

**Pinn Point on Women's Health  
"Uterine Fibroids"**

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Hosted by **DR. VIVIAN W. PINN**,  
Director of Office of Research on Women's Health

Guest Speaker:  
**DR. JAMES SEGARS**,  
Reproductive Biology and Medicine Branch  
NICHD, NIH

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ANNOUNCER: From the National Institutes of Health in Bethesda, Maryland, the Nation's medical research agency, this is Pinn Point on Women's Health with Dr. Vivian Pinn, Director of the Office of Research on Women's Health.

Now, here's Dr. Pinn.

DR. PINN: Welcome to another episode of Pinn Point on Women's Health. Each month on this podcast, we take a look at some of the latest developments in the area of women's health and the medical research that affects our lives.

For this podcast, I am delighted that we will be discussing uterine leiomyomas, or as we commonly refer to them, uterine fibroids, a topic that is of great interest to so many people.

Our guest today to discuss this topic is Dr. James Segars, who is head of the unit on Reproductive

Endocrinology and Infertility in the Reproductive Biology and Medicine Branch of the National Institute of Child Health and Human Development here at the NIH.

But first, some hot flashes from the world of women's health research coming up in just 60 seconds when we continue this Pinn Point on Women's Health. Stay tuned.

[Commercial break.]

DR. PINN: Welcome back to Pinn Point on Women's Health.

As promised, I want to take a look at some of the hot flashes that have recently been in the news regarding women's health and women's health research.

There is a lot of fear about developing ovarian cancer and we often wonder what are some of the risk factors for ovarian cancer, and we have had a lot of discussions in our podcasts related to obesity and the various effects that obesity can have on our health.

Well, in a recent study funded by, and conducted by, Dr. Michael Iseman at the National Cancer Institute here at the NIH with his colleagues, his research has shown through an epidemiological study that among women who have never used menopausal hormone therapy, who are obese, that

they are at an increased risk of developing ovarian cancer compared with women of normal weight.

And why should this be the case? It is thought from their research that obesity may contribute to the development of ovarian cancer through a hormonal mechanism.

So, stay tuned as we learn more about this, but obviously, we are always excited when research begins to give us more information about risk factors over which we may be able to control, that can help prevent diseases and conditions that affect us, and we are very pleased to see that more research is being done on ovarian cancer and we will wait to get more answers.

Now, another topic that sometimes is in the news, sometimes we don't talk about that much, is bulimia, and if you don't know what bulimia is, it's actually bulimia nervosa. It is typically a condition that begins in adolescence or in the young adulthood, it is more common in females, and it is characterized by recurrent episodes of binge eating followed by self-induced vomiting.

And why is this done? It is usually done because of problems with self-image especially for young women who think they are overweight, or who are worried about being

overweight or being fat, and so they engage in this practice in order to avoid gaining weight, and we know that this is a very dangerous condition to have and one that we really need to look out for and pay attention to in young people.

There has recently been a study conducted out of Columbia University and New York State Psychiatric Institute funded by the National Institute of Mental Health, the National Alliance for Research on Schizophrenia and Depression, and the Sackler Institute for Developmental Psychobiology at Columbia University, looking at bulimia and determining that there may be some self-regulatory, that means some internal mechanism to regulate some neural abnormalities that are not seen in healthy controls. That means that our brains then may have a framework that affects the ability of those who suffer from bulimia to be able to control that desire or that drive to take in food and then to spit it out because of their concern for gaining weight.

This is something that we really need to be concerned about. We hear about eating disorders and we hear about bulimia, so we will look forward to hearing more information about this, and if you want to know more about this particular study, it is published in the Archives of

General Psychiatry in this year 2009, Volume 66, page 51 to 63, and you can learn more about the physiological mechanisms involved in bulimia from their study and the different patterns of activity in the brain that were witnessed in women and men who, in fact, suffer from this condition.

Lastly, I want to mention to you that we have a new report available that you may have a copy of and it will eventually be online.

A year ago, in 2007, the National Institutes of Health, the Office of Research on Women's Health, and the Working Group on Women in Biomedical Careers held a national leadership workshop on mentoring women in biomedical careers where we addressed many issues related to mentoring girls and women in careers in science and how mentoring can play a role in not only contributing to the advancement of women in biomedical careers, but also sustaining that advancement.

