



CIRCADIAN HEALTH & DIET

Dr Max Gulhane



Unstress HEALTH

with Dr Ron Ehrlich



Podcast Transcript

Dr Ron Ehrlich [00:00:00] Hello and welcome to Unstress. My name is Dr Ron Erlich. I'd like to acknowledge to the traditional custodians of the land on which I'm recording this podcast, the Gadigal people of the Eora nation and pay my respects to their elders, past, present and emerging. We have a great deal to learn from our First Nations people about our connection with both people and country. They are inseparable and the process by which our indigenous cultures approach problems starting from a position of respect, then connect, then reflecting and in... and finally directing. And I acknowledge Tyson Yunkaporta who I've interviewed from and... That he's the author of that wonderful book, Sand Talk, for alerting me and educating me to that.

Dr Ron Ehrlich [00:01:01] Now today we are exploring a wide range of topics, but returning to the whole importance of circadian rhythm and quantum biology. My guest is Dr Max Gulhane. He is a training general practitioner and health optimising physician. I love that. With a focus on low carbohydrate diet, on carnivore diet and circadian interventions. Now Max hosts the Regenerative Health Podcast and is also co-founder of Regenerate a Health Summit, bringing together ancestral nutrition, circadian health and regenerative farming. All topics that we've explored on our podcast. And I share his passion and he is doing a wonderful job with that podcast and that regenerate movement. I hope you enjoy this conversation I had with Dr Max Gulhane. Welcome to the show, Max.

Dr Max Gulhane [00:02:00] Oh, hi, Ron. How are you?

Dr Ron Ehrlich [00:02:02] I'm very well. And Max, I've been looking forward to this discussion. I've been listening to your own podcast, which we will have links to, of course, but you've been doing some great work and we first met a few years ago before the pandemic when I was connected with the Australasian College of Nutritional and Environmental Medicine. And you were really into or discovering low carb at the time, but I wondered if you might just share with us before we go into some of these things, low carb, carnivore, a whole range of other things, a bit about your own professional and personal journey to this point?

Dr Max Gulhane [00:02:40] Yeah, Thanks, Ron, and thank you for having me on. At the time that we met, I was working in emergency department as a junior doctor right at the beginning of the COVID pandemic. And I was and at that point in my career, I was very much interested in the dietary and the lifestyle interventions. And I obviously still am. And my journey goes a bit further back than that, though, in terms of where I am now and how I'm practising. And it started for me as a patient. Initially, I had a brush with the medical system through the treatment of acne and I was experiencing very, very bad acne and went through a succession of treatments after, you know, there's a basically a ladder of treatments that people get if they fail, you know, topical therapy or topical creams and they get put on different pills and antibiotics and they get all the way up to the sledgehammer, which is where Accutane or Isotretinoin and I had a patient journey with throughout this whole process which spanned, you know, many years. I wasn't offered any useful or any kind of implementable or effective lifestyle with dietary advice that perhaps would have saved me a whole bunch of time and, you know, symptoms and, and the whole side effects of treatments. So this is occurring at the same time as I was going through medical school learning a lot about about medicine, but not really being exposed to any dietary paradigm that could have helped me. Eventually, I found Low Carb Down Under, which was a repository of low-carb metabolic-type videos by a range of doctors and other kind of other health professionals and simply implementing those that advice or that intervention on myself kind of was enough to cure me of the problem. And around the same time, or just before I finished graduating medical school and before I'd even implemented the low carb particularly, I'd even had a brush with the plant-based eating. And that was an interesting detour and very instructive. And I learned very quickly that for me, an exclusive plant-based diet was only going to make not only my skin worse, but a bunch of other undesirable symptoms and irritable gut type symptoms and, you know, susceptibility to colds, a bunch of other things. So I guess I got a spat out at the end of my medical career, my medical training with a medical degree and a thirst for understanding and learning more about how we could prevent disease and how we could treat the symptoms of diseases with lifestyle interventions. In the same way, I'd help myself and I learnt how people could be helped who have diabetes and fatty liver disease. What proportion of our health care... And

suffering was simply preventable or reversible with lifestyle? So that was where I was basically when we met around. And since then I've worked a couple of years in emergency department and subsequently, I found myself here in Albury, New South Wales, training in doing general practice training with one of our mutual friends, Dr Rob Szabo, who, as you know, has got extensive experience, one of basically Australia's top GP when it comes to lifestyle and dietary reversal of diabetes and metabolic diseases. So I'm in the progress of getting my general practice fellowship and at the same time I've been able to implement a lot of what I've learned to help people and are doing a bit of the podcasts on the side to guess, scale the message.

