Introduction to Dr. Goldhamer and TrueNorth

Hi, everyone. This is your host, Dr. Joseph Antoun. And today we have a very special episode with Dr. Alan Goldhamer is a unique doctor with a unique approach to chronic conditions.

I've known Dr. Alan for a good five six years. I've personally went to your clinic or your establishment. It's a full establishment and you're probably one of the few that I know in the words if not if not the one that in today's world is losing long term fasting to reverse multiple chronic diseases.

And this is what we're going to focus on today is the use of a longer, fast, medically supervised fast is the longer you go, especially when you go on water, you need medical supervision is what Dr. Alan built.

He built a full care team that specializes in fasting and long term fasting for medical condition, what we call now medical fasting. And it's a pleasure to have you today.

It's going to be a wonderful episode. So thank you for your time. Glad to be here. So, Dr. Alan, do you want a little bit tell us more about yourself and how you got how you got here before we we talk more about the substance and and long term medical factor.

Well, I've done this all my life, 40 years we've been operating the TrueNorth Health Center in Santa Rosa, California, which is specialized in medically supervised water, only fasting.

And so this is all really I've ever done, all I've ever known. I've really been interested in this idea that health results from healthy living and that you can actually cause health just like diseases can be caused.

Health can be caused in the focus of causing health. From our viewpoint, it's always been diet, sleep, exercise, and it turns out fasting is a way of undoing some of the consequences of dietary excess.

And we what got you to it? The people say this is an insane idea. You branching out of medicine and deciding to build a full I mean, it's almost like a hospital that you have there that I personally visited and you have all kinds of medical personnel.

You have all kind of patients coming from different cities, different countries. It was it was pretty interesting. And can you tell me, how did you get into into that?

Yeah, well, we're a 79 bed inpatient facility. And as you said, the diverse multi doctor staff that treats 1200 admissions a year for fasting.

How the Fasting Clinic Works

And, you know, mostly what we're treating are the disease of dietary excess. So people that get overweight and develop visceral fat and develop inflammatory conditions related to hypertension and diabetes.

Yeah. Got autoimmune diseases and lymphoma, that's probably a bulk of the patients that we treat because we have more people than we can handle. We can cherry pick out the people we think we're most interested in and we do fasting from 5 to 40 days on water only, and then we have supervisory feeding and recovery.

So this is a really involved, carefully monitored process, and that's how we've managed to do it 25,000 times. And so far, everybody that's walked in has walked out.

We've published the fasting safety study. The truth is TrueNorth Health Center is really a human subjects

laboratory that's disguised as a clinic. And we are a 51C3 nonprofit organization dedicated to public education and research.

And mostly we're researching, you know, trying to figure out how to use fasting more effectively, what conditions respond to it well, and then how to document published in care of you journals, the results of what we're seeing, because it's really quite startling what doing nothing can do when you do it intelligently.

I mean, that's that's amazing. I don't know. You're at 79 beds now. And to have 1200 admissions in this is where the disclaimer as well as on TV do not do this at home.

I did not do that. You know, all of you listening here today, if you hear one of the health conditions or you're interested, you know, talk to us, talk to Dr.

Alan. If you can do something at home, that would be the fasting with food. Don't do the long term water fasts on your own. This is why Dr. Alan exists and this facility exists because you've got to be supervised.

So before we get into specifics, Dr. Alan, you mentioned what are the health conditions that you you, based on your experience, you feel are the most can benefit the most from the long term medical fast?

Well, not surprisingly, conditions that are rooted in dietary access tend to be the conditions that respond the most dramatically to fasting. So obesity and its downstream consequences, particularly high blood pressure, cardiovascular disease, type two diabetes, autoimmune disorders in general.

And the the cancer that we're working with most is lymphoma. And we have published some case reports and we've got a lot of people under study right now. It does seem to be a responsive condition.

And so, you know, we're excited to see some of the long term results that we've been able to demonstrate. And can you can you talk about if I'm you know, I have a little bit of a high blood pressure.

