Jorge Flechas, MD: The Potential of Oxytocin, Nitric Oxide, and Iodine

Interview by Karen Burnett

Jorge D. Flechas, *MD, MPH, is the medical director of Flechas Family Practice in Hendersonville, North Carolina. In addition to family practice, Dr Flechas' subspecialities include iodine therapy for thyroid and breast disorders, bio-identical hormone replacement for both men and women, and diagnosis and treatment of cardiac-related issues such as coronary artery disease, artherosclerosis, and hypertension. He is also medical director at FFP Lab in Flat Rock, North Carolina.*

Born in San Juan, Puerto Rico, Dr Flechas is fluent in both English and Spanish. He majored in physics at Southern Missionary College in Tennessee and achieved both his doctorate in medicine (1977) and his master's degree in public health (1979) from Loma Linda University in California. He regularly speaks at medical conferences, where his lectures have informed many doctors on new and effective treatment protocols for a wide spectrum of medical disorders.(*Altern Ther Health Med*. 2013;19(4):50-56.)

***Alternative Therapies in Health and Medicine (ATHM)*:** Where did you grow up and how did you become interested in pursuing a medical career?

Dr Flechas: I was raised in an Air Force family. My dad was a military accountant, and so home for me was mainly here in the South. I eventually would end up going to high school in Southern California, where I helped to take care of a man who, after he became a physical therapist, was working out in his mother's farm field and was struck by lightning. He ended up remaining partially paralyzed the rest of his life. I used to help take care of this man and, through conversations with him, I became interested in medicine, continued to pursue that career path, and ended up practicing family practice here in North Carolina.

***ATHM*:** You majored in physics. Did this help your interest in medicine at all?

Dr Flechas: It did. In the field of physics, you have to work your way through problems. You give them raw material and then try and make some sense of this raw material. If I had gone with biology or some other field of science, it would have been just rote memory: here is a list—plants or this or that. Physics taught me how to be an independent thinker so that I could learn to figure out what is wrong with these patients. It served me well through my medical career.

***ATHM*:** Did you have any mentors who may have fostered your interest in investigating conditions through alternative medicine?

Dr Flechas: I saw that there were diseases coming up during my career that we really did not have good answers for. The medical paradigm, as it is right now, says you are to use the drugs that have been preapproved by the FDA and approved by the pharmaceutical industry for treatment of this disease or that problem.

In the early days of my career, a new disease showed up called *fibromyalgia*. No one had any idea about what was causing it and no pharmaceutical company had shown any interest in trying to solve the problem. As a result—this would have been back in the late 1980s—there was nothing out there.

The question was: what do you try to do to resolve this particular problem for these poor people who were hurting? It is interesting that in the field of rheumatology, back in that day, some of the top rheumatology professors would insist, "Fibromyalgia doesn't exist. These are just people looking for drugs."

One out of every seven patients showing up at the rheumatology office was a fibromyalgia patient and, frankly, the rheumatologists said that if there was a medical problem it was lupus, rheumatoid arthritis, etc—not paying attention to the fact that only 13% of patients with lupus have fibromyalgia muscle pain and so on, or meet the criteria for that.

Basically, it was just an issue of me believing these people and trying to do something to learn to take care of them.

***ATHM*:** I understand there is still a bit of that stigma attached to fibromyalgia, even now. Is that correct?

Dr Flechas: In medicine, a lot of times a "disease" does not exist until we find a drug for it, but once we have a drug approved by the FDA made by some pharmaceutical company, then all of a sudden the disease "exists."

Before that, no matter how much evidence you may have for somebody having a medical problem, it does not exist until we have a "treatment available for it." That is part of the problem—there was no treatment back then, and we were trying to study the sources of the condition.

I approached the problem from the perspective of: "Maybe the patients have a solution to the problem." So I would ask things like, "What helps your muscle aches and pains to feel better?" They would say things like, "Sitting down in a tub of hot water helps my muscles to feel better," or "A good massage helps me feel better." One said, "If I can have an orgasm, I can feel better for 2 or 3 hours." According to the patient, one orgasm equaled 3 or 4 hours of no pain.

