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## Julia Ross: Sugar Addiction - Defeating the Greatest Dietary Crisis of All Time

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Speaker 1: It's time to introduce our main speaker, Julia Ross, on her subject of sugar addiction: defeating the greatest dietary crisis of all time. But, before I do, next month's speaker is Ron Rothenberg. For those of you who don't know who he is, an MD from Encinitas, California, who's probably one of the top people in the world on hormones, thyroid and related areas. When he speaks at the A4M conventions, speaks 12 hours about 3 different times. They give him the longest programs on sometimes 3 or 4 different subjects. Anyway, he's going to be speaking next month on a combination of the subjects I just mentioned. In September, we have Dr. Tee coming back. In October, we have Steve Blake, who's going to talk about Alzheimer's again, referring to the work of Mary Newport and some differences of opinion he has on that approach.

Anyway, introducing Julia Ross now. She has founded and directed 7 programs treating eating disorders, addictions, and mood problems in the San Francisco Bay Area since 1980 at the Recovery Systems Clinic founded in 1988. Ross and her clinical team developed an innovative treatment model internationally recognized for its successful nutrient therapy and biochemical rebalancing strategies. Thousands of former over-eaters can attest to the effectiveness of these methods, which Ross spells out in her new diet cure, just released in a 40% updated edition. Ross has taught at several San Francisco bay universities and presented at hundreds of professional conferences internationally. In fact, she was at the commonwealth club last Thursday and had 120 people show up. She has been featured in many publications, from the Journal of Molecular Psychiatry to Vogue magazine. Her numerous appearances include an NBC program on a successful nutritional approach to depression. Ross's books have sold over 200,000 copies in 4 languages. She trains and certifies clinicians in the US and abroad through the Neural Nutrient Therapy Institute.

Are you ready?

Speaker 2: [inaudible 00:03:00]

Speaker 1: OK.

Speaker 2: [inaudible 00:03:31] Hi, this is Pam. I would like to just give you a few minutes of experience that I have had with Julia Ross, and I would like to talk to all about it. I had a little niece at the time. She was 12 years old. She was addicted to street drugs so bad, it was the worst street drug on the market, until she was 23, 24 years old. Her parents took her everywhere and nobody could help her. My sister in Arizona called me and asked me if I could help her, and I said, "Gee, the only one I can think of is Julia Ross. You have to get her up here."

Well, we went in to see Julia Ross and I was totally impressed. I stayed with her for every visit. I never saw a woman, a girl come out of what she did and now she's a lovely lady, with the thanks from Julia Ross, and all the help and all the faith and trust that she gave me, that I didn't think I had. I didn't think I could do it because it was a tough call. Julia gave me the confidence that said that I can do it and work with her. I

was very impressed, and I couldn't have done it without Julia's help. Julia was the one who pulled my niece out of it. She is drug free, and it's been about 6 years now.

I wanted to share that with you, and if you didn't get any of her books, you really should consider it, because I have them both and both of them are the most powerful books. Now she's got the new revised edition, which is even more powerful, and what a gift to give somebody that you know who needs the help, like I did. Thank you.

Julia Ross: [inaudible 00:05:55] Those of you who don't know me, probably don't know that I've been working in the addiction treatment field since 1973. When I began, I was treating alcoholism. I was among the first psychotherapists attempting to treat alcoholism before there was rehab, a whole industry developed to treat addiction. We thought initially that we were going to be very successful. We were wildly excited. We were using all the techniques we were learning, new clinical psychology techniques, very exciting work. When the first relapse studies was done, we learned that, with alcoholics we were getting 50% success rates, which depressed us no end. We were convinced that we were going to eradicate the problem but that began to look very, very good about 6 months into the crack epidemic, when we had about 100% relapse within 24 hours after the addicts leaving the most intensive in-patient programs in the country.

Somewhere between 50 and 100% relapse is what's going on now. Most honest program directors will admit to 90% relapse rates and I assume that if they admit to 90%, it's probably worse. I was highly motivated to find another way as brokenhearted as I was about the failure of psychotherapy. Fortunately for me, there were a few pioneers, one of them from the state of Washington, an MD named Milam, who wrote a book called "Under the Influence" where he talked about treating alcoholism as a glucose intolerance disease and having tremendous success with dietary recovery approaches, leveling blood sugar and eliminating hypoglycemia and the tremendous cravings that alcoholics have because of their genetic intolerance to refined carbohydrates. They really must have dietary support. That was really exciting. I, just having been named the director of the out-patient program, immediately started hiring nutritionists.

After 6 years, we had two successful cases. Two successful cases in that these women were able to follow our dietary advice. What about all the other clients we had? Were they poorly motivated? Were they ignorant? Were we just not doing a good job of education? Absolutely not. Highly motivated, understood the value of the dietary approach, but absolutely unable to implement it. When I put this failure together with the fact that in the in-patient program it was standard, and it was true all over the field for people to gain 30 pounds in the first 30 days of recovery by substituting sugar for the alcohol and / or drugs that they had been addicted to.

Even so, I didn't see it as an addiction. I did not see food as an addictive substance until one of my own employees came to me and asked me to go to an over eaters anonymous meeting with her, and I began to understand a little bit about what food addicts were up against. That was in the early 1980s. It was beginning to go out of

control. Food addiction, particularly sugar addiction, was becoming more and more common and virulent. But, at this point, I think you all know that our diet has become almost completely void of nutritional value, but, more than that, it's replete with toxic effects. I'm going to talk about, I'm here, and I completely revised my first book "The Diet Cure" in honor of the 21st century epidemics of over-eating, obesity, and degenerative disease resulting from it.

Now, one of the things that I want to say to you in particular because all of you are extraordinarily open-minded and forward-thinking, is that I actually want you to think a different way tonight with me. I want you to think about how we ate before 1970. It's going to be a lot of the emphasis of my talk tonight. How many people here remember what we were eating and what we were like before 1970. OK, this is a well-represented group, here. However, when I speak in other places, I have the following experiences. I mentioned three squares in a book signing in Sonoma County and asked if there was anyone present who didn't know what I was talking about. All kinds of people under 30 had no idea. One guy said, "Do you mean three geeks?"