Dr Ron Ehrlich [00:06:42] Well, I think you'll agree that the podcast is a great learning experience for you, the host. It certainly is for me. And that's why well, I just love doing it. But it's so interesting, isn't it? I mean, Rob Szabo, we did a podcast with him a couple of years and Rob had been in practice for many, well, for 15 or more years instructing people about Type two diabetes and the medications that were required for managing it until he himself, following all of the advice, got type two diabetes and then discovered low carb living and turned that disease around that was supposedly irreversible. In 48 hours. I still remember the story and skin conditions, which I think I've heard someone say that skin 80% of skin conditions originate from the gut. And I think that's probably an underestimation. But when was the last time you visited a skin specialist who even talked to you about diet?

Dr Max Gulhane [00:07:49] Yeah, exactly. And I agree with that, Ron. I think that the skin is manifesting disease that is originating with gut permeability and with poor gut health. And the... There's plenty of evidence of this because when we remove processed foods and remove grains, particularly, it doesn't take... Or fast, it doesn't take long for symptoms of acne, psoriasis, eczema to rosacea to improve quite, quite quickly. So there is a whole... There's a dietary treatment of all dermatological conditions, but that is not anything that you can hear from your regular dermatologist and dermatologist... There's a bit of a, you know, every single specialist has a bit of a

hammer that they use to hit the nail of the disease, which they kind of see the most of. And for dermatologists, it's steroid creams, you know, for psychiatrists, you know, antipsychotics and serotonin reuptake inhibitors. But yet dermatologists like to prescribe steroids for lots of things. And yet it really is just treating its band-aiding a problem without going deeper into understanding or trying to reverse the underlying cause.

Dr Ron Ehrlich [00:09:09] And I know we're going to be talking about not just low carb, but the carnivore thing because plants have... And it was interesting to hear you say that you were on the plant-based diet and it exacerbated things because I think it's worth reminding our listener that while we do say vegetables are an important part of a diet, basically they're not always everything they're cracked up to be because vegetables can be quite dangerous. They try to protect themselves through oxalates, phytates, salicylates, fodmaps, lectin, you know, the list goes on and on, and that sometimes for people isn't the best thing either. And you've kind of experienced that, didn't you?

Dr Max Gulhane [00:09:51] Yeah. And Dr Anthony Chaffee would say that plants are trying to kill you.

Dr Ron Ehrlich [00:09:55] And I do agree with him.

Dr Max Gulhane [00:09:59] And my perspective on plants is nuanced. I don't necessarily think they need to be avoided by all the people all the time. I really like to classify people into sick and not sick. And when we're sick, whether that means we've got an acute immune autoimmune disease or we're whether we're quite metabolically unwell or there's some other, you know, quite severe medical issue, then especially that reflects a degree of gut permeability or this idea that the GI tract between, you know, your mouth and your anus is covered with a mucus... Protective mucus barrier, but a range of factors in our environment and lifestyle impair that ability of the mucus layer to protect the underlying gut. So, I mean, imagine if you had a castle wall that had holes in it and you know, you're shooting cannons and the cannonballs could just go through the holes. Well, the ability of the mucus barrier to protect you from the inflammation of the gut microbes is... Can be compromised by a range of things that we're eating and not

eating. And not only dietary factors, but so things like medications, things like plant factors themselves that you mentioned, the lectins and other forms of plant toxins, but also alcohol, also herbicide residues. And also even there's a paper recently that showed that rinse aid residue. So the components in detergents that we're putting on our tissues can impact gut permeability. So basically, the consequences of this modern environment that we find ourselves in, influence the degree to which our gut's so permeable. And if that's sufficient to make you sick, then that's... It's a consideration to avoid plants until the point where this gut lining has kind of healed up and you're feeling better and at which point we might be able to reintroduce them depending on symptoms. And that's the general approach that I take.

Dr Max Gulhane [00:12:04] The other point I really wanted to make is that it's not only the plant-origin chemicals. And look, this is an area that I'm really interested to learn more about and I'm very interested in, is to what degree is herbicide residue contributing to gut permeability and to contributing to the symptoms that people are seeing? Because when I talk to farmers and I talk to agronomists, they will tell you that in 30 years we've gone from spraying, you know, half 500 mil of glyphosate per unit area of land in a season to spraying 2.5 litres of glyphosate per unit land 3 to 4 times throughout the growing season. And no glyphosate roundup is not the only chemical that the amount of chemical that's being used on the pasture prior to being sown after being sown during the growing season for broadleaf, broadleaf weed control and then for desiccation in certain cases, which means i.e. let's kill this thing to make a more expedient harvesting process. So... And then, and then the grain gets often a grain gets stored in silos. And then what happens if there's a weevil problem? So, the amount of chemical that is actually being used in the process of industrial agriculture is enormous. And I'm really strongly suspect and at the moment, it's a hunch. There was a it was a look, a study a couple of years ago into herbicide residues in Australia and there was multiple detected but the stated line is that you know, there below biologically significant effects. And you know, when you're when have we heard that before? So I really suspect that a lot of the benefit that people get when they go carnivore from a standard Australian diet and could be the emission of industrial herbicides that is impacting their gut permeability. And when you go carnivore, you really cut

