A Mind/Body Approach to Addressing Infertility

A Teleseminar Session with
Alice Domar, PhD
and Ruth Buczynski, PhD

The National Institute
for the Clinical Application
of Behavioral Medicine

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Contents

A complete transcript of a Teleseminar Session
featuring Alice Domar, PhD and conducted by Ruth Buczynski, PhD of NICABM

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and Ruth Buczynski, PhD

Dr. Buczynski: Hello Everyone! Welcome. I'm so excited to have all of us here together again for the second of our calls on women's health. I'm Dr. Ruth Buczynski, I'm the President of The National Institute for the Clinical Application for Behavioral Medicine and a licensed psychologist here in Connecticut and I just want to personally welcome everyone who was on the call.

According to Google Analytics, there were more than 3,000 practitioners last Wednesday night with Joan Borysenko. We're so glad that everyone's here on this call tonight. And again there will be people from all over the globe.

Last week, we had people from Greece, Hong Kong, India, Puerto Rico, and Sweden. And I'm sure there are many, many other countries tonight. We are practitioners of all varieties. We are physicians and nurses and psychologists and social workers. We are marriage and family therapists, and counselors. We are dieticians, physical therapists, occupational therapists, and clergy. We are all kinds of practitioners and that is so important to bring our global community together.

And speaking of our global community, we just want to say to the people of Tunisia and Egypt we are all behind you. We are watching what's happening in your countries and we're so, so excited for you.

Our guest tonight is Dr. Alice Domar. She is a pioneer in the application of mind/body medicine to men's and women's health issues. She is currently the Executive Director of the Domar Center for Mind/Body Health, and the Director of the Mind/Body Services at Boston IVF.

She is an assistant professor of Obstetrics, Gynecology, and Reproductive Biology at Harvard Medical School and she is a senior staff psychologist at Beth Israel Deaconess Medical Center. Her specialty is dealing with helping couples who are working with infertility issues and she has so much to share with us tonight. So Ali thank you so much for being here we're glad you are on the call.

Dr. Domar: Thanks so much!

A Scientific Update On Fertility

Dr. Buczynski: Now, let's start by talking about infertility. I think I have read that there are a little over six million women with problems of infertility, and the numbers are expected to increase, at least in the United States. Since so many people are calling from all over the globe, we will try not to focus *entirely* on the United States – are there higher numbers of infertility in the US than in other places in the world?

Dr. Domar: Well, you know, infertility affects about one in six to one in eight couples, or women of childbearing age. People are unsure of whether or not the numbers are truly increasing, or is it perhaps that more people are going for treatment because medical treatment now is *so* much more effective, than it was fifty years ago.

Certainly in the U.S. one of the issues we are dealing with - and I know it is true in many European

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countries - is the issue of obesity. The fact is, for both men and women, obesity is a detriment to fertility; women are less fertile and men are less fertile if they are obese or morbidly obese.

Dr. Buczynski: Okay, so we will get to that in a little bit. Weight issues could be one of the reasons there is an increase in infertility. What else could be a cause?

Dr. Domar: Age. You know, there is the problem of age especially for women. Fertility in men goes down with age as well - but in women age is their biggest enemy. For women, our fertility peaks at age twenty-five. It goes down sort of slowly until thirty. Then it really goes down after thirty-five, and it plummets after forty.

One hundred or two hundred years ago when women were getting married at fifteen, or sixteen, or seventeen, they were taking advantage of that increased fertility. But nowadays, as the year that we get married creeps up and women tend to delay childbearing until they feel their job is financially ready, they want to get pregnant as their fertility is coming down.

"In women age is their biggest enemy. For women, our fertility peaks at age twenty-five. It goes down sort of slowly until thirty. Then it really goes down after thirty-five, and it plummets after forty."

Dr. Buczynski: So weight is one issue, and age is another issue. Every now and then we hear about environmental issues, environmental contaminants. Do you think that's relevant?

Dr. Domar: I think a lot of people suspect it is relevant. Certainly if you look in the animal kingdom they are finding that a lot of animals who are exposed to different environmental toxins are far less likely to reproduce, or have higher rates of pregnancy loss. I don't think it has truly been proven in the US.

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I know about ten years ago there were studies that men's sperm counts were *way* down both in the U.S. and Europe from what they had been twenty years earlier. People wondered whether or not it was the environment that was decreasing a man's ability to produce normal sperm. Apparently, the last I heard is that the U.S. sperm rates have not come down but they have in Europe. So I am not sure what that means.

Dr. Buczynski: Okay. As long as we are just kind of laying the framework here, let's talk about the differences between men and women. What does the research show about which gender is more likely to be infertile?

Infertility and Gender

Dr. Domar: It is close to being equal. According to some of the more recently released national data about thirty-five percent of infertility is due to an issue with the woman; about thirty-five percent is due to a male factor; about twenty percent is due to a combination, where both of them are sub-fertile. And ten percent is unexplained.

This is a big contest. When I got into this field a *long* time ago, about half of infertility was unexplained. And now it is down to ten percent. So for the *most* part, when a couple comes in for an evaluation, a diagnosis can be given.

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Dr. Buczynski: And do you think that makes it any easier, to know more specifically what the problems are?

Dr. Domar: It's a really good question. The fact is, what the research shows is that people who have a diagnosis are more depressed. People who have it unexplained are more anxious.

Dr. Buczynski: You know, if I was trying to get pregnant and couldn't, and didn't know what was causing it, I can imagine thinking, "If only I knew…"

Dr. Domar: Right.

Dr. Buczynski: But if I knew, I can't imagine that that would make me any more peaceful or less anguished about my situation.

Dr. Domar: Whoever in the couple is carrying the diagnosis, they feel *really* guilty. A lot of my patients are women and have these automatic negative thoughts; you know, "My husband's going to leave me for a fertile woman."

I am sure men who have sperm production issues are worried their wife is going to leave them for a fertile man.

I can only think of one patient in my whole career, who was married to a man with male factor. She said that if she didn't get pregnant with treatment, she was going to dump her husband and find a fertile guy. But she wasn't the most warm and fuzzy patient in the world.

In general people don't marry somebody for their gonads! I mean they marry them for a lot of other things. But there is this huge fear; the person who is diagnosed feels *very* guilty.

Dr. Buczynski: Let's get back to that because I think I would like to pick your brain about how to help people cope with the guilt. But before we get there, let's talk more about some of the causes of infertility. I would like to jump into the whole idea of stress. We all think that we are busier and much more stressed than ever before. Is that relevant to infertility?

Depression, Stress and Infertility

"With couples going through infertility there's an *enormous* sense of isolation. Everybody around them is fertile - and to be infertile in a fertile world is *exquisitely* painful."

Dr. Domar: It is probably not so much the pace of life as it is expectation. I think most people - if you think about a little girl; she grows up with the assumption that she is going to grow up, and get married, and be a mommy. And I think society has expectations of a couple that, once they are married they should start popping out the babies.

