

you see the stacking of odds such that you've got two, three embryos that don't look so great, they're not likely to succeed in your mind's eye, you would err on putting back maybe an extra one in hopes that one will take, and every once in a while you're totally wrong. And these are all at the bedside, informed consents, that you're going back and forth with the couple: What would that do if I succeed, what would it do if it doesn't? And again, remember, down deep in the heart of every one of these couples is, "I've failed already, how can I possibly over-succeed?" It's very hard to take that out. In spite of all the hopes that the clinic might succeed and it'll be high success and better than the next one – after all, we went into medicine to help people achieve a better life, healthier, better, more quality, so you want them to succeed.

JEANNE BLAKE: I'm blanking on the name – the McCauleys? I wonder what that did. Do you hear anything from patients who see them on TV – she's got a website, for god's sake, how bad can it be? And the kids are all lined up, and they all look happy and fine. I know that some of them have developed problems, but they look like one big, happy family. What has the impact of that media coverage on that family had on how couples view multiple births?

DR. SEIBEL: Well, I think what it's done, it hasn't changed what I just have been professing, that people think it can't happen to them. What it's done is, it's upped the ante. Internally, the conflict is going on: Maybe it could happen. The good voice and the bad voice, or the worried voice and the comfort voice. I'm reminded of Butch Cassidy and the Sundance Kid, you know, when they jump off the cliff. They didn't want to do that exactly, but when they turned around there was only one way to go. So that's kind of the way they are, I think.

JEANNE BLAKE: People don't see the McCauleys and have this warm, fuzzy feeling –

DR. SEIBEL: Oh, I don't think so. I don't think they do.

RICHARD: They don't think, "Well, I could be famous too."

DR. SEIBEL: I don't think so. I have so many couples coming in where the woman is at a later point in her life, either because of a second marriage or delay because of a career, or because of a loss of a child, regrettably, through leukemia or other things. Death, divorce, and disaster, the three Ds. And because of these things, you have people at different times in life, and often we'll see, depending on the dynamics, if the man has kids by a prior marriage or she has kids by a prior marriage, all this is going on – like an actuarial, every conversation is going like this. But usually what happens is, the

woman says, Well, if it was twins or something, and the guy's saying, I want one, and that's gonna do me. That kind of thing. You see so much how they sit together or apart, how they're holding hands or not, when the topic comes up, how it changes. Because part of what we're trying to do is observe the dynamics, because that's part of the language that we're seeing. You're trying to help them, because the outcome is really successful only if the couple gets what they want. And if they get what they don't want, even if it's a baby or two or three, then you haven't succeeded, really. That's all part of it.

JEANNE BLAKE: What are your concerns, Dr. Seibel, as you – we mentioned a couple of the issues that we'll be dealing with in the long term, but what do you think some of the topics are that we haven't talked about, or considered as a society, and all the ethics of this kind of technology, reproductive health?

DR. SEIBEL: Clearly, the numbers of embryos that are frozen, and what to do with them, is going to be one of them. How long to keep them, what to do with them, is it acceptable to use them for research. The interface between stem cells and the embryos is now changing. The view in fertility is going to evolve in the next decade, I think, in this millennium, from the treatment of fertility to, it's like using the tools to treat other things. We're going to have, mechanistically, the capability. The most important achievement of in vitro fertilization, other than helping couples succeed, was to put good clinicians and good scientists together so that the practical point, and the capacity to bring it to the clinic, were sitting at the same table in harmony, and not somebody off in a lab doing some crazy thing and somebody off wishing they could do something.

RICHARD: Do you have a sense from your patients, from the couples you counsel and treat, whether they would probably generally favor the use of frozen embryos that they're not going to need or use for stem cell research?

DR. SEIBEL: I think that many would, and I think it cuts across religious lines. Because we're in Boston, I have a lot of Catholic patients, not because I'm selected out for that or anything. It's because there are a lot of Catholic individuals in the vicinity. And all denominations I see, of course. But I think that people do perceive them as special and deserving of special consideration, but they don't necessarily consider them a person or of the same ilk as – sacred. So I think that there are people, if they have them and felt they needed to generate them in order to get what they wanted, there would be some comfort in knowing that they weren't "thrown away." I think that upsets people.

RICHARD: It's sort of like organ transplantation in a way. It's a tragedy, but you're helping somebody else.

DR. SEIBEL: Yes. I would say that would be – if I had to guess, that is, as an informal kind of observation, I would say it could be stronger than that.

JEANNE BLAKE: What about – maybe this is done a lot more than I already know, or that I think, or don't think, or that I don't know – are embryos sold, fertilized embryos sold?

DR. SEIBEL: That's categorically against the law.

JEANNE BLAKE: OK, there you go.

DR. SEIBEL: Because you can't sell body parts.

JEANNE BLAKE: It's considered a body part.

DR. SEIBEL: Well, it falls under the rubric, you know. There was a great deal of contention about an individual in New York who was hiring donors, really ideal women and ideal men, then they recruit an embryo that would be like blue eyes, blond hair, whatever, and all the IQ and all this other stuff, and then if a couple couldn't afford in vitro fertilization, they could just come in, and for a fee – they weren't buying the embryo, they were paying for the cycle. And by the way, you get the embryo thrown in with it. And this made the New York Times, and it also made the dean's office where it was being done, and this was immediately snuffed out. It was like whoop, whoop, like this huge spike that went nowhere, no one ever heard about it or saw it again. That gets into eugenics, and it gets into the uneasy comfort, the queasiness. It's the dark side, and I don't think that will happen, because society just can't tolerate it.

RICHARD: People worry a lot about the technology of cloning, and cloning humans, making copies of yourself or your child who didn't survive, or whatever. How realistic do you think that worry is? Is it near the top of your list of things over the next 10 or 20 years that you would worry about, or do you think it's overblown?

DR. SEIBEL: Well, first of all, I think it's the ultimate narcissism. Can you imagine wanting to have yourself as a kid? Personally, I would never put up with it. ... But anyway, that aside, it worries me because I think people will try in earnest. I think the animal studies have shown that it's not A) very successful, and B) the ones that succeed are often problematic. But in any event, it's not very high on the list.

JEANNE BLAKE: I gave Dr. Seibel the rap there. I love the question. And talk about another program. It was fun to have both of you talking about this issue that's been in the headlines, and I'm sure we'll be reading a lot more about it as time goes on. Thanks to both of you for coming in and talking to us.

DR. SEIBEL: Pleasure to be here.

JEANNE BLAKE: And we'd like to thank all of you for joining us. I'm Jeanne Blake, I'll see you next time.

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