Introduction to Nutrition and Cancer

Well. Dr. Joseph Antoun. This is a pleasure. Again to get to chat with you. I mean, you bring so much knowledge into this space. And this is a question that said, so many people that that are battling cancer, that are concerned about cancer, that wants to avoid cancer, you know, that food becomes a big, big issue. And, so tell me a little bit kind of diet wise, I mean, for for people battling cancer, I mean, what what should that look like?

I mean, what what is that? And thank you, Dr. Karlfeldt. And we've been for the last 25 years researching food as medicine. And the big focus of our research has been on nutrition for cancer patients, both prevention and then during the treatment, whether nutrition can play a role into slowing down cancer progression or supporting current standard of care in cancer remission.

And there's a lot of major breakthroughs that I want to share with you today. And there's this concept, so to start with, you know, cancer is a cell that starts, you know, it loses its inhibition to stop growing and keeps growing, keeps replicating, keeps growing.

So think about it as the fastest growing organ in your body and anything that needs to grows. Anybody needs two things. Needs nutrition to be able to grow, the macronutrients, the micronutrients, and is actually supported by the growth factor that the body also secretes.

There's two major growth factor. One, it's called insulin. It comes as a response of us eating carbs. Another one is insulin. Like growth factor. So we call it literally insulin like growth factor.

And it increases when you eat proteins. So the studies around nutrition for cancer have been we'll divide them into when you have cancer and prevention.

But let's start with when you have cancer. The all the interesting studies are focus on what should we eat so that we don't overfeed the cancer so that the cancer doesn't grow fast?

And what should we eat so that we don't spike the growth factor that the body typically secretes after the carbs and proteins? And this is this is the premise of all our science on how can we use food as medicine and how can we support the current standard of care, the current chemo, immunotherapy and other therapies into improving their effectiveness and decreasing their side effects?

we've studied what to eat, and I'll talk about that. And what not to eat and more importantly, when not to eat.

Why Cancer Feeds on Sugar and Protein

And if we should fast when we have cancer. So I'll address both, if you'll allow me today. Absolutely. And all these things, I mean these become very important strategies in regards to.

Yeah. Because we we look at my cancer like you mentioned, it's the fastest growing organ in the body, literally wherever it's at. And a lot of people have likened it to, you know, the kind of the trough of plastic, you know, theory where, you know, a fetus is developing really, really fast and, and that, that kind of development of tissue.

And how do we and we know with a fetus it grows to a certain point and, and it stops, you know, so there there are some factors that makes it grow. And there are some factors that stops it from growing.

And and then to be able to then use diet, in a very scientific way becomes a very powerful tool to be able to control this whole mechanism that that cancer is.

Yeah. And here it's not in because a lot of people listening to us and also a lot of doctors will be like, yeah, I do recommend my patients eat a holistic, natural plant based food.

And this is great, right? Eating healthy when you have cancer or eating healthy to prevent cancer is important. But there's few steps beyond that. Nutrition can become part of the therapy.

And and we're studying that a lot. Even tailored nutrition we're studying which cancer which state you should what you should eat with it so that you, delay the growth of the cancer, allow the body.

We're going to talk here about the fasting nutrition, allow the body to excite immunity, to attack cancer. So you're part of the therapy now. And to enable, in conjunction with the current therapy, to enhance the effectiveness of the current standard of care.

So food can play all this three or role, as I mentioned, part of that just slowing down the progression or decreasing the regression of decreasing the the cancer coming back, but also part of enhancing the current therapies.

And so, so maybe I'll start there if you want. I'll I'll start. Yeah. I'll be sharing with, with people listening to us hear some of the discoveries, with nutritional cancer.

I would love that. Yeah. Because people are always so confused, you know, they they know that. Yeah. I should eat a lot of vegetables and I should eat a lot of fruit.

That's kind of in their mind that, which which is good. We want to have a nutrient dense diet, but then to have strategies beyond that, I think becomes so important because science and science have gone so much further than just that.

