OFFICE OF RESEARCH ON WOMEN'S HEALTH (ORWH)

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PINN POINT ON WOMEN'S HEALTH

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PODCAST 9:
IRRITABLE BOWEL SYNDROME

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P-R-O-C-E-E-D-I-N-G-S

ANNOUNCER: From the National Institutes of Health in Bethesda, Maryland, America's premier 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 the latest developments in areas of women's health and the medical research that affects our lives.

For this podcast, I'm happy to welcome Dr. Frank Hamilton, who is Senior Advisor in Gastroenterology and Chief of the Digestive Diseases Program Branch in the National Institute of Diabetes and Digestive and Kidney Diseases here at the NIH.

We will get to him in a few minutes when he is going to tell us about

irritable bowel syndrome. But first, some hot flashes from the world of women's health research coming up in 60 seconds when we continue with "Pinn Point on Women's Health."

(Commercial)

DR. PINN: Welcome back to "Pinn Point on Women's Health." As promised, it's time to take a look at some of the hot flashes in the news regarding women's health research.

Well first, some good news about heart disease in women. In American women there has been a decline in heart disease deaths over a period of 6 years consecutively for the very first time: This, according to the National Heart, Lung and Blood Institute at the National Institutes of Health. Women are living longer and healthier lives, and are dying of heart disease at a much later age than in past years. But even though we have this good news there are some serious challenges that remain. Still one in four

women will die from heart disease. Women of color have higher rates of some of the risk factors for heart disease, and therefore are more likely to die of the disease.

Remember that heart disease is largely preventable just by leading a healthy lifestyle such as following a heart healthy eating plan, getting regular physical activity and maintaining a healthy weight and non-smoking Americans can lower their risk by as much as 82 percent. And what are those risk factors for heart disease? Keep these in mind: Age, and for women that age is about the age of 55 although we know it can occur in much younger women; a family history of heart disease; High blood pressure; high blood cholesterol; diabetes; smoking; being overweight or obese, and; being physically inactive.

The National Heart, Lung and Blood Institute is among many components of the National Institutes of Health and the women's

health community that are making a special effort to educate women about the seriousness of heart disease and to inspire them to take action to reduce their risk. However, a different report from the CDC, that is the Centers of Disease Control and Prevention, in the February 22nd issue of *The Morbidity and Mortality Weekly Report* indicated that awareness of individual warning signs of heart attack and stroke may be high, but many Americans still don't know all the symptoms or what to do about them, such as calling 911 immediately.

Interestingly, the lack of full awareness was lower for men than for women. So maybe our campaigns to address education in women are working, but we also need to take that information to the men in our families and in our communities. And, there is less awareness among people of color.

And just as a reminder, remember the most common attack warning signs are pain

or discomfort in the jaw, neck or back; feeling weak, light headed, or faint; chest pain or discomfort, the symptom we hear most about; pain or discomfort in arms or shoulders; and shortness of breath.

So keep this in mind. And we're doing a better job of getting this information out, but we need to make sure that all members of our families are aware, know what to do and how to consult our physicians and our nurses and our health clinics for care, information, and counseling. Because we can continue to lower the death rate from heart disease by being aware and making changes in our own lives.

And finally as another hot flash this week, and perhaps aptly named that, there was a report that was just released with further analysis of data from the Women's Health Initiative. And this report published in the February 25th issue of *The Archives of Internal Medicine*, one of the

JAMA archives journals, reports that combined hormone therapy, that means combined estrogen and progesterone used in post-menopausal women, appears to increase the risk that women will have abnormal mammograms and breast biopsies. And that these abnormal mammograms and breast biopsies may decrease the effectiveness of both methods for detecting breast cancer.

Why is this important? It's important because we know from earlier reports from the Women's Health Initiative that there appears to be an increased risk of breast cancer in women who are taking combined estrogen and progesterone for a longer period of time. However, this further finding suggests that even detecting in women who did not breast cancer whether or not cancer is present or not may be affected by being on long-term use of combined estrogen and progesterone. It has been reported that there is an increased density to breasts

of women who take long-term combined hormone therapy, and this may be a contributing factor.

For us the major point is that we need to be aware of issues and things that we might do that may affect the diagnoses, or even the elimination of our fear that we may have a cancer such as breast cancer. And, obviously, women don't wish to have a biopsy if they don't need to have one.

Stay tuned for more information coming from the Women's Health Initiative as we continue to have further follow up of those women who were part of the largest preventive study that's ever been conducted on women.

We'll have more updates in the next podcast.

And coming up next, we'll learn about IBS from Dr. Frank Hamilton.

We'll be right back with more "Pinn Point On Women's Health."