So what you see in couples going through infertility is an *enormous* sense of isolation because everybody around them is fertile - and to be infertile in a fertile world is *exquisitely* painful.

Dr. Buczynski: Let's talk about depression. Now, obviously it is depressing to be infertile, but what does the research show? Is there any chance that depression contributes to infertility?

Dr. Domar: You know it's a chicken-and-egg question. There is research, a study out of Brown by LaPage years ago, that showed that women with a history of depression were twice as likely to subsequently experience infertility.

"Women with a history of depression were twice as likely to subsequently experience infertility. So, being depressed apparently makes you less fertile."

So, being depressed apparently makes you less fertile. And if you actually think about it, if someone is chronically depressed it is really hard for them to take care of themselves. If you think about how we have evolved, you know - if a cave woman was depressed so she couldn't take care of herself, it is a really good time for her *not* to become pregnant – if she can't take care of herself, she can't take care of another being.

And so intuitively it makes sense. We know that people who are depressed have lower pregnancy rates. But conversely, infertility also *makes* you depressed. And so you can have people getting caught in a *Catch-22*.

"People who are depressed have lower pregnancy rates. But conversely, infertility also *makes* you depressed. And so you can have people getting caught in a *Catch-22*."

Dr. Buczynski: So how good is the research showing that depression can contribute to infertility?

Dr. Domar: They have done I think twenty-seven studies, all of which were on IVF patients, patients who are doing *in vitro fertilization*. The reason most of the research is on IVF is that it is a pretty homogeneous intervention; whether you have an IVF cycle in Boston or in Taiwan, you are pretty likely to have the same medications and the same interventions. What all but a couple of studies have shown is that the more depressed and anxious a woman is before and during her cycle, the less likely she is to get pregnant.

Dr. Buczynski: Now, by the time a person gets to in vitro fertilization, she has already tried the "good old-fashioned way of doing it,'' and not succeeded.

Dr. Domar: Yes.

Dr. Buczynski: So we are still not sure that it is the depression causing it - or is it subsequent to the problem of getting pregnant?

Dr. Domar: You know, a lot of infertility patients who were asked, "Is there a history of depression?" most of them will say that before they started trying they were healthy and they had no significant mental health history. The vast majority of them have never seen a mental health professional before; the vast majority of them have never had medication before. So the average infertility patient comes

"The average infertility patient comes into this with no mental health history, and then becomes depressed or anxious *because* of their infertility."

into this with no mental health history, and then becomes depressed or anxious *because* of their infertility.

Dr. Buczynski: So have you found that for people who were depressed, working with the depression has any positive effect on their ability to get pregnant?

Dr. Domar: Well, if you look at the sort of research from around the world, what we find is that people who are the most distressed have about half the chance of pregnancy with infertility treatment than the people who aren't distressed. But if you look at it on the other side of the coin, there have probably only been a handful of studies now looking at skilled interventions.

"For interventions to be effective...they have to teach the patients skills. So talking about their infertility is not nearly as effective as teaching patients skills that they can use."

If you look at the data, there have been two meta-analyses done on psychological interventions with infertility patients. What they show is that in order for interventions to be effective, there have to be at least six sessions, *and* they have to teach the patients skills.

So talking about their infertility is not nearly as effective as teaching patients skills that they can use. And so the handful of studies that have looked at that, in terms of at least six sessions and offering skills-based intervention, pretty much all show the same thing: the patients who go through those interventions have twice the pregnancy rate as the control group.

Dr. Buczynski: So what kind of skills do you have in mind?

Mind/Body Skills and Infertility Patients

Dr. Domar: Well, you know, I am obviously probably the most biased person in the world in terms of being biased towards Mind/Body Programs. I started the first Mind/Body Program in 1987, and was trained by Joan Borysenko to run Mind/Body groups. The Mind Body Program today is very similar to the Mind/ Body Program of 1987. We would have up to sixteen women in a group, at any stage of infertility, whether they have just finished their workup or they have done five IVF cycles.

"Every week the patients learn a different relaxation technique; they learn cognitive strategies, cognitive behavior therapy.'"

We have two peer counselors who help me run the group program. We have a buddy system. Every week the patients learn a different relaxation technique; they learn cognitive strategies, cognitive behavior therapy. We talk about the complementary and alternative modalities, which are *not* okay to try versus the ones, which *are* okay to try. We talk about which lifestyle behaviors might affect their fertility. And there is a *lot* of group support.

Dr. Buczynski: And do you have men and women together in the group?

Dr. Domar: We identify the woman as the patient, so the group is officially for the women. But of the ten sessions, their partners come to three of the sessions. They come the first night, we have an all-day Sunday session for the partners, and we also have a session towards the end where for the first hour and a half the men go off with a male therapist to talk about what this is like for them. Often, we never ask the guys,

"How are *you?"* And then for the last hour we have previous patients who have adopted and done egg donation come in and talk to the group about what it is like to parent a non-genetic child.

Dr. Buczynski: So in that training, are you using kind of a cognitive behavioral approach?

Dr. Domar: Very much so. It is what Joan Borysenko started with Herb Benson, in 1984 or 1985. I think these Mind/Body groups combine the best of what the research shows, a combination of cognitive behavior therapy, relaxation training, lifestyle management, and group support.

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Dr. Buczynski: Okay. Ali, the psychotherapists are going to know cognitive behavioral code. But some of the physicians, nurses, the physical therapists and so forth might not know exactly what we mean by that. So can we just take a brief moment to talk about what we mean by cognitive behavioral approaches?

"Cognitive restructuring... we have the patients tell us what their automatic negative thought patterns are. We ask them to identify that automatic recurrent negative thought, and then we have them challenge that thought pattern."

Dr. Domar: Well, in fact what we do with our patients in terms of the cognitive portion is what we call "cognitive restructuring," where we have the patients tell us what their automatic negative thought patterns are. And it might be, "I'll never have a baby," or "I won't be happy until I have a baby," or, as I said before, "My husband's going to leave me for a fertile woman," or "God's punishing me for having premarital sex."

Whatever it is, we ask them to identify that automatic recurrent negative thought, and then we have them challenge that thought pattern. And so if you start with, you know, "I'll never have a baby," through cognitive restructuring they end up with, "But I'm doing everything I can to try to get pregnant."

Dr. Buczynski: You also use some forms of meditation.

Dr. Domar: Yes. Each week we teach a different relaxation technique. And so the patients at the end of the program will have learned meditation, they will have learned body skin relaxation; they will have learned progressive muscle relaxation, several forms of imagery; autogenic screening, and Hatha Yoga.

Dr. Buczynski: Tell us about some of the imagery.