And and I a disclaimer before I start talking is cancers are different. Some cancers like. So I'm going to give recommendations that are general recommendations.

Right. This is not to be taken for every individual as their own personal therapist because different cancers like different things in different cancers, defend themselves with different pathways or like different pathways.

So we're going to I'm sorry, given that we're just having like we have a good 30 minutes here today, I'm going to just give you the general guidelines.

But in general, again, as we mentioned, you don't want to consume a diet that's rich in, in, in in animal proteins because they spike IGF and they feed cancer a lot.

Right. This is important in a lot of cancer patients. When they start getting a little bit malnourished or a little bit decrease their they the doctors or nutrition is the recommended to go and eat a lot of meat.

And a lot of, you know, and this is important for the body. But at the same time it pushes the intellect growth factor. So it's nourishing the cancer and and it's pushing the growth factor to enable the cancer to grow further.

And this is why a lot of us today, we're not recommending that people get their sources of protein from a plant based source, which has the plants have different sequence of amino acid.

They don't over spike growth factors. And and so it's tricky because on one side, for example, doctors their pitch to give people whey protein. And and I don't have name brands that is liquid brands with high protein concentration.

And a lot of those actually are nourishing the cancer at the same time. same goes for the sugar. You want to stay away from shorter carbs and sugar because they spike insulin.

You want to be more and complex carbs and fibers. And this is why, again, a plant based diet is great. So we recommend in general, you know, a close to blended, plant based, fully vegan and or pescatarian if you want to eat

some fish as a as a balanced source of, you know, proteins with the right omega at the same time.

But that's again, that's a general recommendation. Each patient is different. Their weight with kind of chemo or immune or tyrosine kinase they take, etc..

But I think for sure you don't want to be ingesting a lot of sugars and you don't want to be living on steaks and animal source of meat, because the cancer would love that.

Now, as much as important, what to eat is, is when not to eat as well. And there's a lot of evidence now that fasting. So along the same lines, you don't want to overfeed cancer.

Okay, can we delay feeding cancer. So if you delay ingesting food, whether you're doing intermittent fasting or prolonged fasting, we're going to talk about both.

We're seeing benefits in both cases. There's there's a big article published in 2016, in Jama oncology, one of the top cancer journals talking about in breast cancer.

And it had over 7000 women in participating in that, in that observational trial.

Intermittent Fasting and Cancer Recurrence

So it's a big it's a big size trial, you know, and and they just they just observe observed women with breast cancer and looking at those who just eat food, in the morning early and therefore, like, do less than 13 hour intermittent fasting.

And those who actually delay a little bit the ingestion of food and they go over 13 hour of intermittent fasting. So just as a simple intervention is, can I extend the overnight fast by an extra hour.

So it's 13 hours or more, or should I eat within less than 12 hours? and they found out a statistically significant difference in the risk of the cancer coming back after 15 years, whether women had 13 hours or more or 13 hours or less.

And this is a top oncology journal. Such a simple, even intervention that many doctors and many patients don't know about or don't even recommend to their patients.

And it makes sense the longer you go without feeding the cancer, the less cancer have, you know, energy and calories to come back. And and if there are cells, they're remaining there, they'll be better off living in an environment where there's a lot of food and a lot of growth factors.

and in what I love the most about this article is every hour, extra hour of fasting had a correlation with the decrease of chances of cancer coming back.

It was just just unbelievable. so we really recommend here that, again, you should talk to your doctor and nutritionist because some people are frail.

You don't want to keep them in the fasting and in, in a 13 hour intermittent fasting, although that's not like the, the worst thing by delaying your breakfast by an hour or 2 or 3.

but this is something to consider when you, when you're in, you know, at least in remission after cancer for sure. And if you're during therapy, you want to talk to your doctor to see if there's something you can do.

Now it gets more exciting when you go longer. This is where we specialize is what we call prolonged fasting for cancer. So we as a company, we're you know, we're called a neutral longevity through nutrition.

And we were founded, based actually at the University of Southern California, where the spinoff from USC and

especially the that the trials at USC around fasting and fasting, nutrition for cancer, that's the entire essence of our company.