Looking at the oddities and strange statements that people would reveal would help you out. We had one lady in Southern California who was nursing a baby and she said, "Every time I nurse my baby, my fibromyalgia muscle pain gets better, and every time I try to wean the child, the fibromyalgia pain gets worse again. I have been nursing this kid for 5 years—how do I get away from it? Because nobody believes that I am hurting or the fact that nursing stops the pain."

That is how I got involved with using oxytocin for fibromyalgia. It was the unique statements of "An orgasm helps my pain to get better," and "Nursing a baby helps me to have less pain." The only hormone that shows up in both of those two statements is the fact that the body releases a lot of oxytocin at the time of an orgasm and that oxytocin is what helps a mother to nurse her baby.

You put those two statements together and all of a sudden you come up with, "Maybe here is a possible solution to this particular problem." I started looking for what it is that oxytocin does and whether anybody had ever defined an oxytocin deficiency. The answer is no.

Oxytocin was first discovered because of its function in helping to deliver a baby, to stimulate a woman to go into labor for childbirth, or to help stimulate lactation.

What ended up happening is that the hormone got relegated to the gynecologist, and the gynecology doctors use it mainly to induce labor and to help a woman make milk. The endocrinologist, when asked about it, would say, "Oxytocin is not my hormone to deal with. That is for the GYN doctors to deal with, so I am not going to do anything with it." It turns out that none of the gynecologists were interested in trying to delineate what this hormone does outside of labor and delivery.

Researchers during the 1960s and 1970s wondered, "We have been focusing on this hormone and its ability to put a woman into labor or maybe even nurse a child, but why is it that men make oxytocin and they are releasing some of their brain into the body every 13 to 20 minutes?"

Men do not nurse their children and men do not go through labor to have a child. And so you have to ask yourself, "What does oxytocin do inside the brain or inside the body?"

We noticed that the number one neuropeptide in the brain was oxytocin. It turns out that if you look at this hormone, as of today's date in the year 2013, no one has stepped forward in the medical literature and tried to define what an oxytocin deficiency looks like.

***ATHM*:** What does it look like?

Dr Flechas: It is the type of thing that you have to look at through systems such as ... oxytocin is the hormone that helps the microcirculation. This was first shown by the Bulgarians. Back in the 1960s, they showed that oxytocin had the ability to control the blood supply out to the periphery, so people with a deficiency run around with cold hands and cold feet. When they have plenty of oxytocin, hands and feet are nice and warm. Oxytocin deficiency would manifest as a problem with very cold hands and very cold feet.

Having said that, if the hands and the feet are cold, could it be that maybe oxytocin controls the microcirculation of

the skin? And sure enough, when you look at patients with cold hands and cold feet, they also look pasty white.

I was very impressed with that when I went down to Costa Rica one time with my daughter. We were out shopping and I noticed this American girl walking around. Everybody else had a nice-looking tan with shorts and T-shirts on. This girl was walking around wearing a long-sleeved shirt. She had gloves on, thick socks, and was pasty white. I said, "I bet you I know what is wrong with her." It helps you to make a diagnosis.

Oxytocin has the ability to kill pain, and so that is why you see oxytocin levels rising throughout the labor and delivery process; it helps to kill some of the pain of having a baby. Oxytocin is the hormone that helps women go into labor, obviously. So what significance does that have for a woman like the one I met yesterday who told me that when she was pregnant with her baby—normal pregnancy is 40 weeks—that at 43 weeks, this woman had not even had the first contraction.

She did not go into labor on her own—she had to be induced to have labor. We asked the question and it turns out that it is the oxytocin from the baby's brain that puts a mother into labor. It is not the mother producing oxytocin—it is the baby who produces the oxytocin that initiates labor. When this woman's baby was born, the baby had problems with autism. Now, from many studies that have been done in the field of autism, we now know that oxytocin deficiency is present in autism.

Mentally, oxytocin enables you to learn the process of how to love; the baby's oxytocin receptors and tissues in the body develop their oxytocin sensitivity while the mother is having her relationship with her baby. A mother's relationship to her baby in the first 3 years of life is what teaches a child how to love the rest of its life. With a lack of oxytocin, there is a very cold stereotype of personality that develops.

***ATHM*:** You have said the children with autism are missing the enzyme that is necessary to convert oxytocin with its peptides into the free form of oxytocin?

