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# *Shifting the Undercurrents of Metabolic Syndrome*

*An interview with Mary Bove, ND*

Interview by Matt Laughlin

**UH** (Unified Health): You were our first interview, back in the fall of 2005. It's great to be interviewing you again! The first time we spoke our readers had the chance to learn a lot about the development of your professional path as a naturopathic physician and herbalist, and some of the inspirations along the way. In this second interview, it would be great to learn more about your clinical practice, and some of the more recent developments in your focus.

Specifically, I understand that you have been focused on the clinical applications of whole food nutrition and are in the final stages of a trial with Clinical Metacore™ by Innate Response Formulas® – a high fiber, low protein, certified organic meal replacement. Let me start by asking you to comment on some of the recent developments in your practice and understanding about nutrition and supplementation in general.

**MB** (Mary Bove, ND): Over the years, my clinical practice has developed from doing births and working with children to working a lot with mothers and women patients. They often drag in their husbands, so I do see some men. But generally, I see a lot of women and children. Women often have many hormonal issues; their hormones change through the seasons of their lives, and certain things seem to plague them. They have thyroid problems, the functioning of their endocrine systems can be compromised, weight issues are common, and many are at

risk for cardiovascular disease or poor bone health.

All of these conditions are preventable or minimized by a good, whole foods diet providing a full spectrum of phytonutrients and other compounds, which are highly available and utilizable by the body's physiology. I've been practicing for 25 plus years now, and over time you see trends in clinical practice. There are times when specific nutrients or certain substances by themselves are noted as being helpful for a specific problem and there may be research that might tend to suggest that. But if one nutrient or specific method doesn't stand up in what you're doing with your patients, you tend to let it fall by the wayside. Much of the time, it comes back to working with the patient's diet, specifically whole food nutrition, and attitude.

**UH** And what about supplementation?

**MB** When I went to naturopathic school I had no idea about how most supplements were produced, nor what they came from. I just naively thought, like many clinicians, that supplements came from natural things in the natural world. The more I learned about them, the more I discovered that wasn't the case, and the more I realized it was important for me to really look at what it was that I was choosing to give my patients as supplements to their diet. In contrast to what I used to advise patients to take as supplements, I have found that whole food vita-



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min supplementation offers more of a spectrum of phytonutrients and vitamins more like those which are delivered in food. This makes a difference to the physiology. That has been an important development in my understanding.

When I talk with many of my colleagues who have been practicing a fair amount of time, they often say two things: Wow, I really go back so much more to nutrition and whole foods as a way to prevent and improve clinical outcomes. And boy, don't I lean more towards the spiritual aspects of things these days.

**UH** It's interesting you say that because a central aspect of the mission of this publication is to focus to a large degree on those two domains of medicine: whole food nutrition and spirituality.

**MB** That makes sense. As you work with people and you mature and watch how disease shows up in people's lives, you realize there is a lot more than just the physiology at work.

**UH** With regard to the physiological aspects of patient care, it sounds like over the years you and some of your colleagues have really returned to some fundamental cornerstones of health.

**MB** You do. And you can really simplify it. I was just at the 21st Annual Women's Herbal Conference in New England and observed that as sophisticated as we get in looking at how things work in physiology, the basic triad that I was taught from my Native American teacher still holds fast. That is, the clinical importance of addressing how the gut works, how the adrenal glands and pancreas work, and how the liver is functioning.

This is completely relevant today, with conditions such as metabolic syndrome out of control and on the rise, which is due primarily to lifestyle and dietary choices. Metabolic syndrome clearly involves the pancreas, adrenal glands, and how we detoxify and move waste out of the body. If you look at trends of what is happening in women's health right now you will see low functioning thyroid, women unable get rid of their belly, and cardiovascular disease risk. You see this picture despite the fact that from a medical standpoint they may be eating fairly well in terms of food groups, in that they're not overeating from one particular food group or another. But because they have so much stress, over activity, or responsibility in their life this influences the body's health picture. They seem to get stuck in a physiologic rhythm that is unhealthy.

So getting back to the fundamentals, one of the things I find with whole food nutrition and whole food supplementation is that you can shift these unhealthy rhythms and help certain physiological pathways return to the way the physiology is meant to work.