We started as a fasting nutrition company for cancer. So this is something what I'm going to share today is something we have studied for two decades.

over 20 million in donations from the National Board of Health, $13 million to donations to the research from, European governments, over $100 million raised into this.

this is we're talking about something now, truly. Food is, almost medicine, that we're going to share. So what we learned is that we started studying fasting for an hour for a day, two days, three days, four days, five days, etc.

there's also a study just got published three days ago talking about how important what happens to the body once you cross the city of fasting. And that's the golden.

That's the golden day. So let us explain to people what happens. You know, if you fast for two hours, up to two days, we call that intermittent fasting.

So a few hours all the way to two days. your body obviously is like lacking calories, and therefore the body says, okay, I do have reserves. It's like when you don't have if you lose your revenue, you say, okay, I have some money in the bank, right?

I go tap into the money in the bank. So the money goes to glycogen in the muscle and delivered body goes into fat breakdown, fat gets us into ketosis, and the body goes into the liver and ask the liver to dump a little bit more calories. We call it Neo in Genesis.

So you go to the bank, you ask for the savings account checking account and then take some credit. This is what happens now after day two and three. You're losing now your bank account.

You're just depleting it. So the body's same thing depleting its fat and and the reserves and the body tells the cells, hey, I'm going into bankruptcy.

You cells buy billions of cells. You're going to have to rejuvenate. You're going to have to fix yourself to be at optimal performance so that we all survive.

Otherwise we're going to we're going to die. And so the body pushes the cells to do what we call autophagy, which is a rejuvenate, a process whereby the cells are trying to be at their optimal performance to survive a fast.

And this is golden. Well, first it won the Nobel Prize in Medicine in 2016. But it's a golden asset when you when you when you have cancer patients. And again it's not every cancer some cancers a little bit love some ketosis more than others.

But in general you know cancers suffer when there's no food for several days. Suffer big time. Remember cancer doesn't know how to adjust to that. A cancer cancer cell has to proliferate all the time, right?

That's the essence of cancer doesn't respond to slowing down like the normal cells. So it's like a it's like a person who has to run the marathon and doesn't know how to stop.

If you don't feed, that person will give them, you know, the right, the right nutrients, the collapsing and the cancer with fasting doesn't know how to deal with it.

It doesn't know how to stop the replication. It just gets in a very, very, very sensitized, depleted, you know, way.

Prolonged Fasting and Treatment Support

So when you come and you hit it with chemo or immunotherapy or racing or whatever treatment you're coming up with, you're finding a cancer that is weakened and you're finding a cancer that doesn't know how to adjust.

And resist the standard of care, because it's not well equipped to to initiate the escape pathways and to resist the, the, the therapy that, that the patient is taking.

This is critical because we're going to start seeing now articles being published, an improvement of the theological response rate and overall survival, first time in history, overall survival statistically significant with the fasting mimicking nutrition.

We're going to talk about how to mimic fasting with food. But that's that's the core of the concept. You starve the cancer. Cancer the sensitized cancer doesn't know how to resist.

Therefore cancer dies. And so what do you tell. What do you tell all the the spouses and the people battling with the cancer, you know, because their doctors are always telling them, you know, you gotta eat.

You're going to go through this therapy, you're losing weight. You know, they feel nauseous. They feel. Yeah. And there they are losing weight and their muscles are getting weaker.

I mean, so what what do you tell them to kind of what mindset they should have and how they should navigate all of that. Because that's always the challenge that I see with.

A critical question because I'm talking fasting. They'll be like, I'm already losing weight, how am I going to fast? And I'm going to answer this. I'll finish the benefits of fasting, and then I'll jump into how to marry fasting.

And this is why we do it with a fasting, nutrition and fasting diet today. And we'll get to that. And then what to eat. So what to eat in between to compensate for that and not to lose muscle and not to lose weight.

So I'll close on. It's a critical question that you're asking Doctor Crawford. so the second benefit of doing the the more than the three day fasting.