Dr. Domar: You know, it is interesting because everyone I know says, "What do you imagine? The sperm fertilizing the egg, and implanting… I don't feel comfortable doing that in a group setting because some patients really don't like that kind of imagery. So we do nature imagery; we might have them imagining walking along a mountain stream and just being mindful, or walking along a beach. Sometimes we have them do an imagery of eating their favorite dessert - that's a very popular one!

"Patients will have learned meditation, they will have learned body skin relaxation; they will have learned progressive muscle relaxation, several forms of imagery; autogenic screening, and Hatha Yoga."

Dr. Buczynski: Tell me more! Why would you do that?

Dr. Domar: Well, if you think about the way we think, so many of our thought patterns are negative; probably about ninety percent of what we think about ourselves are negative. And most of what we think about ourselves is not true - it is just negative, nasty stuff.

> "Anything we can do to teach our patients to get their mind away from its normal negative nasty self is advantageous."

And so anything we can do to teach our patients to get their mind away from its normal negative nasty self is advantageous. So one of the images we actually do is tell our patients to close their eyes and take some nice slow deep breaths. And then we tell them to imagine they are holding in their hand a plate or a bowl that contains their favorite dessert. Then we instruct them to imagine eating that dessert mindfully.

And it focuses their attention *solely* on that image. And they can't worry about their pregnant sister, or their nasty doctor, or whatever else; they are focusing *solely* on eating their hot fudge sundae!

Dr. Buczynski: It sounds great! Do you ever work one-on-one or is it almost always in a group?

Dr. Domar: I do. There are three psychologists in our Center. One of us runs Mind/Body groups, we also see patients individually, and we do couples counseling. We do this for a variety of reasons. I mean, sometimes patients are just not comfortable being in a group, or they have done the group and have done really well, but know that they have a lot more work to do. They may be celebrities and they *can't* be a in a group. There are a lot of reasons.

> "We also see patients individually...for a variety of reasons. Sometimes patients are just not comfortable being in a group, or they have done the group and have done really well, but know that they have a lot more work to do."

I would say that about half the patients that I see have been in my groups at one time or another.

Dr. Buczynski: Can you talk to us about how you work one-on-one with someone dealing with feelings of worthlessness and failure because they are not able to get pregnant; can you talk to us about how you approach that when you are working one-on-one?

> "When we do cognitive restructuring, we ask each patient a series of four questions:
> • Does this thought contribute to your stress?
> • Where did you learn this thought?
> • Is this a logical thought?
> • Is this thought true?"

Dr. Domar: I would actually do the same thing; I would do cognitive restructuring. You know, when we do cognitive restructuring, we ask each patient a series of four questions. Question number one: Does this thought contribute to your stress? Question number two: Where did you learn this thought? Question number three: Is this a logical thought? And question number four: Is this thought true?

And so for example if her negative thought is, "I'm worthless because I can't get pregnant" - which I have heard many times - I would ask her a series of those four questions. "Is it *truly* a true statement to say that you are a totally *worthless* human being because you can't get pregnant?"

And when you say that out loud, you know, the patients start to laugh because they realize how ridiculous that is. Then you can come up with a restructured thought - and we are not looking for Pollyanna thinking here, we are looking for the truth.

So she may start with, "I'm worthless because I can't get pregnant," and end up with, "I'm feeling really sad because I'm not pregnant yet." That is a true statement.

Dr. Buczynski: Yes. Tell us a little bit more about when you work with couples.

Couples Counseling

Dr. Domar: Well, you know, the issue with couples going through infertility is that men and women handle infertility in very, very different ways. I have been working in this field for a long time and I have never, to date, seen a husband and wife, or a man and woman who are in the same place at the same time.

So, in general women tend to be ahead of their husbands in that they want to start trying sooner, they think there is a problem sooner, they want to see a doctor sooner, they want to move on to high-tech sooner and they want to move on to alternatives sooner. The woman in the couple will say, "He's holding me back," and the man will say, "You know, she's pushing me to make decisions I just don't feel ready to make." So you have to certainly work with them on that so they can go at the pace of the compromise.

"Women, far more than men, are almost phobic about other people getting pregnant. For women, hearing about other people being pregnant or hearing pregnancy announcements, is exquisitely painful."

The second issue is that women, far more than men, are almost phobic about other people getting pregnant. For women, hearing about other people being pregnant or hearing pregnancy announcements, is exquisitely painful. It doesn't seem to be as hard for men because men never get pregnant. So a lot of the issues that couples bring to the office are, he wants to go to a party, she doesn't want to go because she thinks someone might announce they are pregnant, and he is just really frustrated.

The third issue is that women tend to be more emotional about their infertility than men are. Women tend to want to talk about it more than men do. The couple will come in and she will say, "You know, we *never* get a chance to talk about our infertility." He says, "Are you kidding that's all we ever talk about."

"Women tend to be more emotional about their infertility than men are. Women tend to want to talk about it more than men do. The couple will come in and she will say, 'You know, we *never* get a chance to talk about our infertility.' He says, 'Are you kidding that's all we ever talk about.'"

Dr. Buczynski: Can you help with that?

Dr. Domar: Well what I tell them is, "The way you are handling infertility is the right way for you. And the way your partner is handling his or her infertility is the right way for him or her. So do not try to push your partner to feeling the same way you do. Respect that it's different and just focus on how you can feel better as you go through the process."

Dr. Buczynski: How long have you worked with same-sex couples?

Dr. Domar: It's interesting because I think we would all think that same-sex couples would have a much easier time because they are of the same sex. But the fact is, gay and lesbian couples have many of the same issues. They aren't in the same place at the same time; they have disagreements on how much money they want to spend on treatment.

There are relatively similar issues that come up. Maybe there is a little more flexibility because with a lesbian couple, if one of them is unable to get pregnant, they can relatively easily, at least physically turn around and see if they can help the other one get pregnant.

I have had a number of couples where it turned out that both of them were infertile. That is where it gets really tough.

Dr. Buczynski: Okay. I want to spend a little bit of time talking about lifestyle choices; choices that might increase the chance of infertility and lifestyle choices that might increase the chance of *fertility.* We mentioned briefly at the beginning of the call, the fact that people are overweight in America and that's increasing throughout the world. This might be part of the reason that infertility is increasing. Tell us more about that.

Lifestyle Choices and Fertility

Dr. Domar: Well we know that obesity, weight in general - either being underweight or obese - are both associated with sub-fertility. Weight does not just affect fertility in terms of getting pregnant on your own, but even if you look at high-tech cycles like IVF, if the woman is underweight or obese, or if the man is underweight or obese, pregnancy rates are lower.

Dr. Buczynski: I can imagine that that adds to the guilt that, an overweight woman would already feel about herself.

Dr. Domar: Yes. It's awful. It is interesting because for women who are morbidly obese, you are just *one more person* telling them to lose weight. What I try to explain to them is what the research shows, even for women who are morbidly obese, simply losing ten or fourteen pounds may be enough to bring them back into the fertile range.