**UH** From a clinical context, there seems to be two

avenues available to clinicians and patients. One is diet, in terms of eating a balanced whole foods diet as much as possible and educating patients on what that might look like in the context of their lives. The second avenue is to use specific formulas or meal replacements crafted from whole foods which provide a spectrum of nutrients that may not be present in a patient's diet, much less available in supplements made from isolated and/or synthetic substances. Would you comment on these two approaches?

**MB** One thing is that both approaches really complement one another. Many people want to make changes in their diet, yet diet is somewhat habitual, and it comes with routines that we build into the fabric of our day that are hard to shift. Sometimes it can be slow going to tweak the diet and tease those out. By approaching their diet you are hoping to change some lifestyle habits which over a period of time contribute to health. And that helps.

But as far as helping a patient to shift a stuck poorly functioning physiological system, it may take 12 months for this kind of change in the patient's health picture so that you can put your finger on what is working or not working. Thus, you may want to look at using clinical formulas that can augment that, and help get started in the right direction while a person also learns to rework their lifestyle and nutrition habits to support that shift. Many times they don't need to have clinical formulas for the rest of their life and instead use them for a specific period of time.

I like whole food clinical formulas when I am looking at therapeutics because they often address the multiple dynamics and contribute to the patient's overall health picture. A formula may provide us with a full spectrum broad enough to address the fact that there are adrenal issues going on, which in turn trigger the stress response, which also impacts insulin and glucose issues, which triggers a drain on the thyroid gland, and so on. If you can get all of the little pieces of the machine which is our body working in sync, it is easier to see change. Certain formulas help you do that.

**UH** That especially makes sense with regard to metabolic syndrome, which is characterized by a broad symptom picture. It seems to call for a broad nutritional approach.

**MB** That is correct. If we hone in on one symptom alone, or one therapeutic ingredient or protocol, we may miss it. Because in the case of metabolic syndrome you're looking at a number of risk factors in one patient: hypertension, insulin resistance and glucose intolerance, high triglycerides, low HDL cholesterol and high LDL, with weight around the belly. And this is a metabolic dynamic caught right into stress on the adrenal glands which secrete cortisol and exacerbate or contribute to this overall picture. So, therapeutically, I find that if you can address the whole picture – if each aspect is taken

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care of by the clinical approach – then it is easier for change to take place.

One of the things about metabolic syndrome is that people all of a sudden find themselves there. They ask themselves, how did I get here? What did that? We often want to point our finger at something. But in this case, we have to point our finger at several “somethings.” It’s more difficult clinically, because you have to address several aspects. You really have to return to the basics. You might say, okay, we have hypertension. Well, how is that related to the cholesterol picture, or to hyperinsulinemia, or to the weight problems?

**UH** So, you’re looking for a clinical approach that addresses all those imbalances.

**MB** Precisely. For instance, insoluble fiber can make a difference with many of these aspects; one of which is the gut, because the gut is the main gateway through which nutrients are brought in and toxins are brought out of the body. Insoluble fiber, together with whole food nutrients and phytochemicals which are present within the phyto-matrix of plants bring a number of compounds to the equation. Many of these may not yet be named as so-called important vitamins, but could potentially be down the road. With this kind of broad approach, it’s like the body is then given a whole bunch of things that it can work with, so to speak. It’s no longer looking for the nuts and bolts it has been lacking, this co-factor, this nutrient or that omega oil. There’s a full spectrum there.

I like this kind of approach because then I see clinical shifts indicating the underlying imbalances in the physiology are starting to resolve themselves. I don’t want it to resolve itself lickety split, because lickety split doesn’t tend to hold very well. I like to see the physiology kind of unwind itself gradually, or untwist itself, at a rate that you know that the underlying processes are making a sustainable change and running more optimally.

**UH** I understand the formula you’re using in the clinical trial, Clinical Metacore, is high in insoluble fiber, low in protein, and also delivers omega oils and whole food vitamins and nutrients. How did you set the trial up and what are the results you’ve observed?

**MB** First of all, it has been an education for me to do this. Sometimes you get caught in a trend or a certain mindset, and you forget to look outside of

that box. And the clinical mindset may not always be as good as you think, until suddenly you’re stopped for a moment by a new perspective. This trial really broadened my clinical understanding. Before I get into the results, and what it revealed, I’ll comment on the patients and the methods we used.

