

Nutritional Medicine Update with Robert Crayhon, MS
Treating the Adrenally Exhausted Patient
An Interview with Master Clinician Jay Wilson, DC

Robert Crayhon, MS, CN: Joining me now in the studio is Dr. Jay Wilson, one of the most respected practitioners of functional medicine today. Jay, welcome.

Jay Wilson, DC: It's a pleasure to be here.

RC: Jay, how did you get interested in nutrition?

JW: It's a long story. I think like most of us, or many of us in the early 70s, we didn't know what to do. We wanted to help the world in some way, and my background had been in environmental education and wildlife biology, so I had a pretty strong science background to begin with. But there were no jobs at that point in that field. I'd also come from a different angle. I had a lot of experience teaching meditation in various venues so I knew I could communicate with people, and enjoyed communicating with people. And my third passion was health. So I sort of put all three of those together with the help of a particular doctor who I was seeing at that point who was a chiropractor who was integrating lots of nutrition in his practice at that point, and that got me all excited. So I marched off to Oregon to chiropractic school and naturopathic school at that point. Pretty much my whole intent at that point was to get a license to do nutritional medicine and from where I stood at my age with my training the chiropractic license allowed me the greatest facility and the quickest way to do that. So I went to school at Western States Chiropractic College in Portland, Oregon, got a degree there, but also concurrently studied at National College of Naturopathic Medicine where I took virtually their whole nutrition curriculum and their botanical medicine curriculum and things like that to fill in sort of the naturopathic end of the practice.

RC: So in your office your Materia Medica is nutritional supplements, botanical extracts and preparations, homeopathic.

JW: Some homeopathics, a lot of traditional Chinese medicine, herbal formulas. I also have a lot of training in that. I was fortunate to study with one of the masters of Chinese medicine in my mind, someone who's brought Chinese herbal medicine to the Western world in a very understandable fashion, Dr. Jake Fratkin, who's also in the Boulder area. Early in my career I was fortunate to hook up with him and learned a lot of traditional Chinese medicine from him.

RC: When patients come through your door they often are some of the most challenging cases on the front range of Colorado. Is that not the case?

JW: That is correct.

RC: And you are known as someone who does some of the most thorough and really painstaking, in the best sense, treatment of patients with nutritional medicine, really in the country. How did you get to that position of being so comprehensive in your assessment and following of the chronic ailments that your patients suffer from?

JW: That's a complicated question but I think there are a couple of factors that come into that. Obviously, part of it is my personal nature, because I'm very detail-oriented, and I like to get to the bottom of things. A lot of what I saw going on even in "innovative natural medicine" was really allopathic medicine using herbs, vitamins, nutrients, that sort of thing. So, there was that dissatisfaction where I could just see people were throwing herbs and nutrients at, let's say eczema, rather than really saying, "Why is this really here? We know we can treat it with these certain things that may or may not work better and be safer than something like cortisone cream, but we're still not really asking the question what's behind this."

That was part of it, just that clinical experience. The other part of it, I was fortunate very early in my career to study with Jeff Bland, to be exposed to Jeff Bland and learn functional medicine before it was ever called functional medicine, where we really started, and I say "we" because there were a bunch of doctors at that time along with Jeff who were listening to him speak regularly and having input with him, where we wanted to look at a model that was different than the disease-centered model. Over the years it evolved and then was coined "functional medicine." But we really wanted to take this idea of holistic medicine and not codify it but basically make it more useable, so when somebody walked through the door with a particular problem, rather than say, "Well, you have this diagnosis or this problem. We treat this with that substance or that nutrient." We wanted a way to look at people and say, "You come through my door with these particular symptoms. What is going on with you biochemically, metabolically, that makes itself express itself in this way?" The classic example that is used in functional medicine all the time now, somebody comes in with a particular diagnosis, say rheumatoid arthritis, and with ten different patients with rheumatoid arthritis there can be ten different paths to get there. It's not just a deficiency of essential fatty acids or it's not just food allergies or it's not just dysbiosis. All those things may figure in, but the various paths that people take to get to their disease state are as individual as the people. So we wanted to really develop a way to systematically look at people and say, "How do we take this patient and how do we figure out their biochemical quirks and what's going on with them so we can affect them favorably?"

RC: What you're talking about, then, is cause-centered medicine. Functional medicine is another term for it, but clearly it's obvious – get to the cause, what's the reason someone has rheumatoid arthritis.

JW: Correct.

RC: How does a practitioner best determine what the causes of the chronic ailments are? I know that's an unanswerable question but at least I have to ask it.