(Commercial)

DR. PINN: Welcome back. Our guest on this podcast is Dr. Frank Hamilton, who is Senior Advisor in Gastroenterology, Chief of Digestive Diseases Program Branch in the National Institute of Diabetes and Digestive and Kidney Diseases at the National Institutes of Health here in Bethesda, Maryland.

Dr. Hamilton, I've had people call me and say my neighbor was just told she has irritable bowel syndrome. What does that mean? So I'm going to ask you to start off by telling us what is irritable bowel syndrome?

DR. HAMILTON: That's a very good question, Dr. Pinn. Irritable bowel syndrome is a chronic, very common gastrointestinal disorder that has symptoms of altered bowel habits such as diarrhea and constipation and abdominal pain. And it's a very common condition, I'd like to stress that. It's been

estimated that about 10 to 20 percent of the U.S. population has this disorder.

DR. PINN: Well tell me, does it affect women more often than men?

DR. HAMILTON: Based on the current literature it looks like in the U.S. or western countries it's more common in women. Usually the ratio is about 3 to 2. But if you look in other countries, like in Pakistan, the ratio is reversed: It's more common in men than in women.

DR. PINN: Do we know why that sex difference occurs?

DR. HAMILTON: Well, there are several factors that have been implicated. Some people feel that it's a societal thing, such as that women seek care, medical care more so than men do. But some other factors that are involved are that the hormones, the primary reproductive hormones estrogens and progesterone, impact on the GI system and makes it more sensitive to various stimuli.

DR. PINN: So if I'm told I have a diagnoses of irritable bowel syndrome what should I think? Do we know what really causes it?

DR. HAMILTON: The cause of irritable bowel syndrome is multifactorial. There are many things that cause or trigger the activity within the gut in patients with irritable bowel syndrome. However, based on the current evidence, there is no specific etiology or factor that we can pinpoint as causing this disorder. Some of the things that we've based on research that we've been able accrue over the last 10 to 15 years shows that it's a multifactorial disease that has many factors which work together in causing this disorder.

One thing that has come out through some very important research that I must give the Office of Research on Women's Health credit for really highlighting the importance of some research that researchers

at UCLA are doing on the interaction of the brain and the gut. This dysfunction between the brain and the gut have been implicated in causing some of the symptoms that we see in many of the patients who have irritable bowel.

DR. PINN: Could you say a little bit more about what that means?

DR. HAMILTON: Essentially we are humans and the brain and the gut essentially talk to each other. The brain has nerves, the gut has nerves, and there's a communication between the brain and the gut. When there is a disregulation or an imbalance between messages from the brain to the gut, or vice versa, there's an imbalance and there's a reaction within the gut where patients may experience a sensitivity based on the nerves and their body responding to, say, a painful stimuli such as a shocking experience or a stressful experience. The gut reacts by responding with smooth muscle contractions.

DR. PINN: What about infection, does infection play any role that we know of in irritable bowel syndrome?

DR. HAMILTON: Well, there's been some very interesting data over the last 10 years by several researchers. There's some evidence that patients who, for example, travel to Mexico or to other place develop what's called traveler's diarrhea. And once the individual comes back they develop symptoms of abdominal pain, change in their stool frequency. And it has been implicated that this was the triggering point. That infectious disease process they had in the traveler's diarrhea that they acquired during their travels sort of was the triggering factor that caused some change in the lining of the gut.

There's some other research that has come out of the University of Southern California that is proposing that there is bacterial overgrowth within the small

intestine and it causes the abdominal pain, the distension and the bloating in patients with irritable bowel experience.

What these investigators did is they had these patients do what's called a breath test and they were able to detect small amounts of carbon dioxide from these bacteria and measured this. And this was an indication of infection or these organisms were causing bacteria to ferment different products within the large bowel to give off gases. And essentially once these patients were treated with various antibiotics there was improvement in their symptoms. So that's just limited information, but it's very promising.

DR. PINN: Well let's say I might have irritable bowel syndrome, just what would you use as the criteria to confirm the diagnoses or can you confirm the diagnoses? And secondly, depending upon making the diagnoses or not, what should I expect as

treatment?

DR. HAMILTON: Well, I think there are several. This is a step-wise approach. I think the important thing for you as a patient to do is to sit down with your doctor and go over your history with him very carefully. That's sort of the cornerstone of making the diagnoses. If you give a history of having abdominal pain that's recurrent, alternating bowel habits from diarrhea to constipation. And if you know that you're getting some relief when you go to the bathroom, like when you defecate and the pain goes away, that's really very critical to understanding that you probably have irritable bowel syndrome or a sensitive gut.

The thing that I would like to emphasize is that one thing that you as a patient, and we encourage all our listeners to be aware of, if you have any symptoms such as a fever, blood in your stool, or weight loss, those are what we call red flags or

alarm symptoms that you should ask your physician to look at more carefully. And also a family history of any type of colonic or cancer in the colon are really flags that you should alert your physician to.