The foundation of my talk tonight and my approach to sugar addiction and its eradication is founded on the fact that we were eating a diet that was relatively moderate in its sugar content up until about 1970. We had no obesity. We had very little over-weight. We had very little degenerative disease, although it had been increasing as our diet had deteriorated. For example, in 1911, there was no heart disease. This is the statement of Dudley White, who wrote the first text book on heart disease in 1930. In his introduction, he said, "I am writing this book for the relatively small number of people with heart disease now. But, when I went to medical school in 1911, graduated in 1911, there was no heart disease." We just didn't see it, we didn't treat it.

When we think about all of the new things and our excitement about the new things, I want you to stop. I've had to stop. I was a passionate experimenter as well, and I still am in a lot of ways, but we've got the information that we need. We know what kind of diets we need to protect ourselves, protect our weights, protect our health. Our problem is, the food's available, but we can't eat it because, as I'll explain, the hard-wired biochemical addiction that has been designed and delivered to us by the refined food industry.

Someone that we don't usually regard as a friend, David Kessler, the former chief of the FDA, actually wrote one of the most important books published in the last 5 years called "The End of Over-Eating." I don't know if any of you are familiar with the book, but David was a compulsive eater, life-long. He owned a suit in every size and when he left the FDA, his friends collected funds to allow him to research his passion, which was to understand why he could never get his weight under control, why he could never get his diet under control for any length of time. I particularly encourage you to look at it because, not only does he document the dynamics of sugar addiction very, very well, but he talks, he quotes the chiefs of Kellogg's and General Mills and so forth talking about what's happened with him. I remember one chilling quote where one gigantic industry leader said, "Well, it's too bad. It looks like the very thing we figured

out that's making us all this money is the very thing same thing that's destroying America's health." Keep your mind strictly focused on the past, just for tonight.

Let's see if I can make this work.

In honor of the progressed dietary disaster that is overtaking us, I contacted my publisher who originally published The Diet Cure in 1999, when there was no announced obesity epidemic - that's how quickly this has evolved. There was certainly no childhood obesity epidemic at that time. I contacted my publisher and I said, "I have not revised The Diet Cure. Over 100,000 people on this and other continents have read it. I have just been contacted by a Frenchman who wants to translate it into French out of his extraordinary gratitude for finally finding something that would assist him with his lifelong struggle with obesity, and I don't want him writing something that's no longer relevant."

I got their permission to revise the book and the more I looked at it, the more I realized that 12 years had passed and my clinic and I had developed all kinds of techniques that were even better than the ones we had in 1988 when I wrote The Diet Cure originally. I sent them back the manuscript with a 40% revision and they were enraged. This is a very expensive proposition, and authors just don't do this, apparently. They're required to change 25% of a book to call it revised, but, in fact, most people don't do that and the publishers look the other way because of the expense. They actually ended up charging me \$3,000 for part of the expenses of inputting all of these changes. I'm saying this to you very seriously, even if you have the original book, throw it away. It's terribly important that you have the most updated information, because this is the battle of our lives.

Because of this, our children really don't have much hope at this moment. Almost all children are addicted to sugar and we'll find out why. The price tag is this: we've gone from a planet whose primary problem with malnutrition was starvation, frank starvation, famine to a country, to a globe whose primary malnutrition problem is reflected in high-calorie nutrient void foods, and the results are, as you can see, disfigurement, unprecedented disfigurement. In addition to the over-eating and obesity, the epidemics of diabetes and other degenerative diseases, specifically heart disease, kidney disease, cancer, related to our diet, strictly related to our diet. In addition to that, depression, anxiety, the other epidemics, including over-stress, and things like ADHD, insomnia, and fatigue. I could go on and on and on, but I want to remind you that before 1970, we didn't experience any of this. None of this. We were not experiencing this. Because we were eating something like the traditional human diet on the planet. Whole foods. Our soil's admittedly deteriorating, chemical pollutants, of course, but we were still very, very different and literally in very different shape before 1970.

It took me quite some time to find unattractive images of our current diet. Really. The webmaster would come to me with all kinds of gorgeous images, donuts with these beautiful frosting, art pieces, and I couldn't get it through to him. No, I wanted ugly. We need something appropriate to the topic.

We're going to go into great detail about these kinds of foods, but since we're eating this non-food, this toxic stuff, here and we're exporting it world-wide, the World Health Organization has become extremely alarmed because of the progression of degenerative illness all over the world. They convened a summit in about 2000 and made a report in 2006. The summit was designed, an international summit, to make recommendations about what can we do to prevent these epidemics of ill health from overtaking us? What are the recommendations of this organization going to be to the world to turn it around. They came up with one. That was it. How many of you saw this report? Nobody. I found it on page 6 of the New York Times and it was this big. When I've been in Europe, all of the European countries had it but at first, front page news. Apparently, that was true all over the world, where the World Health Organization has a hearing, but not in this country, because the Sugar Counsel has suppressed it.

However, we have a local hero, Robert Lustig. How many of you have not heard of Robert Lustig? Well, I'm thrilled to be able to tell you about a pediatric oncologist at UCSF who figured out some time in the last 10 years that his children were being made ill by sugar, which is the number one food for cancer cells. He became enraged, and he's a very solid, strong, articulate fellow and you can see some of his talks on YouTube, UCSF talks. But he didn't get the attention of the country because of the sugar counsel. So, he went to the UK just this year, in February. They published his study, well, an article that he wrote with some colleagues from UCSF, "Is Sugar Toxic?" He's the one who's behind all of the excitement about regulating sugar, about not allowing children access to it, the way we don't allow them access to alcohol or tobacco. He's a big help. There's a great deal of alarm now about sugar, a great deal of buzz about sugar.