Many of the patients who participated in this trial were women who had been diagnosed with metabolic syndrome by myself or the doctor with whom I work. We also included many patients who did not necessarily classify as having metabolic syndrome, but certainly had predispositions for it based on their clinical picture. We also asked for people to volunteer, so there were other patients in the clinic that participated who presented with other issues, whether an overactive bladder, hormonal issues, or others clinical conditions that might also respond well to Clinical Metacore. We figured as long as they were going to comply with the trial criteria, we wanted to watch what this high fiber, organic meal replacement might do in terms of their health situation.



For all the participants, we set it up in a way that they could either use the meal replacement as a snack or a meal. At baseline we had them fill out a questionnaire, answering a number of lifestyle related questions, in addition to subjective measures of their sense of wellbeing, energy, mood, etc. We also measured a number of clinical symptoms: blood pressure, cholesterol (HDL and LDL) triglycerides, weight, and waist-to-hip ratio.

We also used a metabolic scale which looks at percentage of body fat, percentage of muscle, percentage of visceral fat, and hydration. The metabolic scale also gave us calories burned, which we didn’t assess in the study itself, but to which I would refer for women who were trying to lose weight to give them an idea of reaching a calorie amount per day that would help shift them into burning more fat. At four and eight weeks we repeated the questionnaires and checked each of the measures I mentioned. So that was the original trial design.

One of the things that happened as we got close to the eight-week mark and the women knew that they would be wrapping up, many of them said to us, do I have to stop? (Laughter) They didn’t want to stop, as they became aware of all the positive things that were happening. So, for several participants we have allowed them to carry on to three months, and some plan to continue to take the for-

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mula for six months. We will continue to track them, too, to see what the clinical outcomes look like more long term. We selected an eight-week trial simply because it seemed to be most convenient for the participants.

**UH** Would you comment on the nature of the Clinical Metacore formula itself?

**MB** Sure. The whole formula is organic and has raw hemp as a protein and omega oil source, as well as fiber. It also has an insoluble and soluble fiber blend with enzymes and pre and probiotics. Plus, it includes a lot of other food state nutrients from the Innate Response formulas, vitamins and minerals. This is nice because patients don't like to take several things at once. And each flavor is uniquely medicinal. So, the cacao chocolate formula adds polyphenols from cacao beans, the vanilla flavor has vanilla beans which are medicinal. The spices in the cinnamon chai flavor are medicinal, and the berry vanilla flavor adds antioxidants and flavonoids from the berries. We used the cacao chocolate formula.

**UH** What were the results you observed?

**MB** There were a couple things that were significant. The women came back to the clinic at the four-week mark, read their second questionnaires and we checked all the clinical measurements. There typically was not a lot of weight change in the first month. Some people reported a little bit of gas. Yet, many people reported much better bowel habits, which is an important piece of weight loss many clinicians forget is important. We also observed a shift in their total cholesterol, usually a 10-15 point reduction, but at four weeks didn't observe significant changes in the specific breakdown of cholesterol.

I also observed a reshaping or re-sculpting of the women's bodies. I would see one to two inches lost at the waist and hips. I would also see in the metabolic scale indications that the patient's body was showing that it was starting to relearn how to burn fat rather than store fat, or how to make muscle rather than store fat. All of these initial indicators told us that their physiology was changing, which meant we should see outcomes at the end of the second month. Surely enough, that's what I saw. There was more weight loss, at an average of three-four pounds, for most of the women at the end of the second month.

**UH** That's a healthy rate of weight loss, too, isn't it?

**MB** Yes, it is. And we continued to see changes in their body sculpturing at eight weeks. So, more change on their waste and hips. Sometimes people would come and say well, I don't know if I lost any weight this time. And I would ask them about how their clothes were fitting and show them the waste/hip measurements, and they would be surprised, like wow! For some women who had been on

many different types of diets and had a long history of trouble losing weight, the changes were a bit slower. We started to see significant weight loss for them at the second month, but especially the third month—that consistent pattern of three-four pounds of weight loss. As for the other outcomes at eight weeks, cholesterol and blood pressure improved, better muscle mass building was observed, and we also observed some loss of visceral fat. Overall, the women in the trial were very pleased. We now have a lot of them carrying on into their fourth and fifth months.

**UH** Those are great results! What surprised you the most?

**MB** One of the things that surprised me the most has to do with this tendency to get stuck in a clinical mindset. Like many clinicians, I assumed that we should primarily focus on weight and think that we need to see weight loss to gain any ground. This isn't the case. I realized it's kind of like an undercurrent. And the whole undercurrent in the physiology really has to change and get some momentum going before you're going to see that show up on top of the water.