We are very pleased with this report and the proceedings from that meeting are now available, and if you would like a copy of this report, you can e-mail [womeninscience](mailto:womeninscience@NIH.gov) -- all one word, [womeninscience](mailto:womeninscience@NIH.gov) -- @NIH.gov, and you can simply go to that Web site and we will send you

a copy or several copies of this report if you would like to read it and share it.

We hope you will enjoy this report. We hope you will look up these other studies that I have referred to. These are just other examples of NIH research contributing to what we know about the health and well-being of women.

We will have more updates in the next podcast and coming up next, our visit with Dr. Segars for a discussion about uterine fibroids. We will be right back with more Pinn Point on Women's Health.

[Commercial break.]

DR. PINN: Welcome back to Pinn Point on Women's Health. Our guest today is Dr. James Segars, who is not only Professor of Obstetrics and Gynecology at the Uniformed Services University of the Health Sciences, but, of course, is here at the National Institutes of Health where he is head of the unit on Reproductive Endocrinology and Infertility, Reproductive Biology and Medicine Branch in the National Institute of Child Health and Human Development.

Obviously, Dr. Segars is someone that I go to all the time to ask for information and to be better informed about many topics related to women's reproductive health,

but especially in the area of uterine leiomyomas, which we actually refer to as fibroids, and so I will use that lay term during our interview today rather than giving the long scientific name or accurate name, which is leiomyoma.

Now, we have been anticipating having Dr. Segars for this discussion because it is one of the topics on which we get the most e-mail, the most phone calls, and the most interest, because it is a topic of importance for women's health.

So, Dr. Segars, welcome and thank you for joining me today.

DR. SEGARS: Thank you very much for inviting me.

DR. PINN: Why don't we start off by asking you to tell us what are uterine leiomyomas or fibroids, what are they and why do they come about or what do we know about that, and how common are they for women?

DR. SEGARS: Uterine fibroids are benign growths that occur in the uterus primarily of women. They can be located elsewhere in the body, but the vast majority are located in the uterus, and these growths can be quite sizable, sometimes softball size, sometimes even larger.

They create problems by their effects upon uterine

function, primarily causing either uterine bleeding, infertility, or pelvic pressure or pain.

The incidence of uterine fibroids is quite high, but is also interesting because there are race and ethnic differences in the instance of disease, such that uterine fibroids are much more common in African-American women than they are in Caucasian women.

It is estimated that at least 50 percent, maybe even higher, and close to 70 percent of African-American women may have fibroids by the time they undergo menopause compared to maybe 25 percent of Caucasian women. It depends on how one looks at fibroids with regard to what they are, whether they are actual masses that are infected clinically or on histologic section.

If you look at the uterus in histologic section, as many as 80 to 90 percent of women will have some form of fibroids at autopsy.

DR. PINN: What are the major symptoms that bring women to the physician because of fibroids?

DR. SEGARS: The major symptoms would be uterine bleeding, which is most common, excessive, heavy menorrhagia oftentimes either between the menses or with the menses,

which can lead to anemia or a low blood count.

The second problem is pelvic pressure, which is due to the effects of fibroids on the surrounding tissues in the pelvis, including the bladder, such that the patient may have urinary frequency, inability to go the night without waking up in order to void.

The third main symptom is infertility, so the patient may have a loss of the ability to become pregnant or a miscarriage as a result of uterine fibroids.

DR. PINN: Now, if I am a woman who has fibroids, what do we know about the current options for relieving me of my symptoms? If I come to you as your patient and I have fibroids, what are the options, what do you tell me that I might consider, and then my next question is going to be what kind of new options do we think are under development through research?

DR. SEGARS: In the past, I think it has been true that many women with fibroids have been treated with surgery. If you are a patient coming to me with fibroids, one of the first questions is what symptoms are you having and what is your age, because that will determine treatment.

For example, if you are a young patient who is

having primarily bleeding and infertility, then, overwhelmingly the correct therapy for fibroids would be myomectomy or just removing the fibroids.

The problem is, of course, some women may have to have multiple myomectomies, particularly African-American women, because their fibroid disease occurs earlier, at a younger age, while they are trying to have their family, and so this is an issue.