JW: I think there's a theoretical model you can use and I think that's one of the nice things that I have found in the Institute of Functional Medicine and their trainings. They try to develop this basically kind of this view of physiology or this view of disease where we can say, "We know there are these various metabolic systems in the human body. We know there are common ones that go awry. There are ways to evaluate, to a greater or lesser degree, is this pathway involved, is that pathway involved, is there chronic infection involved?" And so you take a look at every patient and, in my mind, when I see a patient for the first time, even my intake forms are set up in such a way where I'm looking at, is there evidence of toxic exposure? Is there evidence of chronic low-grade infection? Is there evidence of inability to handle stress or stress overload? So there's these basic body systems that we look at where we say, again in a pretty systematic fashion, at least in my brain in a pretty systematic fashion, where we say, "What are the various players, or the way I refer to it with patients often is what are the potential logs on the fire here that can end up in this particular set of symptoms that you manifest?"

Again, I think it's looking at this model, and I can certainly go into it in some degree if you'd like. One thing that drives the physiology on one level, of course is the glandular system. And we're not just talking adrenals. We're not just talking thyroid. We're getting into melatonin, and this other thing. There's this endocrine component. There's clearly an immunologic component that we have to look at with people. This brings into the whole dysbiosis or chronic infections, this sort of thing. So you've got endocrine, you've got immunologic, then you've got neurologic. And again, these all dovetail because there's certainly the neurologic component of how do we interact with the environment, because that's how I view the nervous system. It's the sensing device, how we interact with the environment. When someone is either inappropriately exposed to too much stress of any sort, the nervous system can get overloaded. Or if indeed they're exposed to too many toxins, the nervous system can malfunction. Or if there are psychological stressors or emotional wounds they may not process normal input from the environment properly. So there's the whole neuro-endocrine component we have to look at. Digestion figures in, obviously. That's the core of nutrition. When we start talking about digestion we not only think about what's somebody eating, what's somebody digesting, but also is there abnormal flora? Is there dysbiosis? Are there toxins entering through the digestive tract? And then the whole thing, which I think blankets it all, which more and more of us now we have to think of constantly and with virtually every patient I see, is the toxicity. Somebody can live in every other respect, let's look at those things: they have a very good healthy diet, their digestion is basically good, they don't have chronic low-grade infections, they don't have dysbiosis or abnormal flora, their stress-handling capability is very good, they meditate daily, they do tai chi daily, whatever it might be. All those parameters might be fine but then they walk in with a diagnosis of Parkinson's disease, and we know Parkinson's disease has a very strong toxic component. There's a genetic susceptibility but those seem to be in the detoxification realm. But you can take somebody who's ostensibly extremely healthy in every "holistic" or "functional" area you would like to evaluate, and yet they end up with a big disease to which we can attribute at least a huge percentage as its causative factor is toxicity. So toxicity is the blanket that we constantly have to be suspicious when you

“fix somebody’s adrenals.” When you “clean up dysbiosis.” When you do all that and somebody’s still sick, the wild card becomes toxicity frequently.

RC: How do you assess patient’s toxicity? What are you looking for?

JW: Again, you’ve got about three days for me to answer that question?

Obviously, one of the biggest mistakes I see a lot of practitioners make is that they don’t take a good enough history. It used to be, for instance, in the past, we’d ask people, “Did you grow up in a rural area?” “Did you ever do stained glass as a hobby?” All these things that are obvious potential, toxic exposures. But that is no longer really the only clue, because at this point and according to a lot of studies that have been brought out that the EPA has done, virtually all of us have numerous toxic chemicals in our body. The question is not if they’re there. The question is are they really affecting us.

So, it’s almost by a process of elimination. As I said earlier, there are these basics that I always try to cover with people: obviously nutritional intake, digestion, absorption, intestinal microflora, glandular function. To me, you work to sort of set up the operating systems and make sure those are working, and then the next things you really have to look at is you have to consider what are the likely toxins that most people are commonly exposed to. We know from a lot of literature that certainly toxic metals are high on the list of suspicion for virtually everybody in both, the modern world and the second and third world. And then, also, probably a lot of solvents. Those are very common. Third would be pesticides and other assorted chemicals. The difficulty in some of this is how to you best assess these, how do you practically assess these, and not have the patient take out a second mortgage? Fortunately, certain things like toxic metals are relatively inexpensively assayed, via urine tests and provocative urine testing with chelating agents and such.