So we said first sensitized cancer. The second benefit, as we said, cells rejuvenate. And amongst the cells that rejuvenates the fast actually as a response to fasting are the immune cells.

They have just the fastest faster cycle of rejuvenation. So the immune cells get rejuvenated and now you have a better immune attack. Immunity should attack cancer. Back in.

Cancer is a cell that starts losing its identity and immunity should attack it. And now we're paying tens of thousands of dollars per month for it for immune treatment, immune therapy.

Well, there's a natural way to re excite immunity against cancer, which is through fasting. and we saw this in multiple articles where in mice we see better infiltration of immunity through cancer.

When you do the fasting and then humans will start seeing that biopsy is actually a better immune attack against cancer. When you do the fasting. A third benefit here to do the fasting as well as the normal cells of the body.

When you fast, they hibernate might say, okay, there's no there's no calories now. And there's no growth factors. Let us just slow down our replication process.

Again, cancer doesn't know how to do that. So when a chemo comes in for example, chemo as you know, kills cells in replication. So the normal cells of the body saying, hey, we're off replication.

There's no mitosis in here. So don't attack us. So you decrease the side effects of chemotherapy on the normal organs and the normal cells, whereas the cancer is sensitized is actually getting those effects the most.

we call that effect a differential stress resistance. Meaning when you fast, you protect normal cells and you sensitize cancer cells, to whereas the chemo.

So all these benefits are critical. And as I'm mentioning does I'm always talking with therapy. So you want to do your fast the 3 to 5 days. You want to do them right before chemo.

And this I'm going to channel it to answer your question what to eat after. So the fasting timing here that we're talking about, you want to do three or 4 or 5 days right before the chemotherapy or the immune therapy, etc., so that you're weakening cancer, protecting normal cells, enabling the body to host the the intervention.

And on the day four or day five, you take your therapy, and your body is a little bit better positions to, to optimize the, the therapy. So a lot of doctors, a lot of patients, when we started doing the three days of four or 5 or 4 days they like, it was impossible to fast and water is too difficult.

I'm losing the weight. And this is why we received all these grants, millions of dollars to develop what we call the fasting mimicking diet is can you nourish the body while keeping the cells in a fasting mode?

Can we trick the body with certain food formulations so that the body thinks it's fasting, but you're nourishing the body, and that's the essence of our entire company.

And research is we discovered the fasting mimicking diet or the fasting mimicking nutrition technology. Thank you. Big thank you to the National Cancer Institute under the National Board of Health.

They gave us the funding to do that. and we were able to find a very special land base. No chemicals. It's all gluten free, non-GMO, super healthy, rich in healthy fat, plant based proteins and complex carb.

It's a 4 to 5 days fasting program. It's a nutrition program that you receive at your home. You open the box and you have your daily food, and you eat that food and your body doesn't know you're eating.

So for the first time, you're able to nourish the body while the body getting the benefits of fasting. And then that broke the dilemma of, I'm a cancer patient and I don't want to starve myself.

I'm already losing a little bit of weight and the fasting mimicking diet has been, has been tested in, multiple times to show that it protects muscle.

This is very big. when you fast this, you're under a little bit of a that biological stress. So the growth hormone goes up. It's a stress hormone. Now, when you fast on water, even the growth hormone is up.

The muscle can not grow. But when you fast with the fasting mimicking diet, this blend based protein. So the muscle actually is able to maintain itself.

That's that's a very big. So to summarize the fasting chapter I think a lot of cancer with, with a lot of cancer patients that practice certain type of intermittent fasting to slow down as we mentioned, the Jama article 20, 2016, for those who, when they read it, the fasting mimicking diet before the treatment could be an option.

Again, we're talking very high level, very general. You should talk to your doctor is different by cancer, different by stages and different by body weight, etc..