But for the young woman with fibroids, myomectomy is often the therapy of choice, because, of course, she wants to preserve the uterus for having a family.

For patients who are older, maybe menopausal, in the past, I think many people have done hysterectomy, and this is sort of the therapy that was offered many times in the perimenopausal -- for the perimenopausal woman with uterine fibroids, but we are trying to get away from surgical options for fibroids, and we are trying to go more with medical options and noninvasive treatments or minimally invasive treatments for uterine fibroids.

Two of the new treatments that have come about in treating fibroids are uterine artery embolization and MRI-guided focused ultrasound for uterine fibroids in addition

to, of course, medical treatment. We can talk about that in a little bit, but the primary medical treatment now is, for the most part, presurgical and pretreatment. There is no sustained medical treatment that's currently approved by the FDA.

DR. PINN: Let's take a second and have you tell us more about uterine artery embolization, because we get a lot of calls asking about that as an option. What do we know about uterine artery embolization and when would it be a recommended treatment of choice or course of therapy?

DR. SEGARS: Uterine artery embolization has been around now for over 10 years, and this is embolization of the uterine arteries, so by doing so, what one does is cause ischemia in the uterus or a lack of oxygen and the cells in the uterus dying. This includes fibroids.

So, typically, after uterine artery embolization, the fibroids will shrink about 30 percent, 30 to 40 percent typically, but not all fibroid patients are candidates for uterine artery embolization.

For example, fibroids that are located on the surface of the uterus or are pedunculated would be poor candidates, because if they infarct or suffer from lack of

oxygen, they may then attach to other structures in the pelvis, such as the bowel, and this is not good.

Another kind of fibroid that is not a candidate for uterine artery embolization in fibroids, in patients who are interested in reproduction, particularly those who have a pedunculated intracavitary fibroid, that one that is located within the uterus entirely -- in the uterine cavity, pardon me, entirely, because those fibroids can also infarct and then be passed out through the cervix, sort of like a childbirth kind of situation. It's very painful.

So, uterine artery embolization then is not for everyone, and the patient who typically would do best with the uterine artery embolization would be the patient in the perimenopause who has completed childbearing.

At the present time, the studies that have been done on uterine artery embolization indicate that patients who would desire childbirth are not ideal candidates because the infarct of the fibroid in the uterus also may damage the ovarian function, and so those women who have a desire to have fertility in the future may suffer adversely if they have uterine artery embolization.

So, I think that sort of answers it, but

basically, it's the perimenopausal patient who typically has the procedure, and this is done by a radiologist, an interventional radiologist as an outpatient typically or maybe with an overnight stay.

DR. PINN: I am going to push you just a little bit more on uterine artery embolization because I get a lot of questions and I know a lot of women think of it as perhaps the best way to go, and not having a hysterectomy, but as an alternative to hysterectomy.

I know there have been some studies of this procedure, but are there any risks that women should know about if they are considering this procedure?

DR. SEGARS: There have been a couple of studies that have been done on uterine artery embolization. One of the things is that with any of the alternative therapies that we are going to talk about today, to include uterine artery embolization and MRI-guided focused ultrasound, the risk of the secondary procedure is probably the highest risk that you have, so that if the patient undergoes uterine artery embolization, there is probably about a 20 percent chance that sometime in the next year, or two, or three, she will undergo a surgical procedure for a definitive therapy

for uterine fibroids because it is not 100 percent curative.

DR. PINN: Explain what you mean by a definitive procedure.

DR. SEGARS: So, either a myomectomy or hysterectomy. One of the things that women who are considering uterine artery embolization have to sort of consider I think is their sort of likelihood of having a second procedure, particularly whether they are good candidates for this, and so I think there are a lot of women who are very interested in nonsurgical, nonhysterectomy options, but the biggest risk with uterine artery embolization is that they would have to have that later or, not in the interim, but typically, it's in one- to two-year follow-up period of time, and it's roughly about 20 percent, something like that.

The second risk is, is that you can have damage to the endometrium, so there are a couple of cases where patients who have had uterine artery embolization have complete cessation of endometrial function after uterine artery embolization.