Now there are some screening tests for certain solvent residues which I think for about \$100 through one of the local labs in the US. You can look at about 7 or 8 different solvents and phthalates and things like that. And then when you get into things like certain pesticides, things like that, it can get very expensive. You oftentimes, unless you have a historical marker saying, “I grew up on a farm,” or “I used to chase the DDT truck all the time,” you generally don’t go looking for those specifically. What you’ll do is you look at some of the big categories that you can inexpensively screen and fortunately, if you find some of those, a lot of the therapies that you will apply are very similar regardless of what the toxin is. So then the therapy is basically what can we do for this person in terms of nutritional therapy to really maximize their detoxification potential so that, whether it’s xylene, or whether it’s toluene, or whether it’s DDT, that their body will eliminate that to the best of its ability.

RC: So the overarching view is detoxification, gut health, inflammatory pathways, infections, all of these areas have to be looked at independently of even what the diagnosis is. In a sense the diagnosis is what is the presenting symptom but it’s just a sign that there’s a disturbance and then we have to go find it.

JW: Exactly. I have a friend who's an osteopath and he loves to go and examine people before he takes the history, which I think is a very fascinating way to do it, because he likes to see what he feels with his hands and their craniosacral system and then, based on what they say, he filters that into his clinical picture. Now I don't quite go that far because I have so many things I can evaluate, just not the cranial system. So I take a real thorough history beforehand. But I think the whole thought process of we have to look at these basic, if you want to talk about it in computer lingo, the basic operating systems or the basic programs of the body, as you mentioned: digestion, inflammation, detoxification, immunological reactivity. You have to look at all of those and get them functioning the best you possibly can regardless of the diagnosis.

RC: All sorts of people are listening to us: MDs, chiropractors, nutritionists. Not all of them have equal access to various diagnostic or assessment tests. How best can, for example, a nutritionist work wanting to help people in helping them regain their health? It's a problem that there is a great shortage of thorough functional medicine practitioners in this country, even in some major metropolitan areas. And there are nutritionists working hard to do the best they can with these chronic ailments that present. Clearly I think one of the things you said is take a thorough history. I don't know a lot of people that do that very well.

JW: I think that's true. It's something that, unless you're really trained as an internist who's destined for Mayo Clinic to be a diagnostic specialist, I think even a lot of medical docs are not trained that well to take really thorough histories. Again, I was just very fortunate in my training to have good examples of that. Another of my early influences was Dr. Jonathan Wright who practices outside of Seattle. One of the things I learned from Jonathan really very early is that, and this is very germane to your nutritionist question, is there are lots and lots of nutritional clues in terms of history, signs, and symptoms that you can get just by being able to do a basic physical exam, take a history, and when you know these factors, lights will start to go off in your head. It's like, "Oh look, there's one sign of B6 deficiency, there's another sign of B6 deficiency, there's another symptom of B6 deficiency."

So, becoming familiar with those sort of things, if we want to talk about very practical things, in one of Jonathan Wright's books probably 15 years ago he had a whole chapter or two called the Nutritional Physical Examination, where he goes through a traditional medical physical examination from head to toe with all the various common things you look at but with a nutritional interpretation of the various findings that you would have. I can't tell you over the years how invaluable that has been because it's just, again, you can't always say I'm going to run \$1,000 worth of bloodwork on this person and figure out are they low in this, is their methylation pathway down...this, that, the other. But there are very simple, practical things you can surmise from a history and a physical that can take you virtually miles down the road of doing a really good nutritional job with people.

RC: Do you ever use hair analysis?

JW: On occasion I'll use hair analysis to look at basic mineral status. It's great because it's a \$25 test. There are more sophisticated ones, but in certain instances where the finances just aren't available or if you're dealing with a one-year old child who's scared to death of blood draws, you have to be very honest and say this is a very cursory look at your nutritional status, your mineral status particularly, but if we see a particular pattern, that may tell us something.

RC: How do you assess overall endocrine function so that you know that you're rebalancing the patient correctly?

JW: Same sort of theme. There are certain signs and symptoms you look at, something as simple as, something I learned from George Goodhardt 25-30 years ago: somebody stands up and their blood pressure drops, that's probably a sign that their adrenals are somewhat tired. Through to more sophisticated things, like running salivary cortisol profiles. Again, depending on the hormone, it may be salivary, it may be serum, it may be just plain old serum, it may be free and total testosterone. So there's a variety of fluids you can look at, and again, those are all valuable and in some cases they're absolutely crucial. But sometimes not. Let's do a real common example. I'm sure you're well aware of the whole concept behind when is somebody hypothyroid and when are they not. TSH is a range of .5-5.0 roughly. You have even conventional endocrinologists for now several years writing papers saying maybe that range of .5-5.0 is far too wide. Maybe it should be .5-3.0 and anybody with a TSH above 3 you should be suspicious that they're hypothyroid. So there's even that debate within the conventional medical community. But I see people every day who not only does their TSH look normal but we routinely run free T3, free T4 - which are the actual hormones levels - even though all those numbers look fine, the person still looks hypothyroid. So who am I to say because your free T3, which is obviously the most active component of thyroid hormone, who am I to say that because it's in the lower third of the reference range that that means that's okay for you. You might feel best if you're in the upper two thirds of the reference range of T3.