And then in between the fasting mimicking diet. So you're doing your 4 or 5 days before chemo or the standard of care in between to support the body. You want to be on a diet where you're to not lose weight, you're getting a lot of your calories from healthy fats, and you're getting the rest of the calories from plant based sources of proteins and plant based sources of carbs.

you know, a diet rich in legume, in vegetables. And, if you want to supplement with some proteins, if you're losing muscle or if you're losing weight fast, make sure you supplement with the plant based source of protein, not an

animal source of protein.

There's a lot of drinks in the markets that I just take advantage of cancer patients, and they tricked a lot of doctors and a lot of dietitians into a very high concentration of protein and sugar within that bottle to feed the body.

They're feeding cancer mainly before anything else, because cancer sucks. They need cancer. It needs to grow. Takes most most of the those calories. So watch it big time.

There's brands there that that really are, selling hundreds of millions of dollars for that purpose. they do have a role when somebody is truly malnourished and is in remission, maybe of cancer.

But if your body still has cancer cells or you're in active phase of cancer treatment, you don't want to feed the cancer. First and foremost, cancer. Most cancers, they don't know how to eat fat.

So healthy fats are good. Some cancers do actually. And and plant based of course plant base protein so that you're nourishing the body and it's spiking your IGF or your insulin.

So cancer is like is is is barely able to be nourished without being able to to thrive within your body. So and that yeah, this is huge. So and and you talked about the kind of the, the fasting then during so looking at the chemo.

So let's say a person gets chemo every three weeks, let's say Thursday. So they should start then with the fasting mimicking diet or, you know, the the program that you have.

Fasting Mimicking Diet and Muscle Preservation

Yeah. Which enables them to kind of save the muscles and still be in that where they have low insulin, low IGF one, low growth factors, you know, stimulate regeneration of the immune system, because we all know we need an immune system to be able to battled cancer and at the same time make the the cancer cells very vulnerable because like you mentioning they they're still going in the same pace, they don't know how to stop.

and so that makes them very vulnerable because now they're starving and now they're just looking for something. So if the chemo is on Thursday, when what day should they start?

Should they start on Monday? Would that be the best day to start? So with that, by Monday, Tuesday, Wednesday and then Thursday would be the fourth day.

Is that the optimum then. We we have studied four days and we've studied five days. So either you start on a Sunday if you want to do a full five days, or if you want to do four days, you start on that Monday and the last day would be the chemo.

The chemo day. So the last day of the fasting nutrition would be on Thursday, the day they're taking their, their treatment. And so, and so there's no benefit in doing it the day after as well.

I mean, then then then we're good. We, we haven't studied. So we're, we're very, very science based. We haven't studied doing it with the day after versus not.

But we do always recommended the day after. Anyhow, you just got chemo. There's a little bit of GI side effects here. There's a little bit of nausea. So so always recommend that you go easy today after maybe soups, liquids something soft for your stomach for your body.

But we haven't studied like doing it for days before the day of the treatment. And then one day, after all, without the day after, what difference that will make?

And how do people you know from all these studies, I mean, how do they respond, like energy wise, you know, muscle wise? and how do they receive treatment?

I mean, do they are they able to handle the chemo treatment better or, you know, what are some of the physiological, response cysts that people are experiencing?

Well, one of the goals, as we said, of this intervention, is to help them handle the chemo better. It's actually decreasing the side effects is one of the effects.

we even had clinical trials where we, and we don't want to recommend it here, but we went all the way to even taking the cortical beads of that, you know, the day of the chemo.

Because chemo, just this, this layer of side effects, we a standard of care we give we give cortical AEDs. Right. And we went all the way to testing even.

No need for that or the good again, we don't think you should stop those, but, this is how far we went into testing. So we definitely believe that the body is better prepared for the chemo when it's in a fasting state.

Again, we're not talking about the frail patient or the patients already very thin or and I don't want to be generalizing. I don't want out of the discussion because each cancer is different, is patient, is different.

But in general, one of the benefits of fasting before the chemo is actually to better host the chemo and and increase its potential effects and decrease the side effects.

That's one of the goal with the fasting mimicking nutrition. What we're observing is that the lean body mass is also protected. And this is very important, a lot of a lot of first reactions from doctors, like if I want to do the fasting mimicking like to my patient, my patient will lose more muscle, my patient will be frail.