This is okay if the patient has decided that she has completed childbearing, but it's not okay if she wants

to have children in the future, because if you lose the endometrium or the lining of the uterus, there is nowhere for the embryo to implant, and the patient will then be sterile.

That's a second possibility, it's much less common, and then the third I think I mentioned, which is damage to the ovaries, ovarian function, which can lead to a permanent menopausal situation.

In a lot of women who have uterine artery embolization, one of the things that they have seen in the studies is that if they are in the perimenopausal range, many will become amenorrheic after uterine artery embolization. I think that we interpret that to be to some slight decrement in ovarian function.

DR. PINN: Now, you mentioned another procedure, the MRI-guided ultrasound. Tell us what that is and when that might be a recommended procedure.

DR. SEGARS: Uterine artery embolization, just to go back to that, would be really a possibility for the patient in the perimenopausal time, completed childbearing specifically, who has multiple fibroids in her uterus.

Now, if the same patient was either earlier, say,

perhaps even before she completed childbearing, but primarily after childbearing, but had only a few fibroids, say, two to three fibroids in the uterus, that again were located not necessarily close to the bowel, and not in the intracavitary or luminal portion of the myometrium, I know that is sort of a hard concept to get across over the podcast, but in any event, if there --

DR. PINN: In the wall of the uterus as opposed to the lining?

DR. SEGARS: It would be sort of localized completely within the cavity, so it would be almost kind of like a baby in the uterus, so those fibroids that are completely in the cavity are not a good candidate for either uterine artery embolization or MRI-guided focused ultrasound.

But for MRI-guided focused ultrasound, the patient with two or three fibroids, that are sort of away from adjacent structures, can be treated with an outpatient procedure that takes about an hour to hour and a half maybe, depending upon the number and size of the fibroids, where ultrasound waves are brought to converge on the fibroid, much like a magnifying glass would be used to focus the rays

of the sun.

In that area where the rays were optimal, the ultrasound would heat the fibroid up and cause a loss of fibroid tissue, and that loss of fibroid tissue would then result in a shrinkage of the fibroid. Again, it's typically about 30 to 40 percent shrinkage that we see with MRI-guided focused ultrasound in the studies that have been done.

There have been pregnancies after that procedure, as well, as there have been after uterine artery embolization. I have to admit, of course, both have been associated with pregnancy. It is just that the formal recommendation is if the patient is desiring to have pregnancy, that she not undergo uterine artery embolization.

MRI-guided focused ultrasound has been recently approved by the FDA in I think 2004 for the GE platform, the ExAblate 2000, and women who have that procedure done could be considered to have children later depending upon what their wishes are, however, primarily, the patient who is in the post-childbearing years would be the optimal patient, again with three fibroids or fewer, relatively large size.

DR. PINN: Now, those are some procedures that might be used as alternatives to surgery, alternatives to

myomectomy or to hysterectomy.

Where do we stand now in terms of medical approaches to fibroids?

DR. SEGARS: That is a very good question. There are currently a couple of options that women have for medical treatment of fibroids. The first option, this has been around for almost 20 years now, is the GnRH agonist, and more recently, the GnRH antagonist.

Now, these are medicines that are given typically preoperatively to shrink the fibroids. They are very effective. They will again shrink the fibroids about 30 to 40 percent. The GnRH agonist, one of the ones would be Lupron, typically will do this over about one to two months' period of time, so the patient would treat with the injection.

This is an injectable drug, either once for a long-term dose, or more frequently once a month for a shorter term dose and over that period of time would have shrinkage.

The problem is that they cause a medical menopause for the patients who are undergoing treatment, so women will have hot flashes and reduction in estrogen and all the

associated side effects.

Of course, for women who are having significant fibroid problems, that may not be such an issue. The GnRH antagonist, so these are the newer generation of GnRH analogs, are very interesting in that they cause a shrinkage, but it is much more rapid, so the patients get again about a 40 percent reduction, but it is within 14 days.

So, these are commonly used now by physicians pre-surgically to reduce the size of fibroids and make the operation easier.

Now, what some women and physicians have done is have used long-term treatment with a GnRH agonist or antagonist and then given add-back therapy in low doses of estrogen and progesterone to relieve the menopausal symptoms, and that is one option that has been effective.