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It is actually more of an issue for women who are underweight, especially if their job depends on them being thin. It is *really* tough for them to gain weight. In fact there is a reality show on right now with a couple trying to get pregnant. I don't actually remember what their names are but they were on *The View* not so long ago and the wife is very thin. She mentioned on the show that her physician told her she needed to gain five or ten pounds, and she does not feel able to do so.

Dr. Buczynski: And what kind of jobs do people have that make them feel that way?

Dr. Domar: Actresses, anyone who is in the public eye, dancers, or people in the healthcare profession. It is a coastal thing, we opened a Mind/Body Program in LA years ago and it was a *huge* issue for us because for so many of the women there, their *livelihood* was dependent on them being very thin. And we're advising them to gain weight.

If you actually look at the data, you see that if women who are underweight gain six or eight pounds, the majority of them get pregnant relatively easily. So we are not talking about putting on twenty or thirty pounds - we are talking about six or eight pounds. And even that feels insurmountable.

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I remember I was running a group at a weekend retreat in New York, and I was talking about the fact that if you are underweight you need to gain six or eight pounds to get you more into the fertile range. One woman's husband clearly didn't think I could hear him, and he turned to his wife and he said, "Don't you *dare* gain any weight!"

So, here you have this poor woman who is going through infertility; and as a relatively well-respected healthcare professional I am saying, "I think you need to gain some weight" and her husband is threatening her!

Dr. Buczynski: What about exercise?

Dr. Domar: Exercise is probably one of the most controversial entities when it comes to fertility because the fact is there is no randomized controlled study that has looked at the impact of exercise on fertility. There is animal research - and the animal research is very clear - if you take animals and you increase the amount they exercise, they reproduce far less often. There was a study published in 2006 which looked at exercise history and IVF outcome. They found that the couch potatoes have the highest pregnancy rates. But there has never been a study to actually do a randomized trial to see whether exercise has an impact.

"Exercise is probably one of the most controversial entities when it comes to fertility because the fact is there is no randomized controlled study that has looked at the impact of exercise on fertility."

So we advise our patients to decrease the frequency and intensity for about three months, just to see if it is a factor. And if they don't get pregnant, they can go back to whatever it is they were doing. But a lot of them get pregnant.

Dr. Buczynski: And do you find that most patients are willing to give suggestions - like gaining weight, losing weight or lowering the amount of exercise - a try?

Dr. Domar: I would say that *most* is an exaggeration. I would say that *some* of them are willing to give it a try. It is really *hard* for patients to put aside their issues of weight - whether or not they are overweight or underweight. In terms of the ones who exercise, the women who can easily change their health habits don't come to see me because they just do it on their own.

"We advise our patients to decrease the frequency and intensity (of exercise) for about three months, just to see if it is a factor."

By the time women get to see me, their behaviors are pretty firmly entrenched.

I had one patient that, when she came to see me, she was running seventy miles a week and *could* not cut down. So her physician referred her to me. It took me a year to get her down to thirty-five miles a week - at which point she did get pregnant.

Dr. Buczynski: She must have not been having a period if she was running seventy miles a week.

Dr. Domar: Right. She was very, very thin and very muscular, yes. The problem is, if women don't get their periods they can go to physicians who will give them medication to induce ovulation and menstruation. But there is some data to show that that may have a detrimental effect on the baby.

Dr. Buczynski: So when a woman is thinking about exercise, we define "moderate exercise" in a variety of ways. Do you have a way of saying "Try to keep it under X amount"? Do you give a woman some guidelines?

Dr. Domar: Well, I talked to a physical therapist about this years ago, and the recommendation that he gave me, which is still the same one I give to my patients, is try to keep the heart rate below 110. I advise against running, aerobics classes, stairmasters and things like that and encourage walking, swimming, and Pilates.

The same day that we recommend that our patients decrease the intensity of their exercise is the same day we teach them Hatha Yoga. Because Hatha Yoga is a way to keep fit and toned but it won't have a detrimental effect on fertility.

"The same day that we recommend that our patients decrease the intensity of their exercise is the same day we teach them Hatha Yoga. Because Hatha Yoga is a way to keep fit and toned but it won't have a detrimental effect on fertility."

Dr. Buczynski: Alright. What about caffeine? Does that affect fertility?

"One study on IVF showed that women who drank less than 50 mg a day had higher pregnancy rates than women who drank more than 50 mg...a can of soda or a cup of tea has 40mg - which means that if you really want to take this seriously you can't drink coffee. You can eat chocolate! But you can't drink coffee."

Dr. Domar: You know, you are asking really good questions. I wish I had a definitive answer for you. There is probably more research done on caffeine and miscarriage. About half the studies show that caffeine is associated with miscarriage and half show it isn't. But in the studies that show it is, it even can be the amount of caffeine a woman drank the month before they *got* pregnant - which for infertility patients could be *any* month.

So I *do* suggest to patients that they cut back on caffeine. One study on IVF showed that women who drank less than 50 mg a day had higher pregnancy rates than women who drank more than 50 mg. You know, a can of soda or a cup of tea has 40mg - which means that if you really want to take this seriously you can't drink coffee. You can eat chocolate! But you can't drink coffee.

Dr. Buczynski: Now, I am going to ask you about alcohol. We know that alcohol isn't good for a baby. But do we know anything about whether alcohol also makes it more challenging to get pregnant?

Dr. Domar: It does look like alcohol, for both men and women, can make one less fertile. A couple of studies out of Europe looked at several thousand couples who threw away the birth control. What they found was the more drinks the woman had per week the longer it took them to get pregnant. They also have now shown that alcohol can impact sperm production. So I would say if you are trying to make a

baby and either one of you is having more than three or four drinks a week, I would think about cutting back.

Dr. Buczynski: At this point do most couples that are trying to make a baby stop drinking altogether, more for the sake of the baby?

Dr. Domar: I would say that certainly the very well educated, motivated woman who has done a lot of reading will often cut back or limit her alcohol. I think it is sometimes harder to get her partner to do so. Then again, if his semen analysis is perfectly normal and the sperm he is producing are healthy and swimming, there is probably less of an emphasis on decreasing his alcohol consumption.

Dr. Buczynski: Alright. Now, I would like us to spend a little time going through some of the other things that a person might be taking - herbs, for instance. I have no idea that they are at all relevant to fertility. What do we know about herbs and their relation to fertility and infertility?

CAM – Complementary Alternative Medicine and Infertility

Dr. Domar: Well you know, when I talk about complementary alternative medicine with infertility, I call it "the good, the benign and the ugly". There are so many interventions, like acupuncture, mind/body, and nutritional counseling which are good. There are some that are benign, like massage and yoga. Then there are some that are ugly - which are what I call herbs.