So that's where I think clinical experience comes into play. I say to people all the time, "Your thyroid numbers look normal but you're still complaining to me that you're cold all the time, you can't lose weight, you're losing a little hair. Maybe you should talk to your medical doctor and ask them to just increase your thyroid dose just a little. We clearly don't want to push you way outside the normal range and overmedicate you, but maybe you could do with just a pinch more." So I think there're these simple clinical tricks you can use which, if I had to stop measuring T3 and T4, I could probably still do a pretty decent job at titrating people's thyroid medication just based on symptomatology.

RC: Do think that a lot of medical practitioners are paying too much attention to tests and not enough to the patient?

JW: In many cases, yes.

RC: The example I'm actually thinking of is not necessarily thyroid but cholesterol levels and heart disease risk and things like that that we're so married to concepts that may or may not be valuable, with the recent papers showing that half the people in a large cohort that had heart attacks had normal cholesterol levels.

JW: Correct.

RC: So are we paying enough attention to the patient and their complexion and their energy and their vitality?

JW: In probably your standard family practice managed-care medical practice, probably not. Again, that's a perfect example, Robert, of how someone will come in to me with a cholesterol of 205 and an LDL of 110 saying, "My medical doctor wants to put me on statins because he said my cholesterol is too high." And so then it's my job to basically take a step backward and say, "Okay, what's your family history? Has anybody looked at your c-reactive protein? Has anybody looked at your homocysteine? Has anybody looked at an electron beam CT scan of your arteries? Has anybody measured your intimal-medial thickness of your carotid arteries?" Look at even the whole *biochemical* picture. Forget how the person's doing clinically. I think a lot of medical doctors, and I don't want to zero in on them, because you certainly have natural practitioners that do that, too. The cholesterol's a little high, and instead of saying take a statin they say take red yeast rice.

But I think, again, you really have to assess the whole patient, and that's kind of this meticulousness on one hand, but also trying to take the broad view and say, "Let's look at this person. Their cholesterol's a little high but they're in really very good shape. Biochemically we can't find a lot of other markers that something's awry with them. Historically they don't have a lot of heart disease in their family. So do we really need to jump up and down about this cholesterol of 205? Probably not.

RC: Do you ever look at a patient that has cholesterol of maybe 250, an LDL of 130, triglycerides of 150, and the problem turns out to be a toxicity of some sort, not necessarily a dietary over-consumption of calories or something.

JW: I see that all the time.

RC: And that so much of cholesterol and triglycerides are a protective mechanism against toxicity and not necessarily a statin deficiency.

JW: I think that's true. We don't have a lot of hard data to back that up at this point, other than some anecdotal data basically saying when people go on sauna therapy programs, that sort of thing where you're doing a concentrated detoxification regimen, that you see blood chemistry values go all over the map in a variety of parameters. Not just cholesterol. You can see liver enzymes shoot up for awhile, all these sort of things. And again, if that happens during a process, you can watch it. If a medical doctor were to take a look at one blood chemistry panel and go, "Oh my God, your liver enzymes are

elevated and your cholesterol's elevated, and we should start screening you for hepatitis, this, that, the other." But in the context of the bigger picture it's nothing about which one should really be alarmed.

RC: One of the questions that's also on my mind these days is the value of PSA levels and their interaction with toxins, and how much elevation of PSA might be due to toxins concentrating in the prostate. It's an unanswerable question but it still has to be asked because I've seen folks that I've worked with have their PSA levels come down when they do an aggressive sauna therapy.

JW: Right. I think, again, this goes back to some of the things that have come through the Functional Medicine Institute and our friend Dr. Bob Rountree, where inflammation is the language of disease, in a sense. Remember back in the early days of computer there was Fortran, that programming language? Inflammation is sort of the Fortran of disease. So many diseases, regardless of their origin, they get funneled through inflammation, and I think these slightly boggy prostates, slightly inflamed prostates, that then elaborate more PSA, I think that's perfect example of that.

So, again, this is one of the things I tell my patients. It's like we do an evaluation and try to figure out what isn't working, be it the glandular part, be it dysbiosis, whatever. We work to balance that and then we see what's left, because a lot of the times, these seemingly unrelated symptoms and signs get better when you take care of very basic physiologic systems like gut detoxification, like digestion, like getting their endocrine system balanced. When you balance those, all these other little odds and ends mysteriously go away.