More recently, there are other options that are being investigated, but none of which are approved by the FDA. They are in clinical trials, are antiprogestins which have been shown to be effective in the treatment of uterine fibroids.

One trial was recently completed and published

from the National Institutes of Health in the Reproductive Biology and Medicine Branch, and what that showed was a very interesting effect, and that is, that with antiprogestins, there is a durable effect and a reduction in size of fibroids.

So, in layman's term, again, about a 30 or 40 percent shrinkage, but this lasts for several months after the medication is stopped, so that it appears that these antiprogestins are actually targeting some form of the fibroid that is quite durable.

We do not have FDA-approved drugs for these antiprogestins, but the selective antiprogestin modulators may also have benefit for uterine fibroids, and those are under investigation both in the United States and Europe.

DR. PINN: Well, let me back up a little bit and just say that when women complain, or I shouldn't say complain, when women talk about having fibroids and they are concerned about losing their fertility, the possibility of losing their uterus, the pressure symptoms, having a big belly instead of a flat belly because of the enlarged uterus, the bleeding, and I guess that's especially true as women are approaching menopause and get excess bleeding

because of the fibroids, and women are concerned about having fibroids, and we often get e-mails saying why aren't we doing something to help them.

So, I would like this podcast, if nothing else, to let women know we are trying to do something about fibroids, and I think I can speak from what I have seen over the past few years, and that is, while not necessarily an explosion of research, really, much more interest and much more research, not only funded by the NIH, but taking place around the world, to help us know more about fibroids, how to better diagnose them earlier, how to treat them, and alternative ways to treat them.

So, I want to ask you, as I think one of our leading researchers on uterine fibroids, to tell us what are some of the most exciting things we are learning about fibroids from research, and what can we look for coming in the near future that might offer hope to women who suffer from fibroids.

DR. SEGARS: That's a tough question. I think I agree with you, Dr. Pinn, there has been an incredible increase in research in uterine fibroids particularly over the past 5 to 10 years.

One of the things that was real exciting was when the microarrays, the genetic studies were being performed for uterine fibroids now.

These happen in many laboratories around the United States, but we begin to understand a little bit about fibroid physiology, and what we understand about fibroid physiology is that the cells that comprise the fibroids are substantially different than the cells in a normal uterus, and so they respond differently to both medications and they respond differently in many ways to treatment, which is a very good thing.

I think that for women who have fibroids, the ability of the cells in the normal uterine tissue, the myometrium of the uterus to respond differently from the fibroid cells gives us a window where we may be able to alter pharmacologically the behavior of the fibroid cells and then, of course, that may be able to prevent fibroid growth or also to reduce fibroid size.

So, that is one of the things I think that is real exciting is that the research has highlighted the specific differences in how fibroid cells differ from the normal myometrium. These are all preliminary results, but they are

exciting in the idea that we may be able to find specific pharmacological agents that may be able to prevent fibroid growth or reduce fibroid size without causing menopausal symptoms, so that is what I think is most exciting here.

There are several studies that are ongoing right now and others that are planned to look for this.

I think also for women, the noninvasive treatments, the uterine artery embolization, and MRI-guided focused ultrasound, I think, are going to come on line as more women have these and are successful with these treatments. They offer alternatives to surgery for women with fibroids.

DR. PINN: Well, I have asked you a number of questions, you are the expert, so I wanted to stop asking you questions for a second and ask you what should I have asked you about fibroids. What would you like for our audience to know about fibroids that maybe we haven't covered either in terms of the clinical picture, or in terms of research, or in terms of what we can look forward to in the future? Have we covered most of the major points, or are there some things you would like to say?

DR. SEGARS: I think we have covered for the most

part the major points. I think that one of the things that I get many phone calls, too, from women with fibroids, and I think that there are a couple of things that I think women should know about fibroids that we may not have covered in sufficient detail.

One of the things is that fibroids differ, not only in their incidence and racial prevalence, but they also differ in their incidence by age, so that if you are a patient who has fibroids or a family history of fibroids, and you know that you have a family history of fibroids, and, for example, you might be African-American, then, what I hear from my patients is, well, I didn't understand, I am now 39 and I have fibroids, and I have had two myomectomies, and I can't get pregnant. I wish I would have known when I was in my 20s that I needed to get my family out of the way then, I wouldn't have delayed, I would have gone ahead and done that, and not put my career before my family.