The fact is that if a study came out tomorrow showing that herbs were safe and effective, I would change my tune. But as of today there is no data to show that herbs have any positive impact on pregnancy rates. There has never been a randomized control trial looking at herbs and pregnancy rates. And we do know a number of the herbs coming from China are contaminated with some of the metals that are not good, like lead and mercury.

A study published in 2009, by Jacky Boysen looked at the use of CAM. They found that women who used CAM, specifically herbs, have lower pregnancy rates.

Dr. Buczynski: When you use the term "CAM" you mean complementary alternative medicine.

Dr. Domar: Yes, complementary alternative medicine. Right now, the only thing we know about herbs is bad. Could there be future research showing they are good? Absolutely! But we also have *no* idea how herbs interact with infertility drugs.

"There are so many interventions, like acupuncture, mind/body, and nutritional counseling which are good. There are some that are benign, like massage and yoga. Then there are some that are ugly - which are what I call herbs."

Dr. Buczynski: So we are talking about things that people might use like Echinacea, for instance.

Dr. Domar: In fact there was a study that was done about ten or twelve years ago that looked at Echinacea, Saw Palmetto, St. John's Wort and Gingko. And what they found was three of the four, everything but Saw Palmetto decreased the fertilizability of eggs and sperm.

They also found that in men, St. John's Wort might have switched on the BRCA gene. So, we think herbs are so good for us because they come from plants - and a lot of plants are healthy. But the fact is we just

> "There was a study that was done about ten or twelve years ago that looked at Echinacea, Saw Palmetto, St. John's Wort and Gingko... They found three of the four, everything but Saw Palmetto decreased the fertilizability of eggs and sperm."

don't know what's in them, especially these herbs that we are purchasing.

Dr. Buczynski: You were referring to "switching on the BRCA gene." Can you just tell us a little bit more about why that would be something we would pay attention to?

Dr. Domar: Well, if a man is taking St. John's Wort and if it changes his sperm so it switches on the BRCA gene in sperm, you would then worry (although this has not yet been proved) that his children, especially his daughters, would be at a higher risk of breast and ovarian cancer.

I don't remember what BRCA stands for. But there are two BRCA genes that have been identified as providing a significant increased risk of breast cancer in both men and women, and ovarian cancer. (Editing note: BRCA stands for BReast CAncer suscaptibility.

> "Herbs are not benign... We don't know what's in them...we don't know how dangerous they might be."

So herbs are not benign. And I think we think of herbs as being so benign that we go to health food store or we go to herbalists, and they give us herbs, and we take them. But what's in them? And we don't know. We don't know what's in them truly. And we don't know how dangerous they might be.

We definitely know that St. John's Wort decreases the efficacy of the birth control pill. So how might it interact with fertility drugs? No one knows.

Dr. Buczynski: What about acupuncture?

Dr. Domar: Acupuncture is something that is one of the few CAM areas where there actually *has* been a lot of randomized controlled research.

> "They gave the women twenty-five minutes of acupuncture before and after that embryo transfer...they found that forty-two percent of the women who had acupuncture got pregnant, versus twenty-six percent of the control...a very significant result."

A study came out in 2002 with the first randomized control trial on acupuncture with IVF patients. They looked at women who had twenty-five minutes of acupuncture before and after what is called an embryo transfer. For an in vitro fertilization cycle, the woman is given medication to stimulate the production of many eggs. The eggs are then fertilized with her partner's sperm, and three days later on average they transfer those embryos into her uterus.

They gave the women twenty-five minutes of acupuncture before and after that embryo transfer, and what they found was that forty-two percent of the women who had acupuncture got pregnant versus twenty-six percent of the control. So it was a very significant result.

That research led to an *explosion* in the field, in terms of interest in acupuncture. Since then there have been *many* studies done on acupuncture pre and post embryo transfer. There have now been two huge meta-analyses done, and one meta-analysis showed a very significant impact of acupuncture, and the other

meta-analysis did not.

So I think the jury is still out. I am guessing, if you would push me into the wall, that acupuncture is likely to be effective in women who have good quality embryos. And I think that is why the research has been so hard to understand.

Dr. Buczynski: It would be interesting if they would do a more sophisticated study of that; you know, breaking people into smaller sub-groups.

Dr. Domar: Well, the original study did. The original study by Paulus, actually *only* looked at women with good-quality embryos. That was the one that did show a significant difference. I did a study myself, and we looked at all women having IVF, and we did not find a significant impact.

I mean, the acupuncture in that setting makes women more relaxed, it makes them less anxious, it makes them more optimistic. So I feel that even if it doesn't affect pregnancy rates, it is one more thing that women can do to help themselves feel better and improve their quality of life. But the jury is still out whether or not it definitively increases pregnancy rates in all female patients.

"Acupuncture makes women more relaxed, less anxious, and more optimistic.Even if it doesn't affect pregnancy rates, it is one more thing that women can do to help themselves feel better and improve quality of life."

Dr. Buczynski: I don't want to spend a *lot* of time on this but I would like go over some of the medical treatments that are involved with infertility, including the medications. People look at hormones and the thyroid and make an assessment. Is a low functioning thyroid an infertility factor?

Medical Treatments and Infertility

Dr. Domar: Well, the fact is , when a couple goes for their workup, one of the things they are going to do for the woman, is look at thyroid function because if she is hypo or hyper thyroid, it can not only affect her ability to get pregnant, but it can increase her risk of miscarriage. They also test what is called her FSH level on day three of her cycle to see whether it looks likely that she is making normal healthy eggs. It is a rough estimate, but it is the best we have right now.

Dr. Buczynski: And they also look at things like whether she has had endometriosis or whether there are polyps and things like that?

"One of the things they look at thyroid function is if she is hypo or hyper thyroid, it can not only affect her ability to get pregnant, but it can increase her risk of miscarriage."

Dr. Domar: The standard workup these days involves really only three things. One is she has blood drawn on day three of her cycle to assess whether or not she is ovulating and her thyroid function. She also needs to have a radiological procedure called a Hysterosalpingogram - it is nicknamed HSG - they inject dye through her cervix into her uterus to see if her uterine cavity is normal, and to see whether or not her tubes are open.

If her blood work is abnormal, if her HSG is abnormal - then you have a diagnosis of female factor.

The man *has* to have a semen analysis - I don't care if he fathered a baby a year ago; he still needs a semen analysis. And they look at three things. One is the count, or the concentration, to make sure he has enough sperm. The next is the motility, which is the ability of the sperm to swim in a straight line. And the third is morphology, which means are the sperm normally shaped?

Dr. Buczynski: And then once patients are involved in *in vitro fertilization*, do you find that the techniques that you are recommending actually help them get pregnant so they *don't* need IVF, but if they do (need IVF), that the techniques increase the chance that the IVF will work?