I'm three metabolic or early diabetic. I have a metabolic syndrome, let's say. And I just got diagnosed crossing the line towards diabetes. What would you do?

What if I come and knock on your door? How you approached me? Well, the first step is to, you know, get a proper medical history, take a look at the lab, see what's going on, assess the medications is in order to do long term water fasting, you have to first weaned off the medications with the exception of some true hormone replacement therapies or thyroid or something.

Everything is going to be stabilized and discontinued before you introduce long term fasting use that can take. Medication my my every medication, my blood sugar.

Everything but the good news is when you go on a whole plant food source free diet, it doesn't take very long before you have to withdraw the medications because people are not being medicated for their conditions, they're being medicated for their diets and their lifestyles.

And when you change the diet and lifestyle radically, you get radical changes in the presentation.

Conditions That Respond to Fasting

So blood sugars, blood pressures, inflammatory pain related conditions tend to are to be modified dramatically. And so we can, in a controlled setting, withdraw our medications safely and then introduce water only fasting for between five and 40 days.

In a case like that, when. You put them first on a plan based regimen, low calorie. Foods, we whole plant food diet. Oh, okay. And it's also SOS Free and SOS is the international symbol of danger.

It stands for the chemicals out of the food that make people fat, sick and miserable. They include salt, oil and sugar. So salt what was the O? Oil. For? Oil and sugar? Okay.

Yeah. So basically a whole plant food diet. If you do that, it's remarkable what happens. The oil, even olive oil. Oh, all fractionated oil. So all including olive oil.

You know, olive oil may be less bad than other. Was it still nine calories per gram, 100% fat? Not something we're going to use as a health promoting routine.

So it's not for it's not for the nature of the fat. It's just more to drop the calories and make sure that they're just living on the plan base. Our target is 15 to 18% of calories of fat, 10% increase in protein, the balance coming from the whole plant food, complex carbohydrates, as a general.

Rule. And how long would you put them on this nut? So as if you want? Well. It just generally the way it works is we'll do screening ahead of time. You know, half our people are out of state.

15% come from foreign countries. So we'll work with them a little bit remotely, get them on the diet, and then they'll wean down the minutes depending on their medication profile and their health. History would depend on how long that takes.

Sometimes it's a few days, sometimes it's a few weeks. In some cases, it might take several months to be able to, you know, carefully. We particularly people run neuropsychiatric drugs and other things that take a while to get people off.

So what you try to do is get them off the meds with a very healthy plant based diet and then good fasting clean with no meds except if they need something for thyroid or another hormone replace.

Yeah. I mean there are some exceptions. Like with thyroid, what you will generally do is reduce the dosage typically in half, monitor their function sometimes.

Interestingly enough, the need for medication reduces after fasting, partly there's not as much of them.

Preparing Patients and Managing Medications

You know, some of these patients are losing large amounts of weight. Some of it's because many people are placed on medications inappropriately. They don't actually have a biological need for the medication they're on.

They're using it symptomatically. And so sometimes once those symptoms are resolved, the need for medication is eliminated, but it's easily monitored and, you know, appropriately corrected.

The point is, though, drugs can become greatly potentiated during fasting, drugs that you can take in a feeding state healthily can be devastating in a fasting state because of the change in physiology.

Even simple things like nonsteroidal, anti-inflammatory and other things can have significant effects on kidney function or gastrointestinal function that you wouldn't see necessarily in the future.

That's why if a person's on prolonged or they're taking modified fasting, they can do it at home. They can do it safely. We don't have the same complications with water only fasting that needs to be done in resting state.

You don't have six or 800 calories to compensate, so you're going to get more gluconeogenesis if you too active. You know, it's a much more involved, much more complicated process than, say, the modified fasting.

However, when it's appropriate, it's very effective. And particularly if you're trying to get a tumor to break down, if you're trying to deal with resistant hypertension, if you're looking to get neuro adaptation, so you get people to eat differently.