So, I am not suggesting that one has to change the paradigm there, but just know that fibroids are age dependent, and if you know that, as a woman, that you are highly likely to get fibroids as you get older, then, that may affect your choices of when you want to start your

family. So, that is one thing that may be easier to do.

The second thing is that I think that there are many physicians who see fibroids one way, and that is surgically, sort of an old school kind of approach to fibroids.

I would encourage women who are interested in looking at new modalities and looking at myomectomy or uterine sparing surgical procedures or interventions to consider those, and if their physician doesn't want to offer that, then, I would encourage them to look elsewhere, because I think that many physicians do have an open mind with this.

I think that hysterectomy rates have fallen in the United States, and this is largely due to these interventional treatments that we talked about that don't involve surgery, so I think that is the second thing I think we ought to emphasize.

Then, the third thing I do think is that there is -- there is some hope. I have a lot of hope for new therapies, and although these things take many years to occur, there have been some very promising studies in Europe that have occurred with selective progesterone receptor

modulators.

I think that while the first generation of these drugs might not be everything that we need in terms of fibroid therapy, I get the sense that there may be a second line of these medications that is going to come around, and that would be something that would be good for women.

There is a lot of interest also from the pharmaceutical companies for development of these agents for women, because fibroids are so prevalent, so both the physicians and the pharmaceutical company and women themselves I think are empowered now to a greater degree than they have been in the past, and that I think is a very exciting thing.

DR. PINN: Obviously, we are talking about women's health research, and I really appreciate the work that you have been doing in this area, and before we close I want to ask you to mention two specific things.

One, say a little bit about this tissue bank that we set up, that you did the work on in organizing. I think our office provided a little support for, but why this is important and why we see this as perhaps a way to help promote research related to fibroids.

DR. SEGARS: Thank you for reminding me of that. At the American Society for Reproductive Medicine, the fibroid special interest group identified several impediments to fibroid research.

One of the impediments that was identified at the recent meeting was the lack of the ability of investigators, particularly scientists and Ph.D. researchers who might not have access to clinical material to actually study uterine fibroids, so in cooperation with the Office of Women's Health Research at NIH and NICHD, as you know, we have started a uterine fibroid tissue bank, which is just getting underway.

What this allows is for investigators who are funded by NIH to submit requests for fibroid tissues that have been collected and well characterized through the NIH.

This is a service that will be provided free of charge, and I think it is going to help promote fibroid research, not only locally, but also at the national level for those individuals who would be studying fibroids or using fibroids as a model, but have not done so.

I think fibroids are a very interesting model scientifically for researchers, because they grow to such

large sizes, say, 7 to 8 centimeters in size, basically, softball size, sometimes even larger, but they never or almost never metastasize.

Now, rarely, of course, they do, and this is, of course, also interesting, but unfortunate for the women where they do, but when fibroids grow to such size, and don't metastasize, it's an unusual sort of tumor or a growth that needs to be understood.

So, this is exciting for researchers who are interested in what is it about a cancer that makes a cancer a cancer, so fibroids, from a negative standpoint, are a very interesting model for that.

DR. PINN: One last thing which again we don't have the details on, but I must say as we talk about research, it is always exciting to me when we bring together minds and ideas from across the country, even around the world, and I know that you have in mind preliminary thoughts about a third international congress on uterine fibroids.

I know we don't have a date set, so we will ask our audience to stay tuned, but I would like for you to just mention what the intent of that meeting would be, because I think it should be very exciting for women who have fibroids

to know that there will be another meeting of the minds to really compare notes and move forward.

DR. SEGARS: Thank you very much for promoting that, too, Dr. Pinn. I should mention this is the third NIH international congress on uterine fibroid research, the first two sponsored by the Office of Women's Health Research in addition to other institutes and centers in the NIH and in the Federal system.

Both the first two congresses were extremely interesting and provided a lot of ability for investigators from around the world to meet and to design studies and share ideas about how to tackle the problem of uterine fibroids. They have been very well-attended events.