Very specifically, he says that 35 million deaths world-wide are directly attributed to sugar consumption. I wanted to add that the most deadly of all addictive substances that we knew about until just now was tobacco, which kills 5.3 million people a year. Again, is it ignorance? Is there anyone here, especially her, who doesn't know that eliminating sugar from the diet would be a healthful and weight-stabilizing move? No. Lack of motivation? I think diabetes is a wonderful motivator, but one of my early nutritionists was married to a surgeon at the VA who came home and told her that the same patients whose feet he had amputated the week before were rolling their wheelchairs down to the candy machine the following week. This is a powerful, powerful dynamic. It has nothing to do with being informed or being motivated. Because there is such great PR and we think that sweets are so cute doesn't help. Talk about a wolf in sheep's clothing.

In terms of solutions, I just want to, in a few seconds, eliminate any possibility in your minds, I'm a psychotherapist, that psychotherapy is a valuable option when it comes to compulsive eating of sugar. The theories about emotional over-eating, filling the void, self-destructive eating and so forth completely miss the point, which is that there is a bio-chemical tragedy occurring. Anyone who has tried to treat someone with psychotherapy has found it to be an exercise in futility, just as treating any

addiction is and exercise in futility. Many, many years ago, psychotherapists, psychiatrists gave up on treating alcoholism, for example, and said, "We don't know what to do, we don't know what to recommend, because this doesn't work."

Those of you who are aware of the "awareness solutions" to compulsive eating - conscious eating, mindful eating, intuitive eating. I had a call from a journalist who was interviewing me about this and she said, "What do you think about mindful eating?" She was clearly intrigued. Mindfulness is so au courant. I said, "I think it's very similar to mindful heroin use." Which is why I have the hypodermic in this image.

I want to share with you what are the universally accepted definitions of addiction, and here they are: loss of control, continued use despite adverse consequences, withdrawal symptoms, relapse, progressive and terminal dynamic. Does anyone have any trouble thinking of sugar consumption in those terms? I want to let that sink in. Then I'd like you to tell me which pile of white powder is sugar.

Speaker 2: The one in the middle.

Julia Ross: There's a hint there. The point is that a sugar beet is an entirely different thing than this pile of white powder in terms of its impact on the brain, in particular, just as a cocoa leaf is quite different than the white powder cocaine.

Our hard science kicked in anew in 2007 with a study showing that sugar and sugar substitutes, whose use is going up astronomically as people are becoming more afraid of sugar just in the last few months. Sugar and sugar substitutes four times more addictive than cocaine. Four times more addictive. Does that help explain why we have all these epidemics? In the '80s, actually, a husband and wife team, Judith and Richard Wortman, studied the effect of sugar in terms of our serotonin function and found that every time we consumed sugar, insulin rose, and insulin wiped everything out of the bloodstream except the nutrient that was required by the brain to make serotonin. That serotonin got into the brain without any competition from other amino acids and vitamins, minerals, and fats that were plunged into the muscle.

In addition to that, multiple studies talk about sugar being like an opiate, having the same effect on opiate chemistry in the brain, our natural heroin levels are activated by it, the endorphins. Many, many studies, including by Nora Volkow, the National Institute on Drug Abuse talk about the dopamine effect of sugar. She and her well-funded studies are all looking for a drug solution to a drug addiction. Good luck. I think all of us know that when blood sugar levels drop, we get an out-of-control craving for junk food. Anybody ever gone to the store when it was too late? It had been too long since you'd eaten? And you got to the counter with some good stuff and then you bought the candy because you couldn't wait? That's hypoglycemia, and that is known to play a huge part in compulsive eating. Since people are not eating meals anymore, and they are certainly not eating three meals anymore, hypoglycemia is the order of the day.

I'm going to talk about this again, but it's very important that you understand, that I understand, that we all understand that there are powerful addictive factors at play that we had no idea about. We know now that these powerful neurotransmitters are impacted and controlled by sugar, but, it turns out that there are other powerful appetite regulators that are dis-regulated by sugar, and I'll talk about what they are and how in a minute.

The healthy brain is replete. It has all of the neurotransmitters sites, producing sites are filled. An addictive brain, sorry, is empty. There just aren't enough neurotransmitters to send out positive messages, so you've got to use drug substances like sugar to cause a brief activation and stimulation in that department so that we feel sort of normal, sort of like the well being that we were naturally intended to have.

What are the addictive foods? Table sugar sucrose, from cane or beet, is half glucose and half fructose and they're combined, they're tied together, so it's a little bit hard to separate the glucose from the sucrose. Certainly, it takes a little longer than it does for the body to process high-fructose corn syrup, which has more fructose than glucose, and there is no binding between the two, so both the glucose and the fructose hit use very hard, and I'll talk in a little bit about what that means.

What about starches, refined starches? They're sugars, too, right? The enzymes in the mouth convert starch to glucose in seconds, so we get the spike and the neurotransmitter buzz from starch as well as from sugar.

Chocolate? Any questions about the addictiveness of chocolate? Maybe one of the more complex drugs on Earth, well known for it's ability to kill dogs. Anybody here not know about that?

Gluten-containing foods can be highly addictive to many people. They're known as comfort foods, doughy things, right? Pasta, pizza, bread, and I'll explain in a little bit how that works.

Casein, one of the proteins in milk products, has a similar highly-addictive effect on the brain for many people and that's why mac and cheese is so popular. We've got a double-whammy there.

Finally, fat is intended to be attractive to us. Some people can get hard-drug addicted to fats, but not nearly the number of people who get addicted to carbohydrates, refined carbohydrates, sweets and starches.