Dr Flechas: That is correct.

***ATHM*:** Can parents of autistic children consider treatment with oxytocin?

Dr Flechas: Yes. In fact, what ended up happening is that they looked at the active form of oxytocin and children with autism, because they noticed that oxytocin is what helps you to be cuddly, and oxytocin is what helps you to pay attention to those that you are speaking to and helps you have eyeball-to-eyeball communications.

Children with autism do not look you in the eyes. They are constantly looking elsewhere. When you give them oxytocin, all of a sudden they start looking at your eyes again.

***ATHM*:** What kinds of side effects are associated with oxytocin treatments?

Dr Flechas: There are very few side effects. There have now been close to 50 studies done using oxytocin for treatment of children with autism, and they are getting fabulous results. The treatment works, and for people who have absolutely no oxytocin, this treatment is wonderful. It brings them back into normalcy; they are able to communicate with other human beings, and they are nice people to be around. Otherwise, they are irritable and agitated and so on.

Oxytocin helps the children with autism to be able to concentrate; it stimulates the whole brain to be very active. Women have higher levels of oxytocin in their brain than men do, and oxytocin is what helps women to be so mentally alert. They can be talking to you and at the same time be listening to a conversation that somebody is having behind them at a restaurant. That is because their brains are in full alert, whereas a man, he has got to concentrate on the conversation but he does not hear anything else beyond that.

Part of the issue is the fact that women, because of the estrogen in their bodies, produce lots of oxytocin. Because of the drop in oxytocin as a woman goes through menopause, she all of a sudden stops and thinks, "You know, I feel like I have lost something mentally. I do not feel as mentally sharp as I would otherwise." Part of that reasoning is because of the loss of oxytocin.

Oxytocin is what helps you to have a memory, and this is a memory attached to an emotion. Say you had a fight with your husband 3 weeks ago, and then a few weeks later you look at him and say, "Honey, do you remember that conversation that we had a few weeks ago where I got mad at you?" He says, "Yes, I kind of vaguely remember. Did I talk to you or something?" You say, "Did you talk? Every time I think about what you said, it makes me mad all over again." What the woman has done is, basically, take a memory and attach her immediate emotions of the memory to it. Then, 2 or 3 weeks later, when she brings up that memory, the emotions that were connected to that memory come up at the same time. That is oxytocin.

***ATHM*:** Yes, because of a connection with the amygdala?

Dr Flechas: The human ability to connect a memory to a emotion comes out of research of the amygdala which is part of the human brain. Let's say we look at different hormones, such as TSH, thyroid-stimulating hormone.

TSH stimulates the thyroid gland to produce thyroid hormone. You have a hormone produced in the brain called ACTH (adrenocorticotropic hormone). ACTH goes down to the adrenal cortex and stimulates the adrenals to make cortisol.

We have follicle-stimulating hormone and luteinizing hormone stimulating the ovaries to put out eggs and estrogen, progesterone, etc, in women and for men the testicles to put out testosterone. But you have to ask yourself, "What is the primary organ that the oxytocin molecule is stimulat-

ing?" It is the number one neurosteroid inside the brain—and it turns out that oxytocin receptors are all over the brain—but there is a super heavy concentration of the receptors right in the amygdala.

The amygdala is where the human experiences total fear. The worst fear you would ever have comes out of the amygdala. Oxytocin modulates that fear and gives you the most trust you would ever have. You have fear on one end, total trust on the other end, and it is all oxytocin. If you have lots of oxytocin, you trust a lot. If you have no oxytocin, you are extremely fearful all the time.

***ATHM*:** That seems to be an important hormone to have.

Dr Flechas: Tell me about it. … You end up in a situation where a child—a normal child—as they go through childhood and grow older and older, the amygdala slowly gets bigger and bigger. Whereas if you look at the children with autism—they make an oxytocin molecule but it is defective—their amygdala gets smaller and smaller and smaller with time. As a result, they suffer with more and more fear as they go on through life and they live in a constant state of fear.