everything out. Manmade, plant-made . And so that's why I believe it's such a powerful tool. And should we necessarily need to be on it for the rest of our life? We'll know if we can address the other factors. And look, I haven't mentioned circadian disruption, but that there is a gut clock. So... And with regard to this rhythm that each of us are regulated by, we have a 24-hour rhythm, the circadian rhythm that controls and orchestrates every bodily process. The master controller is the suprachiasmatic nucleus in the hypothalamus, but there are clocks in all of our organs that sync up with the hypothalamus to time this... That function based on the time of day or night. There is...There are gut clocks and so proper circadian function is either is important or required for the gut permeability to be essential. So more and more I'm really thinking, Ron, that carnivore is becoming facultative or conditionally essential in some people, not because of the lifestyle that we're leading and that, you know, if you take away the carnivore intervention, they fall in a heap. But so it's really kind of holding them together. But because of the... All these other interventions that they're doing, they're washing their plates with the commodity dishwashing liquid, they're sleeping with the wifi router near them and then it's impairing that circadian proper circadian function. You know, they're also drinking alcohol. And so there's all these confounding and coexisting factors that is impacting our gut health and the herbicides obviously that I just mentioned so that the carnivore is really holding things together. And so that's I guess my thought about carnivore. It's incredibly powerful. But the question is, why are we so fragile that we need to only be maintained on on carnivore type approach?

Dr Ron Ehrlich [00:16:20] Gosh, you've mentioned so much there already, Max. And we're going to come back and revisit some of those things. But let's come back to carnivore because, I mean, we made the point that vegetables have natural toxins that they use to protect themselves from predators and that predators would include humans as well. But as you have so well put to their manmade toxins, even the rinse aid in our plates, not let alone the herbicides that are used on the things that have a significant impact as well. But carnivores, meat is demonised as well, isn't it? And not all meat is the same. How do we... How do you define carnivore diet and what are we actually talking about when we talk about carnivore diet?

Dr Max Gulhane [00:17:14] So my definition of carnivore is simply a diet that is, it consists of food of exclusively animal origin. So the meat of ruminants, of poultry, of pork, of fish and seafood, but also eggs and dairy, because they are derived from animal products. So I think the term can be used somewhat loosely. But to me that consists of a carnivore diet and if we're being really pedantic, you would actually exclude dairy from that. And there's you know, there's certain people who have a different degree of tolerance for dairy within their disease process. And I think depending on what the treatment outcome is and depending on what is going on, what are the symptoms that we're dealing with, whether or not something like dairies included. But at its core, and it is a diet of just of meat, essentially salt and water.

Dr Ron Ehrlich [00:18:25] Right, Right. And while we're on to definitions, let's just define what we mean by low carb or what your understanding of low carb is.

Dr Max Gulhane [00:18:35] Yeah. So I think about low carb as and this is, you know, you hear less than 50 grams of carbohydrates a day is a low carb and maybe less than 20 is a ketogenic diet. I think my definition of low carb is I like to say patients just keep on to 25 grams. And the reason why I use that number is because that is when you really start to see, you know, therapeutic benefit and the risk of not the risk of the chance of using a higher proportion of carbohydrates is that, you know, people simply just don't get as good results. And then, you know, did they do the intervention work for them or do they not use it effectively enough? And but again, that's the therapeutic use of low carb. And what what is typically above, you know, 175 grams is, you know, depending on some people's definition which is vastly more and that's the problem of interpreting some of the low carb literature which doesn't show a benefit, is that they simply used that low carb definition was 150 grams a day. So I've got a much more strict definition of low carb and but... Yeah, I think there's times where it's beneficial to be really strict and depending on the response of depending on what the goal is and depending on the season, then we might be able to be less strict with that.

Dr Ron Ehrlich [00:20:10] Mm hmm. I mean, while we've bandying numbers around, I think it's worth reminding our listener that if you went to see a dietitian or standard, the standard approach would say, well, 300, 400 grams of carbohydrates a day is pretty that's okay. 3 to 400 grams of carbohydrates a day. So when somebody telling you that goes to a low carb, in inverted commas, approach to them, 150, 175 grams of carb would be to the 3 to 400-gram person, a low carb. But in a therapeutic sense, 25 if you were diagnosed with type 2 diabetes and you're wanting a therapeutic approach, you would say 25 grams would be where you would be at.