I'm hopeful that 2012 might be the end of high-fructose corn syrup. There's certainly a lot of momentum against it, but we are up against a commercial issue, which is that it's a lot cheaper in this country than sugar. In other countries in the world, they're not using it, because sugar is very cheap, but there's a lot of motivation to use high-fructose corn syrup, but why not? We don't want to use it because there's something about it. It's increased, since its introduction in 1970, it's increased US sweets intake



by 25% and soda intake by 135%. It contains at least 5% more fructose in this unbound free-form than sucrose does. I don't want to make it seem like sucrose is some wonderful thing, but I do want to talk about how the sucrose is 50% fructose, 50% glucose. The body knows how to handle glucose. It does not know how to handle the volume of fructose that it's getting.

What's the problem with fructose, whether it comes from high-fructose corn syrup or from sucrose? It's twice as sweet as glucose, and it produces equal amounts of triglycerides, only the triglycerides last in the body for almost 24 hours. When we talk about heart disease and our diet, it looks like fructose plays an enormous role. It's the fatty liver syndrome is due to excessive ingestion of fructose. Fructose is processed in the liver. It has a unique way of being processed in the body. Partly because of that, it's unique way of being processed, it has three more addictive potentials than glucose.

Here we go with these satiety hormones: insulin. Insulin is not released after an infusion of fructose. The body does not know that we have ingested an enormous gob of sweetener, so we keep on eating. We don't get the message. Insulin actually helps us to stop eating. When insulin levels rise, there's just a sensation of "I guess we shouldn't be eating any more." Leptin is another appetite suppressant that is not activated by fructose, so the body doesn't know, again, what's happening, so the addictive momentum ...Finally, it stimulates Ghrelin, which a hormone which increases our appetite. We're learning more and more about just how we're getting addicted, here.

Remember that our goal is to eat traditional food. If you happen to know what your great-grandmother served, eat it. A lot of us don't know, but some of us do. I had a woman come to me, spoke up at a lecture I gave at Sonoma State, and she said she was from Nicaragua, and she said she was, and, again, tremendous weight gain since she go to this country and she'd been on a lot of diets and she was fed up with it and she was going to go on a monitored fast of 400 calories. I said, "Please, before you do that, tell me one thing. Do you visit, do you go back to Nicaragua?" She said, "Yes." I said, "Well, when you go back, do you continue to gain weight?" She said, "Oh, no, I lose weight, always lose weight when I go home." I said, "Well, do you restrict, do you try and starve yourself so you'll lose weight before you come home?" "No." I said, "Well, could you eat those same foods in this country?" She said, "Yes." I said, "Please do." It never occurred to her. That's how effective our PR is. The glamour of our food knows no bounds, and the addictiveness knows no bounds.

There is another factor that kicked in in the '70s, and it had to do with our falling in love with a non-traditional body type. Hardly anybody looked like Twiggy, but I can tell you that we thought that we were gorgeous. Most of us were about the same size as our idols, Marilyn and so forth, and we were a country of very confident women. When we started dieting, it was just for fun. It was just like when we wore bustles or did other weird things, fashion things. But this is the kind of fun we used to have being ourselves, and not trying to be a shape that was totally inappropriate.

The price tag for our low-calorie dieting has been immense and silent, but it's one of the reasons I wrote *The Diet Cure* and called it *The Diet Cure* because I wanted a cure for the scourge, the voluntary famine that is low-calorie dieting. It's completely unsuccessful as a long-term weight loss technique, right? Anybody have any question about how successful it's been over the years? In fact, everybody gains more weight than they ever needed to lose in the first place and it increases our appetite in our over eating and slows down our metabolism so that we are absolutely doomed to more weight gain. It's a great industry.

This is another reminder, please don't fall for modern diets. Keep in mind that one of the earliest pioneers in inventing a new, wonderful diet was Kellogg. There are two chapters in *The Diet Cure* on this dynamic. I really want you to become aware because we are doing new dieting, now, right? A lot of people don't do formal diets anymore, most people don't anymore. They are just under-eating all the time. It's low fat, low cal as much as possible, skipping meals, cleansing, fasting, basically restricting in all kinds of different ways that we've confused with healthy eating.

Here's just some of the things that happen as a result of voluntary starvation a la low calorie dieting.

I think I'm going to skip this. Something happened to this unfortunate PowerPoint. What it really was trying to say was that we've gone, that we veer now between not eating much and eating a lot of non-foods, so that the malnutrition impact is magnified tremendously.

The effect on the brain is what I'm really here to talk about. The brain is in charge. As someone earlier said, "it's in control that's walking around supporting it." The specific neurotransmitters that I'm going to talk about are the real problem. Our starvation diets have prevented us from building up the mood enhancing chemicals that we were born and designed to make, so that we more and more need drug effects, specifically from sugar, to feel decent for a minute.

Let's just talk about them for a second. Serotonin, our natural anti-depressant, inner sunlight. Females just naturally produce quite a bit less than males, and then we diet and within 8 hours, our levels typically go below normal levels. The same is true for endorphin, our natural opiate, our natural pain killer, our comforter. Females make a lot less than males do. If you wonder why your partner, your male partner accuses you of being too sensitive and you accuse your male partner of not being sensitive enough, it's really hard-wired. We don't have a lot of pain killer, women, and the more we diet, the less we have, and therefore the more we want to eat and we are the ones who are struggling the most with our weights.

GABA is our natural tranquilizer, and a lot of people overeat because they are too stressed. The food will temporarily stimulate some GABA activity and make us feel a little bit less stressed. Finally, up in the right-hand corner, the red neurotransmitter, well, it's a family of neurotransmitters: Dopamine, L-Dopa, norepinephrine, and

adrenaline, which give us energy and mental focus. A lot of people use chocolate in particular for that, but skittles is a big one for mental focus in my clinic.

Here we are with our neurotransmitter deficit, poring sugar in for a few minutes of relief. What are we going to do instead? We're going to make more neurotransmitters. The more neurotransmitters we have, the better we feel, and the less vulnerable we are to the need for sugar. Neurotransmitters are made only from very specific amino acids found in protein-rich foods. There are 22 amino acids in total, we need maybe five to restore our brains to traditional levels.