Because of problems with the peptides that are attached to the hormone as the hormone is being made, you find out that, yes, these children are making oxytocin—but they are making a precursor form of oxytocin. It is the precursor form that does not allow the child to be normal because the body does not recognize this precursor hormone. You have got to strip these peptides off of the primitive hormone in an effort to have a biologically active form of hormone, which does all the jobs.

***ATHM*:** Have you also found evidence of iodine deficiency in autism?

Dr Flechas: I have not seen too much of it. Autism tends to be a problem with activation of nuclear factor-κB, a gene on the DNA that controls inflammation. Children are being vaccinated with this vaccine, or that vaccine, etc, and—whether you have mercury in a vaccine or not—the fact is that you are stimulating these babies to have low levels of inflammation *continuously*, from the day they are born through the first few years of life. What is happening is the continuous stimulation of nuclear factor-κB, which is the number one gene on the DNA that has the ability to control inflammation. We are keeping these children in a constant state of inflammation when nuclear factor-κB gets turned on because of constant stimulation by these vaccines, and when it does it has the ability to alter more than 400 genes on the DNA.

The source of the nuclear factor-κB activation is not just one thing: it is the continual stimulation of the body with one infection after another. If this poor child does not get vaccinated, then he is facing all the bugs that he collects in the little day care centers that we put our children into. These children are constantly coming down with an ear infection, a cold, or something else. As soon as the kid can get free of an infection, we hit them with another vaccine, getting the kid inflamed again. The child spends most of his early life in a constant state of inflammation.

By doing that, we basically we keep nuclear factor-κB going constantly. When you do that, you eventually start altering the genetic code of the individual's brain. I think that is probably where autism is coming from—the fact that we are doing this to these kids.

***ATHM*:** You think there is an uptick in cases or are we just becoming more aware of it?

Dr Flechas: I think there is an uptick in cases, because in the 1950s it was about one out of every 5000 kids. Ten years ago, it was one out of every 150 case children. Today it is one out of every 80 children. In fact, right now, we are getting feedback from the schools—especially in California—saying that it is more like 1% of all 8-year-old children in the United States. One percent has got autism.

Can you imagine the financial burden that is going to be put on society within another 12 or 13 years? Autism kids often become wards of the state because the parents cannot take care of these kids anymore.

***ATHM*:** Would you please describe your iodine therapy for hypothyroidism and fibrocystic breast disease?

Dr Flechas: Iodine is one of these minerals that we have thrown off to the side. The problem is that in order for you to be able to make thyroid hormone, you need iodine.

When I say "thyroid T3," *T* stands for thyroglobulin with three iodine atoms attached to it, or "thyroid T4" is thyroglobulin with four iodines attached to it.

Doctors have gotten to the point where, when a person walks in with hypothyroidism, endocrinologists and many doctors do not even check for thyroid antibodies. They just assume that for everybody who becomes hypothyroid, it is because of an autoimmune thyroid disease such as Hashimoto's thyroiditis, or Graves' disease, etc. Yet, studies have shown that of all the patients who become hypothyroid, the antibodies are found in about 20% of them. That means 80% of people with hypothyroidism do not have autoimmune thyroid disease—and the likely source of the problem is low iodine. You cannot make thyroid hormone if you do not have enough iodine in the system.

***ATHM*:** Why are people having such a hard time getting iodine into their bodies in this country?

Dr Flechas: First off, we noticed that in the Great Lakes region, up through the Northwest region including Wisconsin, Minnesota, North Dakota, and Montana, there are problems with goiter—iodine deficiency causing goiters.

Back 100 years ago, the incidence of goiter in places like Akron, Ohio, was 56%. Detroit, Milwaukee, Buffalo—they all have problems with goiters. That was due to the fact that there is very little iodine in that region.

A hundred years ago, we discovered that if we add iodine to the salt, the incidence of goiters would go down very quickly. When you give iodine via salt, the patient can get enough iodine to make thyroid hormone. The problem is that we did not appreciate the fact that there are other tissues in the body that need iodine. The thyroid gland is the only one that can absorb and hang on to iodine. The thyroid gland can hold a total of 50 milligrams of iodine, but the whole body can maintain and hang on to 1500 milligrams of iodine.