**UH** Such as improved bowel movements and the redistribution of weight in their bodies.

**MB** Yes. What that means, for instance, is that a good, high quality fiber helps create good bowel habits. But the fiber also helps establish a good, slower release of sugars out of the gut. The fiber also helps improve gut flora. The Clinical Metacore has flora in it, but I think it is also the high amount of insoluble and soluble fiber in the formula which really helps the flora thrive. This is so important in terms of the status of microbiota in the gut which is key for immune complexes, absorption, hormone degradation such as estrogen, neurotransmitter function, as well as detoxification. The fiber shifts how the physiology utilizes our foods, the way we absorb fats and move them out of the body.

From the standpoint of weight loss, I think all of these things taking place helps the body relearn how to use its calories as energy and not store them as fat. This allows the weight to come off later. As a clinician, I start to look for shifts in these underlying trends. Do I see changes in the sculpturing of the body? Changes in their bowel habits? Changes in their blood pressure or cholesterol?

I have one woman who was able to diminish her hyperglycemic medicines; she is medicated for being diabetic. She was overly medicated, and her dose was dropped with the guidance of her physician. Her daughter, who is 17, needed to lose some weight also and had severe PMS. Watching her mother benefit in the trial she decided to start taking the meal replacement, too.

While she didn't change her teenage eating habits or anything, she still lost five-six pounds her

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first month, and only two pounds each month after. So, you could tell that she was definitely holding onto some water. She has also had better menstrual health outcomes, and I think all of these changes is in large part by the inclusion of high quality fiber in her diet that the formula provides.

**UH** Speaking of shifting your clinical understanding, what about protein? Isn't the prevailing thought on the treatment of metabolic syndrome or related issues to use high protein meal replacements?

**MB** That certainly has been the trend in the alternative medicine world, and even in the conventional medical world. I think protein is certainly a piece of the equation, but you have to look at the whole picture. In the American diet we get too much protein, especially animal protein, and not enough vegetable protein. So, if you have high protein and don't have enough of the other nutritional pieces that go with it, it's going to be counterproductive. This is where a high fiber meal replacement formula is huge.

When you look at nature, fiber is an intricate part of a lot of the foods, such as legumes, grains, nuts and seeds. But in the western diet, we take those things out. I have come to understand that we don't make up for a high protein meal replacement with fiber in our diets, because people don't do that. I think taking this approach with Clinical Metacore, where there is still a great protein available, around 6-7 grams of raw hemp protein, makes more sense.

**UH** So based on your results with this trial would you say that the Clinical Metacore is actually more functional than a high protein meal replacement?

**MB** To answer that, we would have to ask what we are using the meal replacement for. There are some medical meal replacements high in protein, which for various medical reasons, might be necessary. In that case, one could simply add protein to the Clinical Metacore formula if needed. As for most conditions we see in the clinic, such as weight loss, cardiovascular risk, working with gastrointestinal reconstitution, or patients with leaky gut people, I think the low protein, high fiber approach of Clinical Metacore is excellent.

**UH** Would you comment on the clinical significance of hempseeds as a source of protein, fiber and

omega oils?

**MB** I do know that hemp offers a complete amino acid profile and is a great form of vegetable protein. It also has a great blend of polyunsaturated fatty acids. The omega oils are well balanced, meaning the -3, -6 and -9 omega oils are delivered in ratios which do not exacerbate a pro-inflammatory response, or lean too much toward favoring one fatty acid metabolic pathway over another. The hemp is also a good source of fiber, and all of these things are lacking in the American diet.

**UH** Meaning vegetable protein or omega oils...

**MB** Exactly, or fiber. I think that's another reason why this formula really speaks to a lot of people. It provides the things that really are not as prevalent in the diet as they should be.

**UH** As for hempseeds as a protein source, why would you choose a hemp protein over another more common form, such as whey or soy?

**MB** Both whey and soy have high allergy histories and food intolerances for human beings. Particularly soy – it's everywhere. I think because soy is a crop that has been manipulated a lot, it has become less of a whole food. Hemp hasn't been over-processed or manipulated, and has the least exposure to humans overall. The downside of whey pro-

tein is that it comes from dairy and many people have issues with that. Not everyone is allergic to the whey in dairy, necessarily, but they are allergic to other types of things in dairy. In general, hemp gives us a great source of complete protein, fiber and oils all in one, with a much lower likelihood of allergies. And it certainly has not been over-exposed in the western world.