We can't get it out of our diet. Why? Why can't we get it out of our diet? All we need is protein. Protein three times a day. Why doesn't that fix everything? Because we don't, we're not interested in protein. We just want sugar! And starch! So, to try and get somebody to eat the very foods that would save their lives is impossible because of the addictive nature of sugar. Therefore, we have to be, I do want to make a point because one of the modern diets, vegetarian and vegan style eating, is quite low in protein and, fortunately, we do have some humane animal slaughtering and pasture-fed options, which we found, therapeutically, are absolutely required, at least initially, in generous amounts.

We're going to take these amino acids as supplements, as concentrates. We've figured out which specific amino acids the brain needs to make the four appetite and mood regulating neurotransmitters that I just described. How long does it take for these amino acids to take effect, turn off the cravings and turn on the positive moods? Literally, ten minutes, at the most. At the most. Five is more like it. We do it in my clinic all the time and we watch people change before our eyes because the amino acid supplementation is brilliant. Free form, the amino acids get right into the brain and literally, within moments, the brain is embracing them and creating new neurotransmitters and the effects are extraordinary on both craving and mood. I'm talking as someone who's been using these amino acids therapeutically since 1986.

One of the things that's most remarkable about them is that, over time, between three and twelve months, typically, they create permanent changes in neurotransmitter function. Many people have a genetic tendency to not make neurotransmitters generously. The presence of these concentrates corrects that. We're talking about epigenetic process.

This is a study that was done by our hero. If you don't know about Kenneth Blum, I want you to worship at his shrine, although he's still living. He was a, he is a neuroscientist who told the world about the amino acids and said, "No other neuroscientist will tell you the truth because the pharmaceutical industry has paid for their research and required them to keep the facts a secret. The facts being that we don't need medications to increase serotonin levels, we just need an amino acid that the brain will instantly convert."

He put together a relatively low-potency blend of the amino acids that would target all four of the neurotransmitters that affect appetite and mood. This is what

happened. These were people who had completed an optifast year and had lost a significant amount of weight. At the end of the year, half of them were put on amino acids blend, and half of them were not. The people who were put on the blend had 70% less cravings and binge eating than the others and they regained 15% of their weight, instead of 42%. Now, this was a very weak blend. I'm not recommending this blend to you, but it was the pioneering effort. What we can do now is to tailor to ourselves, to our friends, to our clients, to our patients, the exact amounts of these amino acids that are needed.

If we've got somebody who is deficient in serotonin, how do we know? We do not know because we did urine testing. I want to make a very, very strong point about the drawbacks of urinary neurotransmitter testing for those of you who know about it. There are so many erroneous results. But what we do know from cerebral spinal fluid testing and from blood platelet testing, very accurate ways of measuring neurotransmitters, is that these lists of symptoms, this particular one is the list of symptoms of serotonin deficiency, are very, very accurate. When we give this list as a questionnaire to our clients, and it's in the book, in both books, actually, *The Diet Cure* and *The Mood Cure*, people identify who they are, they know that they are low serotonin eaters. They tend to eat more in the afternoon and the evening because serotonin levels drop as the sun drops in the day, and they also have these other traits, typically. Not all, typically, but many, often: insomnia, negativity, depression, worry, fear, low self-esteem, panic, irritability, and hyper-activity. All of these things fall to the side when the brain is fed serotonin building fuel.

What is that? The protein in food converts, is torn apart in the stomach, and whatever tryptophan is in that beast is sent into the body and into the brain and is converted into serotonin very, very quickly in the gut, in the brain, and elsewhere.

These are the two fuels that the brain can use to make more serotonin and stop that particular kind of carbohydrate craving that gets worse in the afternoon and evening. Some people do better on one than the other. We've found that about 80% of people do equally well on them. There are some differences, and I make a note here that when insomnia is a major problem, we have much more success with tryptophan than 5-HTP. We always recommend that people try all these things at the lowest dose, which is 50 milligrams of 5-HTP 500 of tryptophan and raise as needed. If you don't feel anything in 15 minutes, take a second dose. Directions are replete in both books.

This is someone with a major depression and major carbohydrate addiction who had her brain scanned at Daniel Ammon's clinic. Her husband was a friend of Ammon's. He told her that she had the cingulate from hell because, the cingulate is the archway at the top of the brain with the abnormal white and red bodies in it. That's the part of the brain where most of the serotonin is made. She had major deficits in her ability to produce serotonin. He suggested that she come to our clinic, because we were so good at helping people with compulsive eating problems and she did come. Three months later, he took a picture of her brain again. She was completely free of both the depression and the compulsive eating, and, in fact, went on to be willing, at some

price professionally, to be the subject of an NBC special on alternatives, alternative approaches that was aired all over the country.

This is a study that just confirms it, an old study done in the UK, not in the United States. I guess you all know why tryptophan isn't so readily used in this country now? Anybody who doesn't know? OK. Tryptophan was the most popular nutrient in the country, particularly favored by psychiatrists because it was so helpful with depression and, particularly, insomnia. When Prozac came onto the market, the first SSRI, they wouldn't buy it. Somehow or another, a disreputable company in Japan made a bad batch and sent it knowingly, they testified in court later they knowingly sent this contaminated batch to the United States, and it killed a number of people and made at least 1500 people very, very ill, some of whom never recovered, although they didn't die. The FDA stepped in and asked for a voluntary ban, which lasted for over 10 years, from 1989 actually until 1995 they finally lifted it, so we didn't have ready access to this. In 1997, we got access to 5-hydroxytryptophan, which is very similar, thank God. But now, tryptophan is available, health food stores on the web, etc.

This kind of success with the worst kind of compulsive eating, sugar bingeing, the bulimics of the world, we see it all the time. We love having bulimics come to our clinic, because it is so easy to fix them. With tryptophan, and a bath of nutrients that always include B vitamins, particularly B6.

We've just taken care of a huge percentage of sugar addicts who eat because their serotonin levels are inadequate, and now we're going to go on to those people who overeat because they need pain killing. They need a treat. They need something to look forward to at the end of the day, or at any time of the day. The foods that specifically target the opiate receptors, the pleasure centers are sugar, but also gluten-containing grains, chocolate, and milk products.