"The man *has* to have a semen analysis... they look at three things...count or the concentration, motility, and morphology."

Dr. Domar: Well, yes. You know, if I had my druthers, if you want to increase the chances IVF will work, you would have a patient who is not underweight or morbidly obese and all the lifestyle changes that we talked about. I would rather she not cycle if she is very depressed or very anxious. I would rather we treat that before she cycles. I would like to teach her what to expect during an IVF cycle, because if you know what to expect you tend to handle it better. And I always want my patients to have a Plan B; "What are you going to do if it doesn't work?" - just so she doesn't feel extremely anxious towards the end of the cycle.

Dr. Buczynski: Do you find that sending them on a vacation makes any difference?

Dr. Domar: When? Before the cycle or during the cycle?

Dr. Buczynski: Either.

Dr. Domar: You know, I have never seen any research in terms of vacations. There is a whole concept called "Conceptionmoon" where people go away on vacation mid-cycle - and some website did a survey a couple of years ago, and actually I think a fair number of people reported they got pregnant on the Conceptionmoon. But, it is not scientific.

The problem with vacations for infertility patients is that most people in this country don't have insurance coverage. I think there are I think nine States in the U.S. and a number of countries in Europe and Israel that provide coverage. But most people in the world who are trying to get pregnant don't have insurance coverage for it. And so for them money becomes a *huge* issue. A lot of them just can't afford to go on vacation.

"If you want to increase the chances IVF will work, you have a patient who is not underweight or morbidly obese...I would rather she not cycle if she is very depressed or very anxious. I would rather we treat that before she cycles."

Dr. Buczynski: And I would imagine money becomes an issue in the family decision of how long to continue trying to get pregnant.

Dr. Domar: It is a huge issue. It is a huge issue.

Dr. Buczynski: Because it is so expensive.

Dr. Domar: I mean, if you think about it, Ruth, therapists say that the top three things that couples fight about are money, sex and kids. And infertility really encompasses all three. And infertility treatment, if it is not covered by insurance, is exquisitely expensive. I mean, an IVF cycle probably averages

"...therapists say that the top three things that couples fight about are money, sex and kids. And infertility really encompasses all three."

about $14,000 – with probably a thirty percent chance of success worldwide.

And so you are saying to a couple, you know, "Pay this amount of money in cash and it will give you a thirty percent chance of having a baby nine months later." What if one member of the couple wants to do that and one doesn't? Or what if you ask your parents for money, and they have money, and they say no?

You know, the money issue can be a huge issue within the couple as well as within the family.

Dr. Buczynski: And so how do you work with that?

Dr. Domar: You know, money is a tough one. I mean, I'm lucky; I practice in Massachusetts which has the best infertility coverage in the country. But I certainly travel outside of Massachusetts and outside of the U.S., and I see a lot of patients who have money issues, and I have some patients in Massachusetts who are not covered.

And you have to talk about, you know, what can you do that is the most effective treatment for the least amount of money? The couple certainly has to talk about their comfort versus discomfort about spending money.

"You really *do* want to focus on lifestyle behaviors and mood because you *really* want to be doing everything you can to increase your chances of getting pregnant if you are paying out of pocket for treatment."

This is a time where you really *do* want to focus on lifestyle behaviors and mood because you *really* want to be doing everything you can to increase your chances of getting pregnant if you are paying out of pocket for treatment.

Dr. Buczynski: Yes. I would like to move on in a moment to helping people who are giving up on fertility treatment. But before we do, tell us about the research on whether there are any health risks with IVF?

Dr. Domar: That is a good question. About, I don't know, fifteen or sixteen years ago a study came out that linked fertility drugs to ovarian cancer. Another study came out, six or eight years ago, linking fertility drugs to breast cancer. As far as I know, that has not been substantiated. There is a big study out of California - I think UCSF - where they are following, fifty-three thousand women who were exposed to fertility drugs. And as far as I know we have not seen a link to long-term health risks.

"Fertility drugs have been used in Israel I think since 1958, and so you would think if there was a significant health risk we would have known about it by now."

Women who never get pregnant are at an increased risk of ovarian cancer - and we know that - with or without fertility drugs. So I would say to anybody, whether or not you were on fertility drugs, if you never got pregnant you need to be monitored more carefully.

But the fertility drugs have been used in Israel I think since 1958, and so you would think if there was a significant health risk we would have known about it by now.

Dr. Buczynski: Okay, so let's move into the area of accepting infertility - and talk to us about that. How do you work with

patients when they may be at a place where they need to accept that that is not something that is going to happen for them, biologically at least?

Coping With the Emotional Impact of Infertility

Dr. Domar: You know, I think a part of it is just a natural process. You know, it is not like I can sit a couple down and say, "Okay, now you are going to be happy because you can't get pregnant." I think that as they go through it, it is like time. I asked a patient the other day who had lost twins last year in her second trimester, "What was the best thing you did?" and she said, "It was time."

I think for a lot of couples as they go through infertility, if the very first day they come in and I said, "Oh well, two years from now you are going to have to get used to the fact that you can't have a biological child," they would slip out. But I think as they go through the treatment, that has to be a part of them; this beginning to wonder if it is ever going to happen to them. And they are beginning to think about what will they want to do if it *doesn't* happen to them?

"I asked a patient the other day who had lost twins last year in her second trimester, 'What was the best thing you did?' and she said, 'It was time.'"

The fact is, it's relatively rare for a physician to recommend that a patient stops treatment. It is usually the patient who makes that decision. And then they have a fork in the road. I mean, the options are third-party reproduction, which involve egg donation, sperm donation, a gestational carrier, adoption, or childfree living.

I can't tell a patient what is going to be the best decision for them. I mean, I do have to say that I think the patients that I see are highly motivated to become parents and so it is relatively rare for one of my patients to choose childfree living. But by the time they get to the point where it is time to stop treatment, they have started thinking about it.

I have a number of couples I am seeing right now where one member of the couple wants to keep on trying and one wants to move on to adoption, that is the thing that is hard.

"It is relatively rare for a physician to recommend that a patient stops treatment. It is usually the patient who makes that decision...the options are third-party reproduction, which involve egg donation, sperm donation, a gestational carrier, adoption, or childfree living."

Dr. Buczynski: That has got to be hard for them to manage.

Dr. Domar: It is. It is a *huge* conflict. What I see probably even more often is the wife wants to adopt and the husband wants to do egg donation, because if he does egg donation he still has a genetic tie to the child. And those are tough ones.

Dr. Buczynski: How do you work with that?

Dr. Domar: You know, I either see them myself or if I feel like I can't offer enough, I refer them. I am lucky; in Boston there is a social worker here named Ellen Glazer whose specialty is working with couples who are "stuck." If I feel like I can't offer enough, I refer them to her.