That's not the case. The the the the the muscle loss is proportionally actually very low. And and once you go to feeding your gain back your muscle. now you will lose some weight.

And it's, it's for patients who are who can handle that. That's fine. And for those who are frail, again, we have to probably you do an intimate fasting or you give them a diet, as we said, the plant based diet for a while.

Once they regain their weight, then you go back and do the fasting cycles. Yeah. Because a lot of people I mean, I and I recognize that each each individual's different and they all should kind of walk with their doctor and make sure that, you know, they're under the supervision of, of a physician.

And each cancer is unique. and it is fascinating. I know you have the podcast that I do. Yeah, my Integrative Cancer Solution podcast. Yeah. I talk to people that that do this in addition to my own patients.

And it is fascinating to see when they compare the difference between when they fast, how they feel during chemo versus when they don't fast, how they feel during chemo.

It's always better. They always feel better during chemo, when they fast, you know? So it is really fascinating. And you and it is hard in your mind to kind of shift that attitude where because you feel I gotta eat to feel strong and be able to handle this stress, but in reality it's complete opposite.

Yeah. I mean, when you eat and and maybe we don't want to go always like fancy and do five days at least the day before. Like this is a general recommendation for most when you eat and you bringing the chemo to your body, you, you you feed the cancer again.

Remember guys. Yeah. The most important thing is the fastest growing organ. Once you have it is cancer right. And so you're feeding cancer before which meat which makes cancer more resistant stronger when you when you're taking the therapies.

Isn't that what you want? Do you want to fast the cancer before? Number two, when you eat, the normal cells of the body are replicating because they got this growth factor boost the insulin and and the IGF.

So then the replication and when chemo comes chemo. Chemo is like a weapon of mass destruction. It's not it's not geared towards cancer. It just get to anything that replicates in the body.

And it finds cells, most cells of the body replication. You're going to have a mass, side effects. So, regardless whether you of the, the five days and follow what we discovered, which is the fanciness of how you enable the body to better host the chemo and, and so at least the day before, like, I think every doctor should pay attention to this the day before or two days before is like, you want your patient to be on a low calorie or fasting so that they better host, the chemo and, and they don't have as much side effects, you know, from that.

But again, different patients, different stages, different, you know, cancer is so different. It's not like one thing. So we don't want to be generalizing.

I repeated this so many times just to protect patients and but I my wish is certain patients are hearing us today. We'll talk to your doctor about this.

Let them read the science. If anything out of this interview today. What I wish is more doctors read the science of fasting and fasting and making diet for, you know, throughout cancer journey because it can make a life difference for many patients or it can make minor difference for others.

But any improvement, any difference, I'll take it. And you brought up the point in regards to steroid because and that's, that's a kind of an issue that that's a big issue.

and if you use the steroids to be able to handle some of the, you know, potential, allergic reactions or histamine reactions from, from the chemo and, it but in essence, what steroids are doing is that they are they're suppressing your immune system.

And obviously, you want your immune system be strong and up and running.

Using Fasting Around Chemotherapy

So if you don't have to do the steroids, then you have that additional benefit of, you know, when you're doing the fasting, your immune, immune cells are kind of vital, rejuvenated, you know, because of the fasting aspect.

And, and then you don't have the suppression of the immune system of the steroid. So if you can do without and obviously, you know, walk along with your doctor and have the discussions with them, but that would be an additional benefit.

Well, there's two stories on the stories, right? There's the chronic use, which I agree with you. They can deplete limit immunity, can increase carbs in the blood sugar.

Right. Which which is which is what cancer once. So yeah, a long use of of steroids is probably, you know and again different cancer different. But the day of treatment the traditional allopathic school of medicines, they do it because some people overreact to cancer treatment and could be life threatening.

So the day off, although we we agree that it could bring an environment that's rich of carbon for the cancer, which we don't want, that although we agree that it can have some minor side effect.