This is how beautiful our own natural opiate is. If we don't have enough, we are looking for pleasure in all the wrong places, like this place. She's off in dreamland now. Where's my ... How many people here are terribly fond of doughy things? If they're going to eat something that they don't think they should, it's going to be made out of dough, right? It's cookie, it's bread, it's pasta, it's ... These are the kind of people that when I ask them what kind of ice cream they favor, it's always cookie dough ice cream. Those are good examples of people who have both the gluten addiction, because gluten, when it's processed, converts into a substance called exorphin. It's almost exactly like endorphin and we get, we literally get, a morphine-like pleasure experience, which is why we keep coming back.

There are those who are so addicted to milk products, particularly cheese, which is high in casein. When casein is processed in the body, it converts into something called casomorphin, which, is again, a morphine-like molecule that just can't be beat. When you put the two together, you have a highly addictive substance, and when you add sugar, as in cookie dough ice cream, you have a triple addictor in that it also includes

chocolate, which has at least four different addictions in it, even without having sugar added.

Of course, with exorphin addicts who are over-eating gluten and milk products, typically there are major GI problems and / or respiratory problems that need to be attended to and it helps to motivate people wonderfully when their IBS disappears and so does their food addiction.

How do we get rid of an exorphin addiction, endorphin-based pleasure addiction, an opiate experience from food? We use these extraordinary, another, we have two options again here. How do we raise endorphin levels within 10 minutes? We use an amino acid called diphenylamine, with or without its twin, l-phenylalanine. The l-phenylalanine is a little bit more stimulating for those people who are tired and would also like to get some energy, as well as pleasure from their food. The DPA is entirely used in the brain to slow down the destruction of endorphin. Presumably, some people destroy their, we all make endorphin and destroy it all the time and some people destroy way too much. This slows that down. It allows the body to stockpile endorphin, to make us, to give us tremendous access to lots more endorphin so we don't need to reach out to sugar and milk products and breads and so forth to get that lovely comforted feeling. These, again, take effect in about 10 minutes.

Finally, what do we do for all of the hypoglycemics? All the people who can't control their cravings for sweets because their blood sugar has dropped so dramatically? It isn't that the brain doesn't just need the four neurotransmitters, which it does, but it also needs level glucose. The brain doesn't store glucose, so it's a job to keep the brain fueled.

This is the amino acid for this particular job. This is an extraordinary amino acid, l-glutamine, which we find beneficial in about three minutes, because most people will open the capsule, empty it into their mouths, it's very pleasant tasting, and the whole scenario of hypoglycemia disappears, the irritability, the over-stress, the headaches, the cravings, the fatigue, and we get this nice, even, strong, grounded sense that eliminates the desperate need for sweets, which the brain experiences if the blood sugar drops too low because you haven't eaten recently, or you've eaten sweets and levels go up and then they're stored in the muscle and you have no access to glucose anymore. There are all kinds of scenarios going on all the time to diminish the availability of glucose to the brain because of the way we're eating. It has many, many other uses. I won't go into it, but it's an extraordinary nutrient.

In addition to that, we have found that 800 to 1000 micro grams of chromium taken throughout the day in divided doses along with the glutamine, or at, with meals, is tremendously beneficial. There's some people who need both, many people need both as a people, we're tremendously deficient in chromium and processing sugar depletes us of our chromium stores. It's a real irony. Bringing the chromium back and using the glutamine is very, very helpful. Taking a multi that's very strong in the B vitamins, including Biotin, which is another blood sugar regulator, is really important and there are two multis that we have found to be extraordinary for balancing blood

sugar in combination with the glutamine, True Balance by Now and GlucoBalance by Biotics contain high levels of chromium that you need, so you don't have to take a lot of different supplements, plus a lot of B vitamins, including lots of biotin.

This is a little summary about the hard-wired nature of addiction. The foods themselves are designed to addict. Low calorie dieting increases our vulnerability. Neurotransmitter deficits result from a high-sugar, low calorie diet, alternating, obviously. Hypoglycemia is a huge factor, but yeast over-growth and sex hormone imbalances can play a part. All of these factors in sugar addiction are covered in The Diet Cure. So get it.

Would any of you like to discuss this, ask any questions?

Speaker 3: I noticed you listed raw food diets as a modern diet to be avoided. Could you explain that a little bit?

Julia Ross: We found that most people who embark on a raw food diet end up eating a tremendous amount of Omega-6 fats, inadequate protein and sneaking sugar and potato chips on the side. If it works for you, great. But if it doesn't, don't be surprised. It's not a traditional diet that any culture on earth has ever espoused.

Anybody else?

Speaker 4: I was wondering if you could speak to for a child, a 6 year old girl, I'm doing nutrition counseling and the mom, we're addressing the nutrition, but I'm wondering about glutamine for a six year old child. Would you recommend something like, I've thought of like gymnema sylvestre or something like that.

Julia Ross: Any example is a great place to start, and I hope, at least one of you will use yourself as an example, but, with a child, you always want to start with a very low dose. Open a capsule and use a quarter or a third and then raise it as the, as needed. But, how do you know if it's needed? Which amino acid should you give? You were asking about how do you know when to give supplements. In the case of the amino acids, we have these very well established symptom pictures. Page 123 in The Diet Cure has all the symptoms of each neurotransmitter deficiency, which amino acid to take, and what doses to start with, and what the average range is of use.

If we've got a 6 year old girl, or a 60 year old girl, who's craving nothing but macaroni and cheese, for example, I'd love to give you my macaroni and cheese, this is an 11 year old girl who was brought to us by her mother who had terrible digestive problems until she gave up gluten-containing foods and milk products, but she could not get her daughter to do it. In fact, her daughter was becoming a beast, more and more angry and abusive and difficult to live with, although brilliant, talented, and wonderful at other times.