RC: So one of the ways that all of these systems going awry can create disease, just following up on what you're saying, is that whether it's some mixed infection, be it something in the blood or something in the gut, and/or toxic insult and/or iffy liver function, and all of that together then creates inflammation that furthers all this in a downward spiral.

JW: Correct.

RC: And it's not simply a matter of taking some curcumin and fish oils and saying we've solved the inflammation. We have to go deeper than that and understand *why* there's inflammation.

JW: Exactly. Those are obviously important nutritional modulators of the inflammation process, and there are certainly some people, many people, in America who don't eat the right fats, who don't get adequate trace mineral nutriture, things like that. So they will be very pro-inflammatory in a very minimally toxic state. That is all true, so that's obviously why we do those baseline therapies of making sure people get adequate flavinoids and adequate fish oil and those sort of things. But, those aren't the people we're talking about. In my practice, the people we're talking about are the people who come in with something that looks like MS but really isn't MS, and we have to say

clearly there's inflammation here, clearly there's neurologic insult, but just to say take B12 and fish oil, that's an incomplete job because even though it addresses some of those patho-physiological symptoms, if we want to call it that, it's not asking the question, "How did this person get here in the first place?"

RC: How would someone add Traditional Chinese Medicine to their practice?

JW: That's a very good question, Robert, because to the average Westerner Chinese medicine is very mysterious. I remember the first book I read, this was back in naturopathic school when I took an introductory acupuncture course, was Ted Kaptchuk's *The Web That Has No Weaver*, which is considered to be the classic explanation to the Westerner of the Chinese Medicine model, both, for the laymen and for the professional alike. I would read that book and I would just scratch my head and go, "I just really don't get damp heat and the spleen. I just can't rock it basically!" And certainly I'm not saying that's the case with everybody. To some people that metaphoric language makes perfect sense to them. But I had enough training in Western physiology that that wasn't ultimately satisfying to me. So again, as I alluded to earlier, I found a good teacher. Jake Fratkin would basically sit down and say, "Today we're going to talk about damp heat and the spleen. In Western physiology this was what they're talking about. It means X, Y, and Z. And the way we treat it in Chinese medicine is to use this class of herbs, and in Chinese medicine, they're known to dispel dampness. When you look at them in Western physiology light, what they do is they're astringent and they're antimicrobial."

So I was very fortunate to have that sort of experience, and to be honest I've not gone to acupuncture school recently, I mean we have two here in Boulder. I think that they still pretty much use the metaphoric model. And while I think that's absolutely wonderful because that system can make connections that we in our Western model would not see...

RC: When you say "metaphoric" you mean damp heat and the spleen?

JW: Damp heat and the spleen, and using what they call their Zang-Fu system, which is the basic Chinese organ system, which is different than our organ system.

RC: In their system the kidneys might mean the adrenals to us?

JW: Correct, as opposed to the thing that filters urine and blood. They use that more traditional model, and while that is certainly useful to learn connections in the body, I think that there's enough research now coming out of China and Japan about the actual physiology of a lot of their herbs that they use, that it's time to start making connections with TCM on a much broader level to the other physiologic system. And not that ours is right, our scientific Western model is right and theirs is wrong, but just there can be a greater common language so we don't look at each other and just squint and scratch our heads.

I think there are some practitioners around that are doing a very good job at trying to bridge this gap: Subhuti Dharmananda for instance. He's been an educator in Traditional

Chinese Herbal Medicine for many years and he's done a great job at looking in sort of Western scientific physiology terms, "How are these herbs working," and then trying to integrate that into the Chinese model.

So that is being done. I think, on a practical level, probably the best way to really gain clinical utility with that is, some of the Chinese herb companies, and I hope you don't mind if I mention them, Seven Forests for instance is an American herb company doing traditional formulas. But they've put out a lot of literature which really helps try to bridge the gap between the two systems. Evergreen is another herb company which has done a similar thing. You read through some of their literature and they will describe things in a Traditional Chinese Medicine way, but then they'll also have the Western diagnostic and physiology analog. And when you do that, after awhile, I mean I don't consider myself a TCM practitioner because I have more Western training. I consider myself as someone who, as part of their practice, uses herbal medicine, and they have particular herbal formulas that hit the nail on the head better than anything we have in Western herbal medicine. So I use those.