Primarily, we are interested in the events because of the ability to forward and to advance uterine fibroid research, so we hope to have another congress this fall, in the late fall sometime.

This will be open to investigators from around the world, and I hope that this will be another venue similar to that we have had in the past where a number of investigators have gotten together with patients, with representatives from Pharmacia and Pharma to study the problem of uterine

fibroids and decide what can be done to help women.

DR. PINN: Let me just add a personal note, and that is, that I have asked you many of these questions because I know they are questions that women want to hear about, but also, as a woman who also experienced fibroids myself, I can really appreciate the need to know more about them, to understand what they are about, and perhaps that helps to explain my own excitement as I see nonsurgical alternatives being explored or introduced, and see researchers, such as you, who are dedicating such time and energy to help us solve the mysteries about fibroids, why they occur, what promotes them, how we can better treat them, and how we can maintain our fertility and live normal lives without the symptoms you have described.

So, I want to thank you both for the work that you are doing in leading many of the efforts related to uterine fibroid research here at the NIH, but also for leading and helping us to encourage others to do research in this area, and then, finally, for spending time with us today to explain so wonderfully what we know and what we are learning about uterine fibroids, so thank you for being with us.

DR. SEGARS: Well, thank you very much, Dr. Pinn.

I think that for those who would listen to the podcast, that they should know also that we couldn't have done any of this without the Office of Women's Health Research at NIH. They have been an incredible partner particularly on the problem of uterine fibroids and that this partnership has certainly been very fruitful.

DR. PINN: Thank you. I think it's partnerships in science and advocacy that really make a difference, and I appreciate those thoughts about our office and I hope we can continue to have that partnership.

So, coming up next, a final thought for this month when Pinn Point on Women's Health continues and concludes.

[Commercial break.]

DR. PINN: Now a few final thoughts.

You have heard from Dr. James Segars about uterine fibroids. I can remember a time when there was very little research attention being given to uterine fibroids even though they are so common, and more common in some populations of women than others, but they affect all populations of women.

The greatest concern for most women is not only the problem of having most often bleeding or the large belly

or the discomfort especially associated with the menstrual period related to fibroids, but mainly the concern about being able to be fertile, to be able to get pregnant and to carry a baby to full term in the presence of fibroids.

So, you have heard from our guest speaker today that women should pay attention to their family history. If they know they have got a family history of fibroids, they may want to give more attention to not delaying for too long the desire to have children, because it can be complicated by the development of fibroids or therapies for fibroids, so it is something to keep in mind.

You have also heard that even though we know that the presence of fibroids has been one of the major contributors to the many hysterectomies that we see in this county, that now we have seen the introduction and implementation of not only new procedures, such as uterine artery embolization or the MRI-directed ultrasound when you have only a few fibroids to some medical approaches to fibroids, to research that is helping us develop more medical approaches that hopefully will not cause menopause or premature menopause in women.

So, what we are hearing is that research has

brought about some increased knowledge and some different ways to approach fibroids, and that from the research that is ongoing and from a bringing together and sharing of information and knowledge and wisdom, and what different investigators are doing related to research is offering hope that we will be able to overcome the real problems that women have suffered related to fibroids.

So, those of you who ask, who call Dr. Segars or who call our office or e-mail asking why aren't we doing research, we are doing research and we will continue to be dedicated to ensuring that we pursue what we need to know about the prevention, the pathophysiology, and the treatment and improved ways of uterine fibroids.

So, I hope that you got that central message and I am so pleased that Dr. Segars is with us to share the wonderful information that he has to help guide our thoughts about uterine fibroids.

So, thank you for joining us in another episode of Pinn Point on Women's Health, and in a moment, the announcer will tell you where to send your comments and your suggestions for future episodes.

I am certainly very interested in knowing things

that you would be interested in having us to cover or discuss on these podcasts on women's health and women's health research.

So, thank you for listening, and I am Dr. Vivian Pinn, Director of the Office of Research on Women's Health, here at the National Institutes of Health in Bethesda, Maryland.

Thank you.

ANNOUNCER: You can e-mail your comments and suggestions concerning this podcast to Angela Bates at [batesa@od.nih.gov](mailto:batesa@od.nih.gov).

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