Water only fasting has a very powerful intervention. But it's not simple. It's not something that can be easily done without a little bit of support. So I want to get into different conditions.

So if we continue with the diabetes one, what is your what is it typically stay at your clinic for 40 diabetic or prediabetic to be kind of right in so.

If the if the hemoglobin A1 C is starting at ten or less, which is our target goal for two in an institute water only fasting. If they're coming in with the hemoglobin, they want to have 16.

We're going to be doing some dietary stuff and getting them prepared, ready to be able to adapt too fast. But those patients are going to fast somewhere between two or three weeks on average.

During that time, they're going to reduce their insulin resistance, they're going to normalize their blood sugar levels. And interestingly enough, about 80% of them will be able to achieve normal blood sugar without medication.

Now, obviously, they have to do some dangerous and radical things like eat well and exercise and go to bed on time afterwards to maintain those results.

But that fasting can do the same thing that diet and lifestyle does, but much more rapidly. And the thing is, it doesn't prove adherence. If people get out of pain, their inflammation goes down, their digestion starts working, they feel better.

They're more willing to collaborate and cooperate with diet and lifestyle changes than they are when they feel like absolute crap all the time. And it was the compliance rate or what's the is it a painful process that people go through?

What I mean, this is water fast. And can you tell us a little bit about that? Yeah, it's an intense process, but not a painful process. In fact, quite the opposite.

Many people coming in with really terrible pain syndromes and including addiction to pain medications that we have to win them off of. And generally that response is good, but it's very intense and it's transient.

So you get some low back pain, you get some headache that goes away. You might get some skin rashes, detoxification, symptoms, palpitations, irritability, sleep disruption.

Sounds wonderful, doesn't it? But they're transient symptoms, you know, they come, they go, they move through. They're in a controlled setting. They're being seen twice a day.

They're you know, we're going through a whole intense we call it education. It's actually brainwashing so that, you know, after they're done, they're willing to make these diet and lifestyle changes.

So this is really an intense immersion program that they're undergoing. And once once you get into the fasting state, you get to those first few days where you're endocytosis, your brain converts to burning beta hydroxybutyrate acid instead of glucose.

And all of these, it's actually a relatively pleasant process for many people. The patients come up and they write screenplays.

Water Fasting, Symptoms, and Safety

They do all kinds of things longer fasting. It's a very different environment. Of I've done it before learning anything about fasting, before even getting interested.

This is 20 years ago when I when I graduated with with the masses in health policy at Harvard in Boston and I was moving for my first job out of state, just, you know, just happy I graduated, just backing up.

My mom comes in and we're moving and I just forgot to eat a little bit. And it went one day, two days, three days. Then I moved out of state and literally seven, eight days and no food.

And then I couldn't I couldn't go back to food. And I found it like really pleasant. You know, once the ketones start going and you're going through autophagy, just autopilot.

And I literally just started thinking, hey, let me see how long I can last. And they lasted 21 days before I started, you know, getting two bites at an apple.

And then bit by bit, I went back to two. And you know what it was? It was I had to repeat my driver's license and it was just the stress of reading the thing and then doing the thing that got me back to food.

And this is this is an. Important point, though, is that long term fasting, if not followed by careful re feeding protocol, can lead to re feeding syndrome and very serious complications and death medication is, you know, if you don't appropriately manage medication, that can be a really serious complication.

And that's a mistake that people make when they're fasting is they're too active, so they get dehydrated or they come off the fast inappropriate and then they end up with problems from re feeding issues.

And here it's it's so important to clarify to whomever is listening is Dr. Alan in his hospital or clinic is or in-patient the focus is you have lymphoma lymphoma of autoimmune.

The meaning is because long term fast doesn't come with any side effects that comes with being a you're going to lose a bit of muscle. You're going to feel the fatigue a little bit, you're going to metabolic rate.