RC: One of the reasons I'm so interested in Traditional Chinese Medicine is not because so many practitioners tell me that it's a cornerstone of their treatment of so many diseases, including cancer and so many other ailments, but because in nutrition these days, rightly called allopathic nutrition by many people, the focus is so on the cell, on the organelles, on the mitochondria, and that's it. The ratio of interest in the larger picture of autonomic nervous system function, parasympathetic versus sympathetic, is much less than it used to be say 100 years ago, 150 years ago, when people like Dr. John Scudder, a naturopath, talked about in his writings almost 90% of the time that balance of the autonomic nervous system and the overall vitality of the patient. So much of the discussion was about the whole person constantly and I almost feel that the invention of the electron microscope and the discovery of all these pathways, while good, has distracted us from so much of the useful information that we need to get in touch with, if just by looking at the patient, or the salivary cortisol, things like that. Anything we can do to get a bigger picture of the endocrine system and then the whole system, and I think the reason that I like TCM is that it's almost always interested in that, doesn't it seem? The bigger picture.

JW: I would agree. And I can even say, you talk about back to 100-150 years, that change. I've seen it in the 25 years that I've practiced. A very good example, when I was doing my training, Bastyr School of Naturopathic Medicine was just started, and they took the model and said we're going to be the scientific naturopaths. Early on, there was some conflict in the naturopathic medicine field because there was one group that wanted to be more traditional herbalists, this sort of thing. Not so reductionistic. And then there were these "we're going to be these scientific naturopaths." So a small schism developed in the profession. As you can see, over time, like you said, we can be more and more reductionistic and we can be treating electron transport pathways rather than treating patients. And I agree with you. Those are tools. Those are clearly tools, and in some people you need those precise tools because they've got some weird little quirk where they need ten times the amount of lipoic acid or CoQ than a normal person would.

But the great majority of people that you see, even the people that I see who are very difficult, the great majority of people that you see...you know, I don't run tens of thousands of dollars of lab work on patients. I may run three or four hundred dollars when we first start, and that's generally the main expenditure. So I think, again, if use this model of getting the big picture, let's say we want to cover these systems, then you track and see how the patient is doing. I spend, for instance, I have trouble staying on time in a half hour to 40 minutes per patient visit, and a good half the time of each visit is spent saying, "How are you doing?" "How's your digestion?" "How's your energy?" "How's your sleep?" "How's this?" "How's that?" I keep very thorough notes and I have these lists of various things that we're working on and things that were bothering them. It's almost a ritual where I just go through this routine and say, "How are you really doing?" Very rarely do I walk into the room and say, "These are the labs we have to cover today." It's really more "How are you doing," because that is vital information.

RC: I think the biggest blind spot, the biggest area that most practitioners aren't taking advantage of and therefore missing out on clinical results is what you're talking about, is this larger picture. It's so basic. I think in my practice in New York, one of my favorite autonomic interventions is asking people to eat more protein. It's so obvious but it supports the endocrine system in a nice way, it's a slow-release glucose: half the amino acids are glucogenic. It maintains lean tissue. It's so basic. Less sugar. You think about that on the autonomic level. Less stress, less fuel for infection, less immuno-suppression. I keep thinking like that, and I remember years ago I was teaching a course and I had an extra-credit question which I offered on the final exam which was, "Tell me your favorite or tell me a therapy that works on the body as a whole." And no one could think that way. They said glutamine for the gut, and that would be their answer. And I'm not berating anyone, it's just that we're taught to think on such a small level. Oh, your cholesterol is high: guggulipid. No! An answer could have been simply sleep, which you spoke about.

JW: Right.

RC: Sleep, which is good for the immune system. Everything benefits from sleep. The right amount.

JW: Or exercise, or laughter, or nurturing. Any of those.

RC: So I know some of you are listening and saying, "Robert this is so basic. Why are you talking about this?" Because in this whole bigger spectrum of the autonomic, parasympathetic, sympathetic function, and all the systems we're talking about are I think where so many of the answers lie. They don't lie in, "Oh, you've got to upregulate your methylenetetrahydrofolate reductase and then you're going to be fine." That's probably great for a lot of people but that's not ever going to be the big answer, is it?

JW: That's window dressing. Those are the details. Again, you know what kind of patient population I see. For the listening audience, I see many end-of-the-roads, as they're called. They've been virtually everywhere. And a portion of my practice is kind

of family practice who I've seen for twenty-odd years now in Boulder, where I act like their family practice doc. In both of those crowds, the thing that I would say, if I had to boil it down to a basic thing that is the most common thing that's "wrong" with people, it's you term it as autonomic imbalance, I term it as their adrenals are fried! Their nervous system is fried, basically. Sure it can be because they have too many toxic metals. It can be because they have a relationship they don't like. It's because they're working too many hours that there are various things in life with which they're unhappy. But I would say a huge important part of my practice, and again, virtually every patient that comes into me, be they have this diagnosis of MS or Parkinson's or you name it, chronic fatigue syndrome, when you take a history, it is, "I can't sleep." "I'm anxious." "I'm depressed." "I can't relax." So again, we're talking about autonomic nervous system function and that, to me is, if inflammation is the biochemical currency of disease, the thing that drives that currency is abnormal autonomic neurology, i.e. how is this nervous system handling stress, or how is it not handling stress well.