But if I continue to see them, we talk about the pros and cons in a very black-and-white way, of adoption versus egg donation. I ask them to go home and do a pro/con list. And if they *truly* end up totally stuck we work on a compromise. I had one couple where she *really* wanted to adopt and he *really* wanted to do egg donation - so together we came up with a compromise; she agreed to do one egg donor cycle, with the agreement that if it didn't work, they would then move on to adoption. And as it was, their first egg cycle donation worked and, you know, she is probably the most ecstatic egg donor mom I know! So there are times you just have to compromise.

> "More often the wife wants to adopt and the husband wants to do egg donation, because if he does egg donation he still has a genetic tie to the child."

Dr. Buczynski: Do you ever have couples that break up as a result of just trying to work all these issues out?

Dr. Domar: It's rare. The divorce rate in infertile couples is lower than that of couples with kids. So I think that the way infertility works is if you can get through infertility, you can get through anything. I think it *can* bring couples together.

I have probably had a handful of couples, who split up, in my whole career. Sometimes infidelity was involved, sometimes they just had very different hopes and dreams; I am not so sure infertility was the *reason* for breaking up but it probably was the last straw.

> "The divorce rate in infertile couples is lower than that of couples with kids...if you can get through infertility, you can get through anything. I think it *can* bring couples together."

I had one couple years ago who had done several donor egg cycles that didn't work; the wife really wanted to adopt, the husband really didn't. She basically said, "You know what? I need to be a mom more than I need to be married to you." And she went out looking for apartments. It scared the *heck* out of him! And he agreed to adopt - which scared me, because I did not want to see this couple become a family against his wishes. But as it turned out, he ended up naming the baby; he quit his job to be a stay-at-home dad… So, you know, in that case it was lucky. They were lucky that he had such an emotional turnaround.

Dr. Buczynski: Yes. Yes, that is a very sweet surprise.

Dr. Domar: Yes. But I have had a few couples where they did split up and the wife ended up having the baby as a single mom.

Dr. Buczynski: When you have couples that are concerned about adopting, what are some of the issues – some of the concerns that they have?

Concerns about Adoption

Dr. Domar: Well, you know, realistically they are concerned about the cost because if you work with a private agency, at least in Massachusetts, it probably costs about $40,000, which is a *lot* of money, especially if you have already spent a lot of money on fertility treatment.

Another issue is just the availability of babies! I mean, everyone runs around saying, "Oh, there are so many children ready for adoption!" Well the fact is there are a lot of older kids that are available for adoption; there aren't a lot of babies. And especially for a couple who has gone through infertility for a long time - they want a baby. So to get a healthy white infant, which is the first choice of many couples, you spend a lot of money and/or you wait a long time.

"Realistically they are concerned about the cost because if you work with a private agency, at least in Massachusetts, it probably costs about $40,000."

There is the issue of, what was the prenatal care; did the birth mom get adequate prenatal care, did she smoke cigarettes, did she do drugs, or did she drink alcohol? You know, how healthy is this baby going to be?

What is the family health history? Is there a significant mental health history; is there a significant history of heart disease or cancer? These are all things that couples want to know.

Dr. Buczynski: Yes. And to some extent they may have limited information on that.

"There is the issue of, what was the prenatal care; did the birth mom get adequate prenatal care, did she smoke cigarettes, did she do drugs, or did she drink alcohol? How healthy is this baby going to be?"

Dr. Domar: You know I guess I can't say *all*, but I would say the vast majority of my patients who have adopted get *wonderfully* clear histories because these birth moms or birth parents are highly motivated to do anything they can for their children. So they answer the questions about their own health history to the very best of their ability. Sometimes where it is lacking, though, is a good health history on the birth dad. If the birth mom knows who he is and still has a relationship with him, she can get some of these questions answered. But sometimes either she won't tell who he is or she doesn't know who he is.

Dr. Buczynski: How about from countries outside the US? People are frequently trying to adopt from other countries.

Dr. Domar: Yes. And it has gotten harder. I would say now it is as hard as I have ever seen it in my career. A number of countries have stopped adoptions**.** There was a really unfortunate circumstance with a woman who had adopted a young boy; I think it was from Russia. She basically put him on a plane and sent him back to Russia. That got a *huge* amount of media attention. So it has made not only some couples nervous about adopting from other countries, but it has made some countries nervous about working with Americans.

You know, international adoption is trickier; it *can* be less expensive than domestic adoption. I think the main advantage is that a lot of people worry about the birth parents snatching their child - which almost never happens. But with international adoption, people worry less about that. The big drawback is you rarely get a baby; you tend to get toddlers by the time the adoption is final.

"International adoption is trickier; it *can* be less expensive than domestic adoption...The big drawback is you rarely get a baby; you tend to get toddlers by the time the adoption is final."

Dr. Buczynski: I did want to save just a little bit of time to

talk about your newer book because this whole series is on women's health and I think the topic is really important for women. So the title, again, of the new book is *Be Happy Without Being Perfect.* If I say to you, Ali, that perfectionism is an important issue for women, what would you say?

Be Happy Without Being Perfect

Dr. Domar: Absolutely! You know, women put such pressure on themselves to be perfect - not just in one area of their lives. If you look at all the different areas of our lives - our body, our home, our relationship, our parenting, and our job - we want to be perfect in every way.

> "Look at all the different areas of our lives - our body, our home, our relationship, our parenting, and our job - we want to be perfect in every way."

Dr. Buczynski: Right. So what would you say - are you getting a reputation as someone to work with in this area?

Dr. Domar: I certainly speak a lot about it! I go to a lot of conferences and speak on it because I think everybody recognizes the pressure women put on themselves, and the fact that perfectionism is a detriment to people's happiness.

I started the book by talking about this patient - you know when you see a patient and it gives you this real "Aha!" moment? It was a woman, I think in her mid-fifties. She was happily married, had a number of children who were all doing really well. She and her husband were financially very comfortable. They had a second home and she would spend the summers at the beach house. She had a wonderful relationship with her mother, she was very active at her church and her kids' schools, and she had a ton of friends. She was healthy, she ran, she had started weight training, and she didn't drink a lot of alcohol.

And I sat there with this patient thinking, "Now why has she come in to see *me?"* She seemed to have this really perfect life. I actually felt her life was a lot easier than mine!

I finally said to her, "Why are you seeing me? I teach stress management." And she said, "Because every time I open a closet or a drawer and see clutter I feel like a complete failure." And that was an "Aha!" moment for me because I think that a lot of women do that.

So many women I know, both in terms of friends, neighbors, or patients have *so* much going for them. But when you talk to them they zero-in on the one area of their life that isn't perfect, or isn't going really well. And that's really sad.

> "I think everybody recognizes the pressure women put on themselves, and the fact that perfectionism is a detriment to people's happiness."

Dr. Buczynski: Yes. They zero-in on the one fault that they find in themselves.

Dr. Domar: Yes.

Dr. Buczynski: So how do you work with that?