She called us and asked us if we worked with children and we said, "Well, what's the situation? Sure." She brought her over and I asked the little girl what she was so mad

about all the time and she told me. I said, "Would the two of you look at this little list of symptoms and tell me which cluster of symptoms describes your daughter best?" They both looked and they both agreed that low serotonin was it, because of the irritability, she didn't sleep well, she craved her macaroni and cheese every night. She didn't eat anything much that didn't have both wheat and sugar in it, unless it had wheat and cheese in it.

I said, "I don't think that your actually mad at your mother. I think that your brain is empty in the area that should be making you happy and I think I have the food that could fill that part of your brain. Would you be willing to try it?" We gave her a, in her case, 25 milligrams of 5-HTP, which is our child's dose. It's a very tiny, LifeLink makes it, it can be chewed up. It's neutral tasting. She chewed it up. She was actually quite cooperative and maybe five minutes later she got up out of her chair where she had been sulking and walked over to her mother's chair and sat on her lap. This was progress. Then she whispered in her ear something I couldn't hear, and then, she stood up and sang us a song. It was "You are so beautiful in every way no matter what they say." We wept. People in the outer office could hear, it turns out she was a belcher.

Anyway, her mother, they were supposed to come back in two weeks, and her mother called in ten days and said, "You know what, we don't need to come back. She's fine." Here's the best news. She said, "As far as I'm concerned for her health is that, instead of crying and having a tantrum when I asked her to try going off of macaroni and cheese, and so forth, she said, 'OK.' She's been off for almost two weeks and she doesn't have any more tummy aches." We saved [inaudible 01:11:03] IBS, God knows what we saved her from with a little tiny bit of 5-HTP.

Speaker 5: I'm curious about what companies might you suggest for to buy amino acids from?

Julia Ross: The disreputable company that made the bad tryptophan stopped making tryptophan, so we don't have to worry about them. But in general, I prefer amino acids that are made by a company called Ajinomoto in Japan. It's a huge, huge, huge company making very high quality amino acids and MSG, they're really famous for their MSG, unfortunately. You'll see that some of the over-the-counter, tryptophan for example, is specifically made by Ajinomoto, which has been making it for 40 years and never made a contaminated batch. It is distributed all over the world, all this time that the ban was going on in the United States, with no problems. To tell you the truth, we have been using, other than tryptophan, which we always get Ajinomoto sources, for example, Montiff probably makes the purest amino acids possible. Their concern for purity is extraordinary and the founder of the company is another hero who introduced amino acids to the world, to the United States, anyway.

We have been using other sources and not finding any difference, other than tryptophan. Tyrosine, DLPA, DPA, many different companies sell them and get them from different manufacturers and we find them to be equally potent. Amino acid supplements are made from yeasts, so they're something that even vegans will eat and it's a life saver for them, since they're not getting enough protein at all.



Do you have your hand on your head or are you ...

Speaker 6: Oh, I'm sorry. I raised my hand up, but I [inaudible 01:13:32]

Julia Ross: That's okay. Did you have ...

Speaker 7: This is a very general question. Some doctors tell you to take medications with meals, some say before meals, recently I had one doctor say, "Take it at night before you go to bed." When is the best time to take medications?

Julia Ross: I don't know about medications. They vary quite a bit. For example, somebody taking ADD medication would never take it at night. They'd never sleep. They don't tend to sleep very well, anyway. In terms of amino acids, generally, between meals, up to about 15 minutes before a meal and an hour or more after a meal.

Speaker 8: Since chocolate's a good source of phenethylamine, is the problem with chocolate the sugar in it, or what's the problem with chocolate?

Julia Ross: Well, there are so many. It has, in addition to the, it has an opiate-like content. It has a stimulant. In addition, it's always combined with some sort of sugar, which can affect all the parts of the brain in a potent way, and, usually, there's milk in it, right? Most chocolate is milk chocolate, and so you've got four different addictions going on in one piece of chocolate.

Speaker 9: I don't know if you alluded to this earlier, but how do you determine if you're going to recommend 5-HTP or tryptophan to someone?

Julia Ross: We ask people whether they have serious sleep problems. If they do, it's more likely that 5-HTP will make those problems worse, whereas we almost never see that with tryptophan. That's the primary thing, but we always individualize. That's what we encourage, I encourage readers to do is try it. See if you feel wonderful in ten minutes. Great! Or if you feel semi-wonderful, then take a second one until you actually feel complete relief from the appetite and mood problems that you're experiencing. If you don't like the way you feel on 5-HTP, then switch to tryptophan, or, if you start with tryptophan, switch to 5-HTP.

Speaker 9: Could you use both?

Julia Ross: Could you use both? Usually, you wouldn't need to because they do such an identical job, because 5-HTP stands for 5 hydroxytryptophan.

Speaker 10: Do you know an upper limit for glutamine intake?

Julia Ross: I don't know an upper limit for glutamine intake because I know dietitians who work specifically with AIDS patients who use 50 grams a day and they eliminate the diarrhea that kills so many AIDS patients. But the average amount of glutamine

needed to stop the hypoglycemic cravings for sugar is two capsules, 1000 milligrams. Some people need three. That's usually between meals, three to four times a day. Some people need it at bedtime so they don't wake up craving in the night because their blood sugar dropped.

Speaker 11: Assuming you're doing everything right, how much fruit should you be eating, and is there any fruit combining that you should do? My second part of the question is, I'm a PE teacher in middle school and we're, half my kids do not fall inside the healthy fitness zone. In other words, they are unfit. Where do I start?

Speaker 12: By praying.

Julia Ross: Please help me to spread the word that you can rescue your child from the cravings for the junk by feeding that child protein morning, noon, and night, and other whole foods, but protein has to be in there in order to fuel the brain so that the neurotransmitters will start emitting the signal, "Oh, I don't really want that whole coke," or "I'm not even interested. I really want that sandwich, or whatever Mom made for me." The kind of things we ate in the '60s that satisfied us. But, I think regulation is also going to be another part of it. I just want to stick with the biochemistry today.