And these are things I'm going to ask. You have to adjust for those. I know you have to adjust for those. But what we're trying to say, it's I'm trying to help people not to go at home and do on their own a ten, 14 days fast way.

So these interventions are more balanced towards giving you short term drastic benefit because you have a health condition. He he doesn't do this for somebody who just want to fast and is healthy and is.

So this is an important intervention, a very serious intervention, but a very effective intervention. And it's worth. A couple of points. You know, interestingly enough, we just did our first study looking at cardiometabolic changes in healthy people.

Yeah. And it turns out the magnitude of the change in Normotensive supposedly healthy people is actually even larger than in sick people. So it may be that people that get some of the best benefit of benefit of fasting or preventative application with short term fasting, but this.

Is, you know, with whereas with prolonged and with the fasting, you know, we're recommending people do three times per year with five very fast. But one of the things I want to chAlange, though, before I get forget about it, is that we did a DEXA scan study where we actually tracked people's body composition changes after a long term fasting.

And a lot of the old wives tales are not true. For example, if you look at people before fat, you know, baseline after fasting and then at six week follow up, the bone mass is not reduced despite the fact, you know, bed rest, the lean mass percentage was higher at six week follow up than it was at baseline.

It goes down during fasting is primarily fat and preferentially visceral fat and the fat continues to come down even after lean tissue is replenished during recovery.

So this is not a situation when it's done properly where the people are depleting their lean masses. They are in fact predominantly mobilizing fat and visceral fat.

No, I agree. And the percentage of lean body mass would be because they're losing more fat. And this is an

important theme in with we see it a lot with prolonged right is fasting acts more doesn't act like a like a low calorie diet where the body is tapping into muscle and fat together or it will go below resembling where you're losing both.

Proportionately, fasting acts as a stress and the stress preferentially goes to the fat and particularly in body mass. Why?

Diabetes Remission and Body Composition

Because also it increases growth hormone. The stress factors and the growth hormone and stress factors go and tell the muscle, hey, you got to maintain.

Why do it in a stressful situation? We're going to need you to go find food. This is human evolution in the body. If you have a little bit lower calorie this way.

Most of the chronic low calorie diet, another turkey. In the long term to downgrade your metabolic rate, you lose a little bit of bone, you lose a little bit of muscle.

And this is what we're seeing with the we're going as epic as well. They mitigated that they're mimicking the same effect fasting does. The opposite goes after the fat and tries to spread the muscle.

Now, I agree with what you're saying is proportional to lean body mass is less decrease than the fat. But you will you will have a little bit of a decrease.

And this is I said all this to introduce the notion of re feeding, where it's important to go back and say, okay, now that we reset your body, we're going to give you a little bit of protein, some training, so that you gain back your muscle mass without gaining back the fat faster.

In one of these examples of a 15 year fasting, you know, first last 18% body fat, 4% lean tissue, 55% of the total body load of visceral fat, though. And the lean tissue, of course, is replenished, Wolf, that continues to come down.

So you can read proportion. Your body. But the problem with water fasting is you do need to rest when you're doing it because your biggest burn glucose is your brain and your muscles.

If you're overly active, you increase the glucose need that's going to increase gluconeogenesis to meet that glucose demand. Otherwise, beta hydroxybutyrate acid becomes the dominant fuel in the brain.

And so water fasting creates a unique opportunity to make that conversion possible. And obviously, we're we're a softer version of what you have. We did the five days and we do it once a month.

We just launch a four month ago or our diabetes remission program we call a neutral health. And, you know, we were thinking 6 to 12 months. We started reducing medication because they're only doing five days a month.

And I just interviewed today two of the first patients and one is cut half of the medications by month four, meaning just five times, five days time. So it's so 20 days.

And then the other person is going to be off medication on all medications. And month four again, that everyone is going to achieve that. And when we say month water, we're just mean five days four times that before and in the secret the secret in here is threefold.