Dr. Domar: Well, you know, you sort of go back to that cognitive restructuring and challenge them into thinking about their thought patterns. For example, "You don't need to be a size two to be happy." And also help women look at the cup as being half-full rather than half-empty.

Another "Aha!" moment happened a couple of years ago during one of my Mind/Body groups. One of my patients said to me, "Do people compare themselves up or compare themselves down?" And the fact is we always compare ourselves up. Most of us, who are in the healthcare field, are healthier and happier than the vast majority of people in the world. Yet we don't see ourselves that way.

We compare up to people who are doing better than we are, more affluent than we are, or who look better than we do. Yet, ninety-five percent of the world's population is not doing so well. But we don't look down - we look up. And that always makes us come up short.

"So many women I know...have *so* much going for them. But when you talk to them they zero-in on the one area of their life that isn't perfect, or isn't going really well."

Dr. Buczynski: Yes. Do you see that as a spiritual issue at all?

Dr. Domar: You know, I do. It's funny because one of my neighbors leant me this book and I just read it, called *Hector's Search for Happiness*. I have to say, I have made almost all my patients buy this; it's a little tiny paperback and it takes about two hours to read. It is by a French psychiatrist. It feels somewhat autobiographical in nature. A psychiatrist, who is a little bit fed-up with taking care of the worried - well, goes on this world trip to see if he can discover the secrets of happiness.

It is a very spiritual mission for him. I think he does try to figure out what makes people happy; what makes *him* happy. It is very spiritual.

Dr. Buczynski: Now the title of that book was *Hector's Search for Happiness.* Who was the author?

Dr. Domar: I don't remember. You know, it's funny because most people who read it just think it's cute. I think those of us who are shrinks will, as I did, read it and say "Wow! This is *really* interesting!"

He comes up with eighteen lessons on happiness. It is a very interesting book. One of the first patients that I had read it is in an awful life situation. She has a very ill husband, she herself has cancer, and she has a young child. I had her read it and when she came back she had written down all the lessons. She is really changing the way she is living her life, based on what she read.

"You go back to that cognitive restructuring and challenge them into thinking about their thought patterns. For example, 'You don't need to be a size two to be happy.'"

So sometimes you can have a little something really turn somebody around.

Dr. Buczynski: I know when my partner was dying of a brain tumor, she had just been diagnosed with a Glioblastoma, and she said to me days later (this is the co-founder of NICABM, Christine), "You know, I know that there are thousands of people all over the world who are just struggling to be free right now and who are terrified for their safety, or who don't have enough to eat or to give their children." And I thought, "Wow…" you know, I don't know, if I had a brain tumor, if I would be thinking about people other than myself, or feeling "Oh my God! What are we going to do?"

Dr. Domar: Yes. But maybe sometimes it helps people who are facing a crisis to understand that they are facing a crisis and they are not alone.

Dr. Buczynski: Yes. You know, I am so sorry, we are out of time. This call flew by *so* fast! But I wanted

to first of all thank everyone that is on the call. I know that you take time out of your busy schedule; you either organize to mark off the hour and not see patients, or to stay up very, very late, or to get up extra early in the morning so that you can participate in this call. And we just want to recognize you for doing that, and thank you for being part of our community.

I also want to mention that I will be sending out an email - it will come out very shortly - and in that email I am going to be doing two things. One, I am going to be sending you links to Ali's books. I am going to send you links to two of her books; although she has written several. I am going to send you the links to Amazon; you can check out the reviews and read what other people are saying about them. And I am not saying you should buy the book; buy it if you want, or go see if it is in your library.

But I do want to recommend that you take a look at the books and see not only if they might be useful for you, but if they might be something you will want to use with or refer to your patients. First, there is *Conquering Infertility: Dr. Alice Domar's Mind/Body Guide to Enhancing Fertility and Coping with Infertility*. Then, there is her most recent book, which is kind of an interesting one for me, is *Be Happy Without Being Perfect*. So these are *Conquering Infertility* and *Be Happy Without Being Perfect.*

The other thing I am going to do is give you a link to the Comment Board. Now this is our community board. And we would like to have everyone go to the Comment Board and talk about how you are going to apply what you heard tonight. So when you go to the Community Board, please put your first and your last name, your city and state or country, and your profession - and just talk about some of the ideas you have heard, and how *you* will apply them with your patients.

And, Ali, thanks for taking *your* time to be part of this series. And thank you for your work. You have been studying this for a very long time and I appreciate the work that you have done and the time that you gave us today, to be part of this series.

Dr. Domar: Well thanks for inviting me to be on!

Dr. Buczynski: Great! So, everyone, take good care - and goodnight now.

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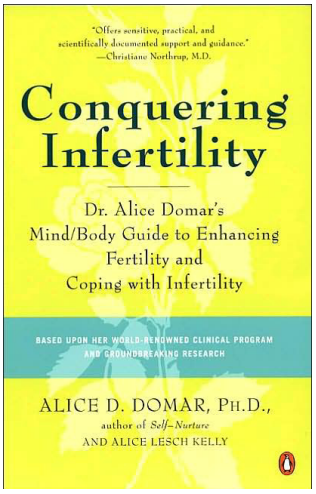
About The Speaker:

Alice D. Domar, PhD is a pioneer in the application of mind/body medicine to the health issues of both men and women. She not only established the first Mind/Body Center for Women's Health, but also conducts ongoing ground-breaking research in the field. Her research focuses on the relationship between stress and different women's health condition in order to create innovative programs to help women decrease physical and psychological symptoms.

Books by Featured Speaker: Alice Domar, PhD

Conquering Infertility: Dr. Alice Domar's Mind/Body Guide to Enhancing Fertility and Coping with Infertility



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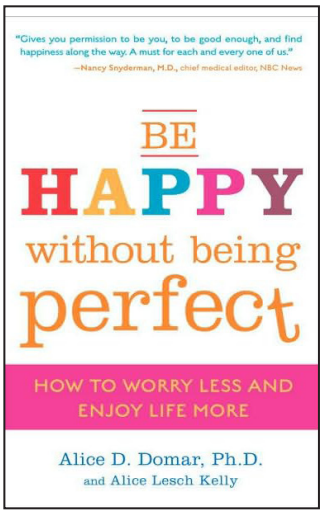

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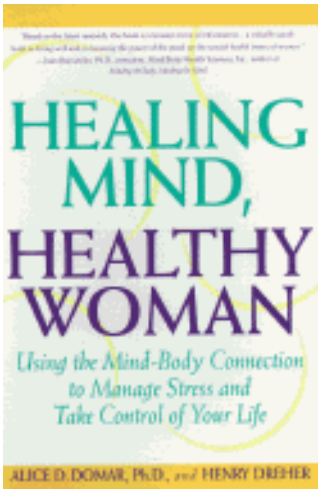

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