It's just there's a big discussion whether the day of the chemo you want to give the court tickets or not, obviously from malpractice reasons, from an acute life risk reason, you want to do that, you want to keep the particulars.

You don't want to go long on those because, you know, probably there's a lot what you discuss. So yeah, we don't want to sit here and I think we don't have enough signs to, to recommend to not give the Portuguese the day of the treatment.

but again, in the future, where we're studying a lot of, a lot of those interventions and what to do, but given the short

term risk on their lives, on the life of the patient, probably for for now, we still recommend to do those the day off rather than a chronic use.

And and we've talked so much about cancer, obviously there's a huge group. I mean the statistics are moving towards that one out of two at some point will develop cancer.

Yeah. Between 1 and 2 to one out of three. So now we're looking into prevention and we're looking into you know what can we do to live longer and live healthier.

Yeah. So it seems to me that this type of program, yeah, is not just allocated for people battling cancer, but it's also then for biohackers or people that want to avoid a lot of chronic diseases and just kind of add life, you know, to, you know, to a good life to, to their, you know, to the living.

I mean, that's, that's a, that's a really big point in, the, the we just published an article last week, in nature, one of nature's journal called Nature Communication.

Nature is the number one science journal of the world. And that article was about the use of the fasting mimicking diet, the product that we have in the market called prolong, which is, you know, it's for promoting longevity.

And basically it's it's a it's a it's a five day of fasting mimicking nutrition, that you do three times a year. And the goal is to keep your cells rejuvenated three times a year.

It's like, you know, with if you watch a car race, you know, every, every, few laps, the car goes into the pit stop and the mechanics come in, they change the wheels, they change the the oil, the gas.

So that's the same thing. Fasting puts you in check. Oh, there's, precancerous or there's something going wrong, or the cells are very old and they're dysfunctional.

Let's get rid of those. Right. Let's rejuvenate the these cells. your your pre-diabetes, your cholesterol, your your blood sugar are increasing. Let's reverse that. Right.

So it's it's an unbelievable rejuvenation that that happens to the body when you fast over five days again, you're fasting with food. So we made it much, much easier than any water fast.

this article is showing that if you do three cycles of the fasting mimicking diet, you're going to decrease the bio age score by 2.5 years. And if you do it three times per year between age 50 and 70, you're decreasing it by a score by 11 years on average.

And in the same article we're showing now, these are statistical projections. We're showing how much you decrease the risk of diabetes, risk of cancer risk of the people would be how come you can tell us you're going to prevent the risk of decreased risk of cancer?

100%. You know, when it cancer, diabetes, Alzheimer's and cardiovascular disease, the four killers are going to kill 90% of us that age related, right?

You don't get most cancer at age 18. You don't get diabetic type two at age 20, you don't get your first heart attack at age 21, and you don't get Alzheimer's, even if you have the gene at age 24, you know you're going to still get them later in life when the body loses the ability to rejuvenate when we're old and correct, right.

This is when you got them. And so with the fasting mimicking restored will re enabling the rejuvenated the correct the heal effect that the body has. Right.

All the philosophers historically they said fasting is medicine healing in the body.

Fasting for Longevity and Disease Prevention

Awaken the doctor from within. We do have the capability of healing. I mean, you just cut your head by accident and in the cut your hand in a kitchen by accident, you're just in the cells heal.

Right? And when you're old, you cut your hand. They take longer to hear it to heal. And that's exactly what we're doing. We're trying to rejuvenate, to make, to keep the cells of younger through fasting.

That is a big natural way, of rejuvenating the body that existed with our ancestors forever. And then and then religion carried it. Fasting is the only common word with all the divine religions.

And and we as scientists, we put a lot of effort over, over 20 years, actually, to see what happens when you fast for several days and it turns out that it's one of the healing processes.

So doing three times per year of prolong is very important for your healthy aging and to support the healthy longevity. And and definitely we believe that in this environment that we live in, we're eating a lot of meat.

This is why cancer is increasing globally, by the way. We're eating a lot of sugars. We're gaining weight. All these, risk for cancer, for diabetes, for Alzheimer's.