We end up trying to think of it in the sense of the thyroid's needs for iodine, and there should be plenty in the population. The problem is that we never appreciated how much iodine the rest of the body needs. So you tell this to a doctor and ask, "Does your patient have enough iodine?" The doctor will say, "There is plenty of iodine in the salts in the nation." The problem is that 50% of all women cooking in the United States cook with salt that has no iodine in it. Then the other problem is that a lot of the fast food industry is using salt that contains no iodine.

***ATHM*:** Does consuming iodized salt provide enough iodine to solve this problem for most people?

Dr Flechas: It would solve the problem if we were just looking at the thyroid gland, which is the only organ that can accumulate iodine. But the whole body needs iodine, so when we are only consuming it through salt, we are getting only enough iodine to take care of the thyroid—not enough to take care of the rest of the body.

Here is what happens: lack of iodine to the thyroid causes hypothyroidism—low thyroid disease. With a lack of iodine to the breast, you get fibrocystic breast disease. With a lack of iodine to the ovaries, you get ovaries that have cysts and nodules and scar tissue—otherwise known it as polycystic ovarian syndrome (PCOS). A lack of iodine to the uterus, lack of iodine to the stomach, and lack of iodine to the esophagus give you problems with increased cancer. That is why in those areas of the world where there is an increase in cancer rates of the breast and the ovaries and other tissues where there is iodine deficiency. In patients with goiter secondary to lack of iodine, they have a much higher incidence of thyroid cancer later on in life.

The saying here would be the absence of iodine inside the cells of the total body, not just the thyroid, gives you problems with increased risk of development of cancer.

***ATHM*:** What is the estrogen and iodine connection?

Dr Flechas: It turns out that estrogen inhibits the absorption of iodine. Let's look at a disease like depression. The depression incidence in the nation is about 1.8 women with depression for every one man. For rheumatoid arthritis, it is four women to every one man.

With lupus it is nine women to every one man. When it comes to hypothyroidism, the incidence is something like 10 women to every one man. It turns out that during the original studies on iodine in Akron, Ohio, back around 100 years ago, what they noticed was that the incidence of goiter among children was like one to one: one boy, one girl.

Once the girls went through puberty, due to the increased estrogen production, ovarian function, breast development, hip development, etc, the rate of goiter went from one-to-one to six girls to one boy. A few years ago, they found out that it is the estrogen that inhibits the ability of the body to absorb iodine.

***ATHM*:** Is there a good solution to that problem?

Dr Flechas: Yes. You give them iodine, not get rid of the estrogen.

On the flip side of the coin, 3 or 4 years ago, Dr Bernard Eskin looked at the issue of what iodine has to do with estrogen. It turns out that if you make an estrogen molecule, you have to go through about 16 different steps.

At the DNA level, iodine turns off 14 of the 16 different steps inside the DNA to keep the body from making too much estrogen. So there is a feedback mechanism. These two are competing against each other—iodine and estrogen—because estrogen inhibits the absorption of iodine, while iodine goes to the DNA and turns off the ability of the body's cells to make more estrogen. You will notice that over the last few years, what have we been talking about with women? We have talked about the dominance of the problems of estrogen—you have too much estrogen in your body and that is why your breasts are so big and your body is getting very big. It turns out that it is not an issue of estrogen dominance; it is the fact that we need to turn off this spigot and get these girls some iodine.

***ATHM*:** Could it be related to all of the hormones in the food we eat?

Dr Flechas: I am sure it could be. It could be a lot of the xenoestrogens that we are consuming in the diet or chemicals that look like estrogen, such as DDT.

The thing is that it could also be the iodine deficiency. We used to put iodine in bread, we used to put iodine in milk, and we put iodine in the salt. What has happened is that they took the iodine out of the bread and they took the iodine out of the milk. Now, you look at the public health issues in the United States, and the Public Health Service says, "There is too much hypertension in the population. We need to cut back on the total amount of salt in the population."

When you cut back on the total amount of salt, you are getting rid of the iodine that the population is getting. In fact, if you look at patients over age 60, you will find out that

approximately 25% of the people above age 60 who become senile do so because of low thyroid disease. Why? Because they are not getting any iodine—their doctors took them off of salt for their hypertension.

Where is the person supposed to get their iodine from at that point? There is none in the bread, there is none in the milk, there is none in the salt—because there is no salt in the diet—so talk to me about where a person is supposed to get their iodine from.