And I always explained this to the patient and the same is happening probably with you, Dr. Alan is is protection of lean body mass, which is the fastest burning of calories.

Right. So so we're helping you reset your tastebuds to eat healthier and better and the plan base and the colon and all of that. But at the same time, we're keeping the engine, the engine of the burn there.

Number two is the insulin resistance and tapping into the visceral fat, the number three, which is why the summit is called fasting and longevity, is autophagy.

There's rejuvenation, you know, when when you go into fasting and the prolonged fasting, whether with prolonged or with with Dr. Alan, there's what's happening in the body has to make some tough decisions.

Right. And guess what? The tough decisions are they going to tell the cells to rejuvenate or the Nobel Prize in medicine and autophagy? And what we see is the body is turning old cells, the senescent cells, the zombie cells get to get rid of you. Right.

You just consume calories. You're not producing anything there. And the senescent cells are very detrimental because they they induce what we call exponential aging.

They start producing some you know, they irritate the immune system. Then you have a higher inflammation called inflammation. They start create this accelerated aging ambient in the body.

And by getting rid of those cells, by rejuvenating the current one and by pushing the stem cells, you're getting a younger biological age, you get a younger you is always away from the onset of the chronic disease or a better way to deal with them if you have them.

And that's the variable. This is why we titled this some of the fasting in longevity. Some of these are the key things your muscles preserve. You're more vibrant and younger with autophagy and at the same time you reverse the metabolic or reset your metabolism, which is 73% of Americans now are overweight and 90%.

The latest statistics of American 90% have certain metabolic issues, whether it's inflammation, overweight, cholesterol, triglycerides. So this is why this prolonged fasting is working.

So well, because it's tackling all the three. Like Dr. Alan, you said, it tackles the essence of the disease. The pills are just compensating for the behavior, for the nutrition.

So, I mean, as I see it, the the advantage of the proline type model is, you know, it's practical, it's safe. And you're able to do it on an outpatient basis.

Autoimmune Disease and Inflammation

The the advantages to the long term water only fasting is it gives you a much more intense, you know, response, particularly for patients were whatever else they're doing isn't working well enough or fast enough.

Yeah. And so I want to talk about autoimmune. Can you can you talk a little bit about why fasting can help autoimmune diseases? Yeah. So what I can tell you is that what we see in terms of all measures of inflammation, whether it's, you know, the acute phase, reactive proteins, whatever you want to look at when you fast, it has a profound impact on inflammation, initially increasing it and ultimately significantly decreasing it.

We just published a paper actually in Lancet, a preprints that talked about this increase in inflammatory inflammation happens during fasting. We have another study now in that population looking at where are they at six weeks post fasting.

And of course, not only does it normalize dramatic reduction in overall inflammation, so the limited rate process is part of the healing process. But the net effect of chronic inflammation that fasting has is quite profound.

But, you know, you can get a little bit confused if you just take one little timepoint and look at one biological marker. You have to really look at the big long term picture to get a sense of what fasting is actually doing.

And of course, in managing rheumatoid arthritis, ulcerative colitis, ankylosing spondylitis is asthma, eczema, psoriasis. These conditions respond profoundly, consistently to the combination of fasting and then, of course,

health promoting diet as well.

Obviously you can't go back to greasy, fatty, slimy, processed foods and expect to get the same lasting effects. In a get a lot of people sending us pictures of their psoriasis on their and their withdrawal on on their on their skin because you can see them easily on the skin.

And I bet with with your clinics it's the same. So you've you've you've had patients with psoriasis said say what else? Well, we've actually published some great pictures on plaque psoriasis, you know, showing before, during after without the use of medications really quite in a separate keratosis that drop off during fasting you know they make very great pre post pictures basically any of these autoimmune diseases tied to gut leakage tend to be responsive to fasting.

And I'm sure you see the same the same kind of conditions. To ad we know there are 33i mean there are multiple dimensions of fasting impacts autoimmune, but they're three big ones.