If it's difficult to change your lifestyle and eat healthy, which is the case for most people, right? You go to every college, you tell everyone you should study every day, every every parents tell their kids study every day.

10% only study every day 90%. And they don't. But five days before the exam, they are sitting there stressing. They're studying, and then they pass away.

So and that's exactly what the ProLon is, is if you don't have a healthy lifestyle, give us five days every quarter and then do the fasting. mimicking intuition, do ProLon it is that stressful five days that get you back on track when it comes to healthy longevity.

Yeah. And it doesn't. I mean, if you if you look at the benefits you know, here you're talking about 15 days out of 365 days. So it's not like it's a huge amount of days.

It's not. And it's not like you're going to be starving. You're having food, you know, that that is replenishing you. So it's not like you're you're sitting there starving.

You're actually eating something, but it is tricking the body into that fasting mode. And then you're having these, these tremendous, you know, tremendous effect.

and obviously we're all scared of the, the big killers, you know, heart disease, diabetes, Alzheimer's, you know, on it's rice, which is like, type 3 diabetes.

You know, what it's called now and then, obviously cancer, like we're discussing right now. So, you know, 15 days out of the year, you know, to do this, I mean, that that doesn't seem that big of a sacrifice.

No, 100%. And just to clarify for folks here, they one is 1100 calorie does not fasting mimicking attrition by starvation. This is my nourishment. So they want is 1100 calories.

They two, three, four and five are 800 calories. You get your morning bars, you get your soups and other snacks for lunch. You get a sugar crisp actually for snack in the afternoon, and then you get your dinner.

so this is not a starvation diet. This is a nourishment thy that gives you the benefits of fasting. and we're just this is this is a new scientific proof of what we should do, but is actually lived with the humanity forever.

We were not supposed to eat all the time. We would call it in a fancy way intermittent fasting, prolonged fasting, whatever. It just our ancestors. They didn't eat all the time, they didn't stay late and on Netflix and stressing at work and eating at 10 p.m.

and and they didn't look, 73% of them did not look overweight, and they were not stressed. And they were not they didn't have the life complexities. They were actually sleeping early.

They're eating the next morning, their breakfast after 12 hours. sometimes when they migrated or there was no food or no electricity, a day or two goes by the body to those the body knows how to rejuvenate.

So we're we're just bringing normal life to our life. We are living a fad today of overfeeding, of over stressing, of being depressed. And we're getting disease as an expression, an accelerated aging.

Well, we're bringing back fasting in a natural, healthy way through the fasting making light to help you readjust to how do you go off this current fad that's leading to disease, and help you go back to what your body's supposed to do and rematch your potential?

When it comes to longevity with your nutrition and lifestyle. Yeah, and that's the thing, is that today's living I mean, obviously the disease they were talking about, these are modern diseases that we're dealing with.

And so, and so that's I mean, what science is doing is and obviously looking back, what did we used to do. So when we didn't have these diseases and then replicate that.

And you're absolutely right. These are things that have been with us for, you know, thousands and thousands of years, just a normal part of daily living.

And we've just kind of forgotten what daily living should be like. And, and so we're dealing with these modern diseases. yeah. Well, Dr. Antoun, I mean, it's always such a pleasure.

You're. I mean, this is such a huge area of, research, and, people are starting to understand more and more the importance of this. I, I really appreciate that that you are are kind of the spearhead and leading the charge, so to say, in this field of research that's so important and touches so many diseases.

So thank you so much. That we I appreciate you hosting me today. Hopefully we change somebody's life and at least ignite curiosity for people to go and read about fasting for cancer or fasting, mimicking diet and go talk to your doctor or all the doctors listening to us today.

Take this seriously. Food is medicine and this is not about just eating. Healthy food is medicine. And fasting is so powerful as awakening a healing mechanism in the body.

so marrying this with the standard of care could be could enhance the chances of people living a healthier, longer life, which is ultimately what we want as as caregivers.

Thank you so much. Thank you.