As a result, people then developed problems with hypothyroidism and then they get put on drugs, hormones—synthetic hormones that have the ability to mimic thyroid hormones. And thyroid hormone—when you give the synthetic forms of thyroid hormone—those hormones have the ability to inhibit the absorption of iodine into the body.

Now these patients have two things: estrogen inhibits the absorption of iodine, but so does thyroid hormone.

***ATHM*:** It is a loop?

Dr Flechas: Yes.

***ATHM*:** I would like to change the topic to another interesting thing that you have worked on, atherosclerosis. You stated that if you increase the ability of endothelial cells to make nitric oxide, you can erase this problem. Could you elaborate on this?

Dr Flechas: Researchers at Stanford Medical School were looking at this problem many years ago and tried to identify what is it that makes blood vessels be more elastic and wider, so that you can vasodilate and you can open up your blood circulation to blush, to have nice warm hands and feet, to have better circulation in the heart, etc, etc.

They discovered a gas that was being produced by the cells of the blood vessels. The endothelial cells of the blood vessels make a gas called *nitric oxide*. In fact, all the research that went into discovering what nitric oxide was would eventually lead to a Nobel Prize for Medicine, back in 1998, given to three researchers for the work they did in identifying nitric oxide, the gas.

A lot of the research work was done at the Vascular Research Laboratories at Stanford Medical School. There was a doctor there by the name of John Cooke, MD, PhD. Back in 1996, Dr Cooke and the research that he did demonstrated that nitric oxide has the ability to inhibit the fats inside the bloodstream from accumulating along the walls of blood vessels.

Dr Cooke was the first one to show that there was inhibition of the ability of fat to accumulate in the blood vessels, and it was Dr Cooke who first showed that there is such as thing called *regression of atherosclerosis* due to the creation of nitric oxide.

By the time you and I are age 40, we have already dropped production of nitric oxide by greater than 50%. By the time we are 60 and 70 years old, it is nitric oxide that helps to maintain blood pressure. At age 25, maybe 1% of the population has hypertension, but by the time you are 65 years old, 67% of all of us already have high blood pressure. The elevation of blood pressure is due to the fact that we do not have enough nitric oxide being produced in the body—because nitric oxide is what helps to open up the blood vessels and keep them open so that the blood pressure can go down.

Basically, because of this new paradigm, Pfizer Corporation—2 or 3 years ago—stopped all research and development in the field of hyperlipidemia and hypertension. I was getting some training up in Ann Arbor for another project I was working on, and one of the med techs there said, "You see half of our crew here? Half of these people came over from the research and development area of Pfizer Corporation. These people are here because Pfizer has shut down the pipeline for new development of drugs in this area. There is a new paradigm operational out there that is going to change the way we look at medications that are being used. This new treatment is going to force a revolution in the whole field of hypertension."

***ATHM*:** They know?

Dr Flechas: They know that this research in nitric oxide is what is going to take over the field. Having said that, Pfizer was one of the original companies doing research for development of a drug to help the body to make nitric oxide. Then they noticed that this drug had the ability to give men better erections—a drug that is called *Viagra*.

Viagra was first developed as a drug for hypertension. It turns out that Viagra did better for controlling impotency, but all the drugs for impotency that are in this class—treating men for impotency—all those drugs also lower a person's blood pressure. Having said that, the more the body makes nitric oxide, guess what's going to happen? Less arthrosclerosis.

***ATHM*:** What role does copper deficiency play and endothelium dysfunction?

Dr Flechas: Copper is crucial for an enzyme inside the blood vessel called *elastin*. Elastin helps the blood vessel to make the tissues that are elastic and give blood vessels the ability to stretch—that is controlled by copper. With a lack of copper, the blood vessels lose their ability to stretch and the one disease that shows up very quickly with copper deficiency is problems with aneurisms.

People who blow out a blood vessel in the brain or the heart or the aorta—a lot of that is copper deficiency because if you do not have copper, the blood vessels get stiff. They do not have enough elastin, and then a blood vessel will tear itself apart, and you end up with an aneurism and death.

***ATHM*:** Are people becoming more aware of these issues?

Dr Flechas: I think with time, yes.