**UH** What were some of the subjective results reported by the patients?

**MB** People reported improvements in energy, cognitive functioning and moods. They also loved the taste of the cacao chocolate. It really felt like this kind of meal replacement offers not only good clinical outcomes, but also a satisfying means to that end, so to speak.



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There were a couple women who had a history of migraines who couldn't take the formula due to the dark chocolate. We were able to get the vanilla flavored powders for them and they were happy. In general though, women love chocolate and it does tend to satisfy their cravings.

**UH** The flavors have a medicinal influence but are also subjectively satisfying – and this subjective piece is also important from a clinical standpoint?

**MB** That's right. Many people feel when they're having chocolate they are getting something special, a treat, or it gives them a calm feeling. And often when they are trying to lose weight or change their body shape, they might feel that they are always denying themselves something. Having this flavor reminds them that they're doing something good for themselves; it kind of trickles into some of our sensory memories. Same thing goes for vanilla, for those who are not chocolate people. It still ties into memories and positive associations with things when they were young – feeling comforted and safe.

**UH** Is this a formula practitioners could use for detoxification programs?

**MB** Definitely. Some of that fiber blend, which has the insulin and guar gum, not only helps with the slow release of sugars, and the slow release of fat, it also helps pull out toxins and helps with detoxification. The presence of that insoluble fiber makes a big difference with regard to how we get waste out, so we're not holding on to waste or reabsorbing it or rerouting it through the body in some way that is detrimental to us.

I am also using the formula with a couple of kids in our practice who are prone to allergy due to leaky gut. This is a way to get them on some high fiber so they can grow the gut microbiota and also get the immune complexes situated properly in the gut. So much of the immune system is in the gut. And all of the gut tissue that has to do with producing immune complexes needs the flora that is there, which depends on enough high quality fiber as part of that dynamic. It makes a lot of sense for allergic tendencies, food intolerances, or food allergies that contribute to a person's strain, stress or syndrome. You can couple the formula with a diet that is a low allergen for several months to both clear out the allergen and also to bring back the gut health.

**UH** What were some of the individual patient results worth noting?

**MB** Another thing that happened was that our other doctor who ran a few patients in the trial had a woman who lives maybe 40 miles away. Well, this woman talked to three of her friends about her enthusiasm for it and how she was feeling on it and her friends called up and asked if they could join the trial. (Laughter)

As a doctor you pay attention to when people talk about their experiences like that. It really means they're happy with the results they are seeing. This has to do with compliance. A lot of times with protein powders, people will comply for a week or so, and they simply get tired or sick of it. That is not what I was hearing from the participants. They were happily doing it and not having any negative issues.

**UH** So the subjective and objective measures work hand in hand.

**MB** Yes. When somebody notices that something makes a difference when they start taking it and they continue to see that they're having good, objective outcomes, that's a great sign. They'll come in after four weeks and I'll say, look, you're burning calories better, your muscle mass is up, your fat ratio is down. Yes, your weight is the same but look at this, you lost two inches off your waist and eight inches off your hips – that's a win! I can say to them confidently, you know, the next time I see you, I bet you will see that you have lost some weight. And they do.

**UH** So the whole notion of needing to use high protein powders or this idea that the weight loss is the first thing you should see are no longer part of your clinical mindset?

**MB** Yes, and that has been my education as a clinician. I was caught up with the whole idea that you need a lot of protein to lose weight and you have to lose weight to make a difference. And it's just like wait a minute – we're stuck and not really thinking about all of the steps that make one change their weight in the first place.

**UH** By that you mean addressing the underlying, foundational prerequisites that you want to notice before there is a weight change.

**MB** Exactly, and it is all of those underlying prerequisites that malfunction and lead to metabolic syndromes in the first place.

**UH** It must be fulfilling as a clinician to have everyone so happy.

**MB** Yes! Really. The only woman who wasn't happy at first was one of the women who had the migraines on the dark chocolate formula. She really wanted to keep going because she noticed that other people were benefiting from the trial. She had to wait a few weeks for the vanilla formula to arrive and once that came in she was really happy!

**UH** Thanks so much for your time!

**MB** Thank you – my pleasure.