RC: How do we repair burnt out adrenals?

JW: Do you want me to answer that on a biochemical level? Do you want me to answer that on a metaphoric level?

RC: All of the above.

JW: I think this is an area where, again, this is how I see it and this is how I talk to my patients about it. I will go over let's say their salivary cortisol profile and I'll say, "Okay, it's high here, it's low here, your DHEA is low, whatever." I'll give them those details and I will tell them this is what cortisol does, this is what DHEA does, and all of this. And then the next thing I'll do is I'll say there are two things we have to do here, I'll tell them. The easy part is me. I give you certain things that can help repair these biochemical pathways, but realistically, that's about 20% of what needs to happen here. Then I'll talk about licorice root or whatever is appropriate for them and I'll explain to them what the herb does and why we're using it. Then I say now the other 80% is yours, and I make a point to tell virtually all of these people, I say "There's nothing wrong with your adrenals. It's not like you have an adrenal disease, but the adrenals, they're responders to stress. The reason you're having these difficulties, which we can measure on this adrenal profile, is that you've had too much stress in some area of your life, so what can we do about that?" And I'll tell them there are some very simple and practical things like keeping their blood sugar stable, and talk to them about diet and how you mentioned earlier with adequate protein, adequate fat, that sort of thing, and exercise. Exercise can be good to relieve stress and to balance the autonomic nervous system. Or if you exercise inappropriately, you can actually stress your nervous system. We'll talk about that. They nod and they grasp all that, and then I'll say, "But the real intangible here is how did you get here? Is it your job? Is it your relationship? Is it that you don't get enough sleep? Is it that, due to the way you were raised, you put far too much pressure on yourself and far too many expectations on yourself? What is it here? Did you undergo trauma? Either emotional abuse? Sexual abuse? Is there something that happened at an earlier time in your life? What is driving this?"

Sometimes I will know that, to some degree, based on my history. Sometimes I don't. But I say this is really where most of the work has to happen, is remedying those pieces of the puzzle. The herbs are easy. The diet is pretty easy. The exercise piece is pretty easy. But really getting a handle on what is driving the autonomic nervous system to be overly stressed is really the big piece of the puzzle.

I'll also try to give them some tools. I will ask them, "Do you meditate? Do you do some sort of relaxation practice? Do you play music? Do you listen to music? Is Mozart your meditation?" I will try to encourage them to use some sort of proactive tool, and I don't care whether they pray, whether they chant, whether they meditate, whether they go play croquet. Doesn't matter. Whatever is going to help balance their autonomic nervous system, I try to encourage them to do that. If there clearly is the need for some kind of more formal psychologic intervention or something like that, I try to encourage that. The great majority of people that I see, and I think that most practitioners see, that is a huge driving factor is that there is just, in scientific terms we can say too much autonomic dysfunction. In laymen terms we can say these people are just too stressed out, and we need to basically teach them how to balance that.

There's a minority of people, and I certainly see them, that their life is great, and their stress management is great, and they don't have a trauma history, and their adrenals look like a mess. Then it's my job to say do they have a low-grade chronic infection, do they have pesticides, do they have heavy metals, something that's driving it. But that's really a minority of cases, that that's the main driving factor. The great majority of cases is some kind of either imbalance in lifestyle or some sort of internal imbalance where like I said earlier, due to a certain belief system, certain emotional traumas, that these people are just pretty beat up on an emotional level and then that's translating through to autonomic dysfunction.

RC: Jay, what are some common mistakes that nutritionally-oriented practitioners make?

JW: I see two. The first most common one that I see is the cure of the week. I don't care whether it's goji berries or whether it's candida or whether its heavy metal toxicity or Lyme disease. I think it's very easy as so much information comes out about these various therapies and various conditions that we didn't even know existed before. It's very easy to get suckered in to thinking they're the solution. And not that there isn't value in those things, but I think, like most people in life, sometimes you wear your pants tighter and sometimes you wear them looser depending on the fashion, and I think that certainly happens in even our field of functional medicine and nutritional medicine. So I see that quite a bit, and that is something that I just have to say, well, take the bigger picture and say, for instance, rather than goji berries how about blueberries? How about cranberries? They're probably cheaper, they're probably a lot more available, and they probably work just as well. Nothing against goji berries, but if we really want to talk about practical nutrition that not just people who shop at Whole Foods and Pharmica in Boulder can do, but people who live in Indianapolis can do. People in Indianapolis can do blueberries. They probably can't do goji berries as easily. So, I see a lot of that. I see

just sort of this faddism, and again, I think it's not malicious. It's very innocent. But I think you just really have to watch for that.