Speaker 11: [inaudible 01:18:20]

Julia Ross: Oh, the amount of fruit. Again, it has to do with the individual. If you have an apple and you can't stop and you have to have a peach and you have to have a banana and you have to have an orange, you can't have fruit for a while, because it's too sweet for you. It's triggering that compulsion. You want to turn off the compulsion with the amino acids, and then eat as much as you need. We recommend three pieces a day, but some people need less.

Speaker 13: I think adults have given up their relationship with their children and allow their children to pick out their diets. I think that's the number one problem because the family is broken down and they sit around and watch TV, eat pizzas and crap.

Julia Ross: It's broken down, but I think a lot of it is that the parents are eating through the kids. "Oh, it's there." The parent's excuse to eat this stuff, too, because they're so addicted. This addiction doesn't play favorites, adults, children, people of all ages, sexes, whatever.

Speaker 14: I'm puzzled you talked about addiction to fat, whereas, as far as I can tell, most people probably don't eat enough fat. Can you say more about that.

Julia Ross: I agree they don't eat enough fat. That's why I was saying that part of our current form of dieting, which is to eat low fat, is a disaster for us. We need to go to traditional fats. We need to go back to butter, ghee, coconut, palm, the saturates. I explain how safe and healthful they are in this book, so, and reference it, so that if

you've got people questioning you, "Saturated fat? No!" You'll see how well documented their safety is. If there's a traditional food in the world, it's fat.

Speaker 15: Would you kindly speak to the young parents who aspire to give their children the power bars in place of a meal?

Julia Ross: Power bars are mostly sugar, so they have to be out. No more sugar. That was easy.

It's twenty-five of ten, what are we doing here about time?

Speaker 1: Let's take about two more questions, I think.

Julia Ross: Two more questions? Okay. Who hasn't asked a question?

Speaker 18: I had a couple questions. You mentioned TrueBalance and then one other supplement that was good for people with sugar issues ... My other question is, do we have to worry at all about ... Can you hear me?

Julia Ross: Yeah, but I can't talk without the microphone.

Speaker 18: Do we have to worry at all about amino acids competing with other amino acids?

Julia Ross: GlucoBalance by Biotics was the other multi that's so good for stabilizing blood sugar. The reason that we take these individual amino acid concentrates away from food is that so the other amino acids in food won't compete, so that these aminos will get right into the brain without any competition from the meal.

Speaker 1: Last question.

Speaker 19: I work with DVS labs and Dr. Mariens, he's used a lot of the amino acids usually in a ten to one ratio, like L-tyrosine to the 5-HTP, and he does the indirect urine measurements from the kidneys with these different amino acids, he gets really good results. I've also seen your work in your clinical results, as well, so I see both ways working. What's your take on that?

Julia Ross: Thank you for asking that. Does anybody else know about this raging debate among the amino acid aficionados? In the US. About whether we have to take, everybody has to take tyrosine along with their 5-HTP if they're going to take 5-HTP or tryptophan. We have found that there are no hard and fast rules when it comes to our brain chemistry, and that each one of us is perfectly capable of individualizing exactly which nutrients we need. Tyrosine is very stimulating. Tryptophan is very calming. For someone who is low in serotonin, they're usually over-stimulated and they don't need any tyrosine, thank you, because they're already compulsive, and obsessive, and hyperactive, and having a difficult time slowing down and relaxing, and that's what we want them to have is the tryptophan or the 5-HTP, which is going to allow them to relax, and slow down, and smell the roses, and feel that inner sunlight, see the positive side of things. There are other people who have ADD and they are low in

serotonin. The ADD people need a lot of tyrosine to get that mental energy and focus going, but they have a hard time sleeping, because they don't have enough serotonin. We give them tyrosine in the morning and we give them 5-HTP or tryptophan in the afternoon and evening, so they don't compete, but they get what they need.

I'm just finding that [inaudible 01:24:07] and urine testing can lead us astray. We really need to stick with the clinical picture. If we give people a mixed amino and they do well, great! But if they don't do well, pay attention. So many of these urine testing labs just say, "If someone doesn't do well, give them more!" Which is kind of like giving people anti-depressants and when they become suicidal saying, "Well, I guess the need more!" We have to be very careful with these brain nutrients to really be sensitive to the brain response that we're targeting.

Thank you very much!

Speaker 1: I tell you what, you know, this was a wonderful talk, and this is a very important topic and it's so wonderful to have. I just want to put in a plug for what we're doing, because this is a very good example of the kind of medicine that Linus Pauling recommended, which is to find out what natural chemicals are important in your body, and to find out which of those are deficient and then replace it and eliminate the deficiency and thereby solve the problem. That's exactly what we can do with amino acids and your research is wonderful.

Julia Ross: Thank you.

Speaker 1: Thanks a lot. OK, go ...

Speaker 20: It works like gangbusters. I'm a former patient. I guess, okay. It works. It works long-term. It's a more or less permanent change in your biochemistry, and I just want to say that in public to encourage anybody who's thinking about it, to give it a try, because it really does work.

Julia Ross: I didn't pay him.

Speaker 21: I think that was one statement that was made the last time Julia was here, that basically, in her thing, in her organization up there, they have, she has taken many people that have been through, I think you said fourteen and fifteen drug rehabilitation centers without a cure. They come to you, you question them and give them a pill and say, "Go sit outside." Within 45 minutes, [inaudible 01:26:20] problem. I think that's very impressive.

Julia Ross: Me, too. Usually, it's a little more complicated than that.

Speaker 1: Are we still on? You know, the interesting thing about chemical deficiencies is when you find the right, when you find out what the deficiency is and you fix it, it's amazing how quickly you get a response. Just amazing. I could give lots of examples, but the evening is [inaudible 01:26:42].

Thank you all for coming. It was wonderful to see you. Especially the new people. I hope you get the concept.