Number one is the leaky gut. And you mentioned that, you know, every day the food that we're eating is damaging. The gut lining and our insides so we're leaking is why it's called leaky gut.

We're leaking molecules that they're not supposed to get into our blood when they get in, the immune system attacks them and the immune system sometimes does a mistake and cross-match those with one of our organs.

And this is why it starts attacking us. This is why autoimmune disease is increasing. You know, with it should an increase if it had if you know, we were thought it was genetics right any way it's increasing its environment.

It's what we eat is what we drink and all of that. So the fact that you're fasting, you're helping the healing of the gut lining and you decrease that, you know, leakage into the blood.

And by the way, now we're there's leakage into the brain. And then a lot of discussions about whether Alzheimer's is a type three diabetes is merged with some leaky gut and some you autoimmune process as well.

So that's that's the first benefit. The second benefit is we see that the body when you fast does not allow high calorie expenditure and one of it is when you have a hyper excited immune system replicating the T cells, attacking, raising the body temperature a little bit, the body shuts down.

That is like, hey, I don't want you to attack. We we need to save calories. So we see the attack going down very fast. And as we know, fasting induces autophagy and healing and the damage organ.

That's number three. The damage organ is trying to heal faster is a better call for rejuvenation within the cells. So three major impact fasting. Is another one.

I think there's another mechanism too, and that's that there are both exogenous and endogenous toxins that accumulate within the cells of the body, you know, PCB toxins, pesticide residues, you know, all kinds of various substances, much of which comes from the consumption of animal products that are biologically concentrated with those substances.

And there's also endogenous talk, not really toxins technically, but these are intermediate products of metabolism that in high concentration are in the wrong location or whatever can have detrimental effects.

You know, cholesterol is not a toxin, but you plug up your blood vessels with fat, it's probably not a good thing. So I think that in fasting you rapidly mobilize in that process materials.

And it's inflammation level across the board, whether it is autoimmune or not, what you're describing is 100% true and an artificial is part of detoxing as well and part of, you know, getting so it's it's the entire inflammation level of the body that gets moved with it.

Fasting, Longevity, and Human Adaptation

I have an interesting theory. I haven't seen too many people discuss this, but this very same biochemical changes you see with fasting are often the same ones you see with exercise, which is very interesting because, you know, in fasting, your resting and exercise, you're vigorous.

But both of these conditions, both of these interventions have one thing in common, and is they both deal with the consequences of dietary excess. So whether you're exercising or you're fasting under the weight, body and effort levels increase.

You know, every little marker that you see go up for exercise also tends to go up with fasting. I actually always say it is is and it's, you know, we call it the the the the the intense training, right.

That says they do it three times a week is exactly like fasting. And the fact that walking everyday fasting is like eating healthy and then both eating healthy and exercising every day a little bit is the right course of action.

And then you interject with stress. This is why the intermittent stressful exercising with intermittent fasting or will be prolonged. They create another level of bitterness, right?

How I am, how my heart is going to respond when it's under stress, is going to actually develop new vessels, it's going to rejuvenate how my brain is going to develop.

But it's so it's taking the entire body to the next level. And we do it with intensive exercise or fasting. You know, I guess then are 40 day water only?

Fasting is more like the ultramarathon. Yeah. You're 40 days across. It is the big is it big as well. Moses, David, Elijah, Jesus. In our patients that's up to 40 days.

So they've actually had one physician talk about asking whether. They were doing a modified fast. They were doing a probe on like water, so they were eating a little bit of plant based.

And at a certain point. I had a physician call me once and they asked me if we also teach them how to part the Red Sea. Oh, I told you, it's all on the wrist.

But this is this is I mean, the fasting has been has been part of the human rights for for forever. So it's not it's not an emotion. We ate and we did not eat throughout human evolution.

This is very important in our ancestors. I mean, imagine winter times, right, when they had to migrate and then the World War Times, etc., etc., or draw when there was an excess of heat or not.