The second thing that I see on a professional level, much more commonly, and this just goes back to the meticulous nature, is that there will be people who come in to me and they've all seen Dr. Y, and Dr. Y basically chelates heavy metals from people. So every person who goes into Dr. Y's office gets heavy metal chelation. And then somebody will see Dr. Z, and everybody that's seen Dr. Z has gluten intolerance as diagnosed by stool antibody levels. And so everybody that goes through that office, they all have gluten intolerance. I view my role basically as a skeptic, to basically say, maybe you have toxic metals. Let's see if you really do. Let's see if they were adequately managed. Maybe you have gluten intolerance. I'm not sure. Let's see.

But a line that I say to patients all the time when we get with this hour and a half to two hour first intake, I'll say, I really don't know what's wrong with you. I've got some ideas where we might want to look, but I don't really know. It might be gluten. It might be heavy metals. It might be bad flora in your gut. I've got some ideas and your picture makes me think, based on past experience, it might be X, Y, or Z, so we'll look there first. But I don't really know, and frankly, in a sense, I don't really care, because I can treat virtually all of those. I'm not necessarily more dedicated to heavy metal detoxification than I am to gluten intolerance than I am to intestinal dysbiosis. They're all there, they're all problems with people. So, I see a lot of that, and what I would really like to see on sort of a very basic emotional level from doctors is just this attitude of I really don't know what's wrong. Let's just check you out and see. And again, I think that's what's sort of wonderful about some of these osteopaths who go into their examinations basically blind, and say I'm just going to see what your sacrum feels like. I'm going to see what your cranium feels like. I'm going to see what your hip joints feel like. I don't really care what's wrong with you. I'm going to find what I find from a very honest examination and then we'll if we can put that together with the clinical picture that you're presenting me. So I think there really is this, I don't want to call it a lack of humility but maybe a lack of inquisitiveness among a lot of doctors to just say I don't really know what's wrong with you, because I think we as practitioners, when patients or clients come to us, they vest a certain level of trust. They invest in us or upon us a certain level of expertise, a certain level of authority. And I think we oftentimes unconsciously take that on, and so we sit in our chair and we think, okay this person's paying me X number of dollars an hour to figure out what's wrong with them so I better impress upon them that I've got the answer and that I know something. So they'll say I know what your problem is. You've got candida, or you've got this, or you've got that.

I, fortunately at this point, twenty-odd years into my career, I have plenty of patients. I don't have to beg for patients. They come to me. So, I've gotten to a point where I don't really feel that pressure that I have to fix people, because I've had enough people over the years where I didn't "fix" them or heal them. I maybe helped them 20%, but I wasn't able with my knowledge base at that point in time to unscramble everything that was wrong with them. So over the years of seeing these very difficult patients, when you have enough failures you get humbled. And so I think I've, over the years, taken that on

and basically said, “Well, I think you might have this. I think this might be going on, but I don’t really know. Let’s check it out and see.” And I think if more people adopted an attitude of, like I’ve said, just innocent inquisitiveness, and then tied that together with a fair amount of technical knowledge, I think people would get better health care because everything would be on the table. One of my patients said to me just yesterday - this is a woman with very chronic, long-standing esophagitis and heart burn that nobody’s been able to solve very well. Most recently she’s been working in concert with a gastroenterologist who finally convinced her to take an acid blocker – Nexium or Protonix or one of those – and it actually was helping. I’ve encouraged this woman all along, I said just keep taking that because it’s helping you, and then we can get a little more nutritional therapy in you, we can get a little more of this or that and help things heal. And this patient told me, she said, “When I told my acupuncturist and my homeopathist that you said I should keep taking this prescription medication, their eyebrows kind of raised. They kind of thought, oh my God, has he flipped over to the other side or something!” I tell people as frequently as not, “I think you really should take this antibiotic,” or “You really need this medication at this point, because you’re in such a situation that that can do a better job than the herbs and the things that I have.”

I think the difference here is not that I’m pushing drugs, but the difference is is that you say what is going to serve the patient best at this moment in time from a very honest place.

RC: Jay, thanks for being with us.

JW: My pleasure.