***ATHM*:** What work have you done with bio-identical hormone replacement for men and women?

Dr Flechas: A lot of that has already been done. However, there are still answers that need to come out, such as: does giving testosterone to men induce cancer? The new answers coming out of Harvard right now say *no*—that the absence of testosterone in men is *why* men develop cancer. There is a 400% increase in the rate of cancer for men who do not have enough testosterone.

When you get testosterone to these men, the cancers do not come. Next, if a man has an elevated estrogen level, do we try to get rid of his estrogen? The answer turns out to be no, because one of the major stimulators for the body to make nitric oxide throughout the whole body is estrogen.

If you take away a man's ability to make estrogen, you increase his risk for hardening of the arteries and heart attack. As the studies that are out there now show, there is an increased rate of arthrosclerosis and heart disease in men who have low estrogen.

***ATHM*:** What are you recommending for women with bio-identical hormone replacement?

Dr Flechas: As women go through menopause and they lose their estrogen, we ask them to start taking natural estrogens as are made by the body. A hormone medication like Premarin has something like 18 different estrogens in it-one of which is compatible with humans, and the other 17 are compatible with a pregnant horse. The problem is, the body does not have a good way to get rid of these horse-pregnancy estrogens. It is better to give an estrogen that is like what the human body makes, try to keep the dose as low as possible, and keep the person comfortable.

I think the issue there, too, is testosterone. Once the ovaries stop making estrogen, they are still making testosterone. Lack of testosterone has a lot of side effects in the female body—one of them being the fact that testosterone in the female body is what inhibits her ability to develop autoimmune disease.

If you look at men who come down with lupus and men who come down with rheumatoid arthritis, you can find out that these men also have low testosterone. When you get testosterone, the autoimmune diseases tend to calm down. I would not say totally disappear, but they tend to calm down.

***ATHM*:** You have a master's in public health, as well as a doctorate in medicine. What have you learned about how things operate at governmental institutions like the Food and Drug Administration and Centers for Disease Control and Prevention through your awareness of public health?

Dr Flechas: What I have learned is that even though you have advances being made in these fields, one of the problems of medicine is the inertia. You may discover something and it takes years and years and years to finally get the medical profession to come around. Even these governmental agencies can tell you that you need to do this, and that, and so on to make things better. It takes doctors a very long time to change their habits.

Here is a perfect illustration: if a woman goes through life with one sex partner and she has repeatedly, over and over and over again, had a negative Pap smear, then why do we persist? A woman goes on into her 60s, 70s, and 80s—why do we persist in doing Pap smears on a woman who has never had any signs of cancer? The answer is that maybe we need to do Pap smears every 5 years instead of every year.

***ATHM*:** What are you working on now that you find exciting?

Dr Flechas: Most of it is the field of nitric oxide, and things associated with that. Also, I am working on the effects of iodine on early pregnancy. We have a lot of girls in our practice who have fibrocystic breast disease, and they get pregnant while they are getting treated with iodine for the fibrocystic breast. The question that arises is: do we stop the iodine? In Japan, they do not stop eating seaweed and fish and so on just because they are pregnant.

The average Japanese woman is eating around 13.8 milligrams of iodine per day. I say, "Let's turn all of our pregnant females who are taking some iodine into Japanese women." Take at least 12.5 milligrams of iodine a day because in Japan it is 13.8, so we are not going to hurt the girls by taking away their iodine and at the same time we are not going to hurt the baby by taking the iodine away from the mother.

The result is that we have got about 16 mothers who have now delivered babies, where they continued to take the iodine through their whole pregnancy. We treat them as if they were Japanese women, and all of these kids are now just phenomenal kids who are turning into geniuses.

Our oldest one in the practice, right now, is an 11-year-old. She is going through the sixth grade. At her school they are a little bit more progressive and are allowing some of the more genius kids to take college courses. She is just finishing her third semester in a college course. Last year, she took college English and made straight As.

We have got 16 of these kids in all different stages of development and every one of these children is a genius.

***ATHM*:** That is good news. And you do not have any reason to advise not continuing with that achievement?

Dr Flechas: We continue the iodine through the pregnancy, but we give them the amount of iodine as if the mother were living in Japan.