Once the diagnosis is made and it's comfortable, it's important that your physician sit down with you and talk about some of the things that are impacting you. There are some things that we like to take a very proactive approach on. There are some things in your diet that sort of trigger symptoms within IBS, such as fructose, which is found in a lot of our sugar-free foods, lactose, which is very common in both Hispanic and African-Americans patients as well as Asians. But it's important to start with dietary manipulations.

First of all, we encourage patients to eliminate things that really bring on the symptoms. And this is greatly helped by the use of food diaries. We find

that many patients will have more symptoms when they drink a lot of caffeinated beverages, both diet sodas, colas, et cetera, and coffee. If they consume a large amount of chocolate, they will have more symptoms. So we ask patients to be proactive and look very carefully at their diet consumption.

Once we have that pretty clear and have done some dietary interventions, we ask the patients also to consider their symptoms, is it more constipation or is more diarrhea. And sometimes by using higher fiber foods, such as broccoli and dietary changes such as including bananas in your diet, you can really improve some of your symptoms with your constipation.

When you have patients who have diarrhea predominant IBS, we encourage them to really watch what they're eating as well, and then there are medications that will slow the gut from having all those urgencies and the need to run to the bathroom.

There are some more modalities that we're very pleased to show that have made a big difference in the treatment, we call it complimentary or alternative medicine using things such as hypnosis, biofeedback, and cognitive behavioral therapy, which has made a big difference in how we treat these patients with irritable bowel syndrome.

DR. PINN: Oh my, more broccoli, less chocolate. Well, I'm not sure that's good news. But maybe it is. At least we'll be eating healthy, but maybe we'd better watch the chocolate, huh?

Well, let me not digress more, but I had to comment on the less chocolate idea.

Well, what about some of these TV ads that I see, especially talking about taking certain products, maybe yogurt-like products and maybe that will help women control how their bowels function? Is that related to irritable bowel syndrome?

DR. HAMILTON: Yes. There is some

evidence that has really happened in the last 3 years by several of our researchers which focus on probiotics. These are the good bacteria that really help the digestive system sort of properly digest food products. These products use bacteria called Lactobacillus Bifidobacterium, which allows them to really sort of take care of fighting off the bad bacteria that's in the gut. And some patients have noticed marked improvement in their abdominal pain, the bloating sensation, and a better sense of well-being. So the evidence is not in, but it's very promising and some striking news that may improve patients' outcomes.

DR. PINN: Well, since we want to talk a little bit about research, and you've mentioned much of the research, could you just tell us what some of the most fascinating research may be about to offer, at least what is being investigated right now that may offer more hope for us?

DR. HAMILTON: Well, I think some of the things that have happened is that I think we've been able to develop more information both using animals studies as well as human studies looking at the pathophysiology, looking at how hormones, especially serotonin, which is a neurotransmitter within the body, has given us a lot of important information about the activity and how it effects the gut.

There are several researchers that are supported not only by the NIDDK, but also by the Office of Research in Women's Health, who have shown that this serotonin really regulates all gastrointestinal function. And when there's a decrease or an increase, or an abnormal amount of these serotonin or neurotransmitters in the gut, you have various manifestations of this disease. Such as some patients will have IBS constipation predominant or IBS diarrhea predominant. So this has given us a clue, and hopefully

potential targets for developing other drugs.

Some of the drugs have been targeted for serotonin, agonist and antagonist and they've caused some side effects. Recently, the FDA removed some of these drugs from America because untoward side effects. But there's still hope that FDA will release some of these drugs for the treatment of these patients.

Some of the other interesting, and I really have to commend Dr. Pinn's Office of Research on Women's Health. Her office in partnership with the NIDDK developed what's called Specialized Centers of Research on Sex and Gender Factors Affecting Women’s Health. And the UCLA group has done some very outstanding research on looking at visceral hypersensitive; this is why is the gut sensitive to various stimuli. And using functional imaging studies they were able to demonstrate just tremendously that patients who have IBS highlight or they respond very

differently to different painful stimuli. And this research would have never happened without this partnership. And we're very pleased that this partnership has advanced our understanding of visceral hypersensitivity—some people feel it's the physiologic hallmark of IBS. And we feel that without this advance through the UCLA Center, this evidence would not have been able to really promote research in this area.

DR. PINN: Well, thank you for alluding to our support. But certainly it's been a collaborative effort, and we're grateful for your taking the lead and NIDDK's leadership in this area. And, again, we hope that we're helping to make progress in looking for the wonderful work of our researchers who are using and who are carrying forward their work based upon funding from the NIH.

Let me ask you just to make one comment on one other aspect that I think you

alluded to but we didn't go into. And perhaps we should explain for our listeners. And that is there have been comments that perhaps irritable bowel syndrome may be common in women who have experienced abuse or have experienced sexual or physical abuse. And while I know from all you've said that this is not the only factor involved, might you make a comment about this for those of our listeners who may have read about this?