It was a lot of days where food was cast and then a lot of days there was no food and the body is set up to store. And also the cycles of winter and summer you store and then you spend.

And what's happening to us today, we store, store, store, store We age faster and then we end up with chronic diseases. And when you think about it, fasting is a biological adaptation.

All the humans that couldn't fast died. That's why everybody I mean, what is fasting is basically converting brain your biggest form of glucose from brain glucose to burning fat, specifically beta hydroxybutyrate acid.

So that mechanism is so critical to human survival that anybody that didn't have that capacity didn't make it the first time spring came like an average 70 kilogram male can fast on water only around 70 days or so.

Not the initially should. But the point is this is so inherent to our structure. All we've done is take it this ancient biological adaptation and applied it in a very unusual modern environment where people have dietary access.

There's never been dietary access. You know, it used to be only the Kings got these diseases because they were the only ones that could eat the highly processed foods.

Now everybody's eating like a king. And we've got a whole situation where 72% of people were overweight or obese. If you're not overweight, you're abnormal.

The fastest way to to I was present is there's a slide that are present where in a person hitting another person in the head and is causing pain and they say, what's the solution?

Like stop hitting them. Right. And then when you overfeed the person, what's the solution? And it's it's insulting. No, it's just stop, you know, stop that feeding and give them a period for them to burn what they would they would be stuck.

But I think I think this is what why this summit this is why we're bringing the best in class doctors to come in. And and and the beauty is we're not coming to bring more chemicals or more additives or more artificial fads.

Research, Training, and Closing Remarks

We're coming in to say for the first time in history, the science of longevity and in the science of true healing diseases is merging with the science of natural intervention as natural human evolution.

And by the way, religion is joining all together. Fasting is the only word that is common to all divine religious. And and this is we got to bring back humanity to what we're supposed to do, which is eat healthy and then do intermittent fasting.

And sometimes think long fasting. The Jews, the Jains, the Hindus, the Christians and Muslims, everybody has a tradition about fasting. They may not agree on everything, but that's one thing that's in common.

And it's interesting. We've we've brought together a lot of the free index, America's fasting literature, because there's a lot of older literature and the new stuff.

In fact, on our our website fasting.org, it's a fasting compendium website. People can go in there and search that literature and really review what's really be done to on the long term fasting.

Not so much. All the stuff you guys are doing with the intermittent fasting, with the longer term water only fasting that literature has been brought together reasonably efficiently.

So that's a nice resource for people interested in long term fasting. Yeah, well, it was a pleasure to have you today. This is this is probably a session that's going to shock a lot of people first about how a sinner like yours exists and what it does and the power of prolonged fasting.

You have done the approach of supervising people in patient and make sure they are safe and they can do it safe. We've done the approach of doing a modified fast with food so that they can do it at home and it's done.

We've done. You know, God bless. Valter Longo was spent 23 years and there's been there've been a lot of attempts to bring back fasting to the world. But the science that came out of USC and Valter kind of gathered that critical mass.

And then many other people like yourself who rallied and said, yes, we have also the proof and we have the effectiveness. And I think this is this is becoming very factual and part of every human's life.

Hopefully. You know, for us doctors that want to learn and see water only fasting, we do offer internship residency where no cost to the doctors, we provide them room, board and training and they can get experience actually seeing people get well and watch this fasting process go through its course.

So and how long can they be? How long can they reside within? Depends on what level of skill they want to acquire. But some of them are here for a month or two to see some people through the cycle. Some are here as long as a year.

We're a formal and residency training site. We have lots of different opportunities depending on the doctor and what they're trying to accomplish, but they can get a chance to get some real hands on experience actually utilizing this if they want here in our facility in Santa Rosa.

Where those who want to read more, it's a true north facility. If you want to Google, Google it and you can read more truenorthhealth.com Yeah. Well, we appreciate you very much and thank you for your time today.

Very good.