DR. HAMILTON: There has been a lot of publication from studies both at the University of North Carolina, which shows that there's a minority of patients who've had very, what we call, difficult to manage IBS cases, who have a history of either physical or sexual abuse at some point in time. And the strong evidence is that these are factors which impact the development of IBS, but is not necessarily a specific cause of IBS.

What's happened with these

patients who have been victims of sexual or physical abuse in their early childhood lives, they tend to be more vigilant about different stimuli or painful stimuli and they just have a very sensitive reaction to various stimuli such as certain foods make them more aware, whereas a normal person would just ignore that symptom. So they're hyper-vigilant towards any type of painful stimuli.

I think it's important that the patient develop some diligence in talking to his healthcare provider. This is a very sensitive topic and after much discussion, it usually takes development of a patient-doctor relationship before these issues can really come up. And we strongly encourage patients to talk to their doctors openly about any things that may have impacted how they deal with stress.

DR. PINN: Well, we've talked about irritable bowel syndrome, and I think I

should point out that Dr. Hamilton reminded me that this a chronic disorder that affects from 9 to 22 percent of the U.S. population and is believed to be the second most common cause of work absenteeism, second only to the common cold. So we know that it is not an uncommon disorder. It's something we're learning about. And we've heard a lot of information that I think will be very helpful for us in understanding what irritable bowel syndrome is, what we know about it, and where we're going.

So, Dr. Hamilton, what else would you like to tell us about irritable bowel syndrome that I haven't given you an opportunity to express?

DR. HAMILTON: What I'd like to stress to our listeners is that this is a chronic condition. It's not associated with cancer. There is hope. The option is that we encourage you to develop a good relationship with your healthcare provider. And there are

other treatment modalities that provide assistance to you in helping to deal with these symptoms. But I think it's important that you develop a partnership with your healthcare provider in order to improve your quality of life. And I think it's only through this partnership that we can empower you to live a better life for you and your family.

DR. PINN: And if our listeners want to get more information about irritable bowel syndrome, they can go to the NIDDK Web site?

DR. HAMILTON: Yes, they can.

DR. PINN: And that is nih.gov and then click in NIDDK and then click on?

DR. HAMILTON: Health information: Irritable Bowel Syndrome.

DR. PINN: Great. So we'll all keep that in mind.

Any last words before we bring this interview to an end?

DR. HAMILTON: We'd like to thank Dr. Pinn and this office for working very closely with us. And we feel that there is hope through research. And we feel that you're not alone in dealing with it. There are many other people out in the community who suffer with this condition. And we encourage you to be open with your healthcare provider about your symptoms. And it's not all in your head. It is a condition that, unfortunately, had been labeled as being more of a psychiatric illness. But it is a real condition and you warrant the respect, not only from your healthcare provider, but also from your family. And we encourage you to take advantage of the support groups that are available to patients who suffer with irritable bowel syndrome.

DR. PINN: Well, I thank you, especially for those comments. Because one of our major challenges in women's health and addressing women's health through women's

health research has been to define where there really are physiologic and biologic and genetic reasons that contribute to conditions that women have felt in the past, were not taken seriously when they complained of them. So you have really just put into a nice set of a few words really what we hope our women's health research is helping to accomplish, and that is to help us understand better the health of women and their families and their conditions that affect both their length of life and their quality of life.

Coming up next, a few final thoughts for this month when "Pinn Point on Women's Health" continues.

(Commercial)

DR. PINN: And now a few final thoughts.

I want to first thank Dr. Hamilton for a very clear and defining discussion of irritable bowel syndrome. I hope that you learned much from what he had to say, not

only in terms of understanding that there are many reasons that can contribute to the development of this chronic disorder that does affect both women and men but is more common, three-to-one, in women in the United States. And that you also understand there are different approaches to treating this disorder. And the most important thing is to have a discussion with your healthcare provider.

I hope you also learned that we've got wonderful research going on by a number of different centers that he mentioned that are helping us to understand factors that contribute to irritable bowel syndrome. And, most importantly, what Dr. Hamilton expressed in his concluding comments, that is there is hope for not only a better understanding of this condition, but perhaps better ways to treat it and perhaps eliminate its effects on both women and men through research. And that is what we're all about: using research

to help us understand and be able to better define, prevent, treat or cure conditions that affect women and their families.

Thank you for joining us on this episode of "Pinn Point on Women's Health."

In a moment, the announcer will tell you where to send your comments and suggestions for future episode.

I am Dr. Vivian Pinn, Director of the Office of Research on Women's Health at the National Institutes of Health in Bethesda, Maryland.

Thank you for listening.

(Whereupon, end of the recording).