Dr Max Gulhane [00:21:01] Yeah, 20, 20, 25 grams. And I think it speaks to the inversion of normality in terms of what we live in, in this day and age, that 300 or 400 grams of carbohydrates you know, is, is a good idea or that's is that that's normal. And I don't think you know historically year-round people were eating that much, that many much of it diet died to derive from grains. I mean the domestication of wheat occurred maybe 7000 at the earliest, 8000-7000 years ago in the Fertile Crescent. And so there just simply wasn't the abundance of readily processed source of glucose in the form of like grains that we have access to now. And in terms of recommendations for people to eat that year-round, I mean, if we go back to the origin of these dietary guidelines and we start looking at the work of... The effect particularly, you can see that the origin of all these type of low meats, low saturated fat, high, not high grain-based diet is, is religious, and it simply reflects religious ideology as insisted and as pushed by the Seventh Day Adventist Church from the late 1800s, which essentially got transmuted or imputed into the dietary guidelines in the late 1970s. So, when you say, Ron, that, you know, people will be told to eat 300-400 grams of carbs, they do. But the question though I want to know or did I invite people to think about this? Where did that recommendation come from? And it's no wonder to me that so many people sick today. If one of the reasons you know, obviously I'm not saying it's the only reason, but one of the reasons is we're eating a whole bunch more carbohydrates than we ever did historically.

Dr Ron Ehrlich [00:23:03] Hmm. No, no. And actually, if evidence counts for anything, and I think it does in health care, something is seriously wrong because preventable

chronic diseases are at epidemic proportion. And I guess while you can't say correlation means causation, I don't think it's too much of a stretch to say the correlation between what you eat and your blood sugar levels would be pretty profound. And there's another statistic, you know, when we're talking about 3 to 400 grams, I think people need to remember that a teaspoon of sugar is four grams, four grams and carbohydrates get broken down into sugars pretty quickly. Most and that's a sobering statistic. The other thing, did you want to add something then?

Dr Max Gulhane [00:23:56] Yeah, I just want to make the point. The point here Ron, is that there are situations where someone who is metabolically healthy can soak up 300 grams of carbs a day and not suffer any medical ill health. And I was talking to our friend, Dr Jalal Khan about this in my recent podcast with him. And the observation is Dr Paul Saladino, who lives in a equatorial latitude and eats 300 grams of fruit and honey per day, is supremely insulin sensitive, is... Has got no visceral fat and is thriving. But there's nuance here and the nuances that he isn't consuming any linoleic acid rich, potent saturated vegetable oils, i.e. seed oils and he's got a... He's eating completely seasonally derived fruit, which is appropriate for his latitude, temperature and location. And he's extremely regulated from a circadian point of view. So and he's sorry... And the fourth thing is he's very physically active and obviously sun exposed. So all those factors and nuance have to be taken into account when we talk about the effect of carbohydrates on metabolic health. And I'm not suggesting that I'm not that some people can't tolerate them to be metabolically healthy, that's not true. You can. But if you're doing everything else wrong, if you're eating Uber eats, you're cooking with canola oil and you're staying up till 10 a.m. at 10 p.m. scrolling on your iPhone, then you're not going to be able to handle the glycemic load that you know, Dr Saladino is in terms of fruit and honey, especially again, if it's winter and not summer.

Dr Ron Ehrlich [00:25:43] Mm hmm. Now, you and you also mentioned those seed oils as being, you know, a problem. And they certainly are pro-inflammatory. Which brings me back to the carnivore diet. And before, you know, we go into too much more detail. Not all meats are the same either, are they? I mean, this is why we're both interested in regenerative agriculture. But talk to us about the fact that not all meats are the same.

Dr Max Gulhane [00:26:09] Yeah, that's a great, great point. And I think it's both a function of nutrient density and the presence of human agricultural-derived contaminants. So when we raise an animal in a confined feeding operation, whether that be chickens or pigs, and we feed it a diet, that is... It would not usually be able to get access to or a species-appropriate diet. The nutrient content of that meat, whether that's chicken breast or that's pork tenderloin, with those eggs, is suboptimal compared to a pasture-raised animal. So you feed an animal species, an appropriate diet. The human output or the human food is reduced in its nutrient density. And the one might illustrate this concept to people is that you just taste the difference. You taste of regenerative grazed beef steak or piece of pork and pastured pork, and you compare that to a piece of pork raised in the local... Whether you buy from Woolworths is come from a giant confined feeding operation. It's like a different species of animal. And the flavour that you can get even without seasoning, a piece of regenerative raised or pastured animal meat is incredible and simply that reflects the degree of nutrient density on your brain and your body and your taste sensation is recognizing the fact that that is incredibly fresh and that's incredibly nutrient dense.

Dr Max Gulhane [00:27:43] So that is the first kind of metric that I think about is just simply we're not getting the nutrient density of the food in... If we're animals combined. The second aspect of it is this idea of passage or contamination of the meat with products of industrial human agricultural techniques. And this is very difficult to objectively quantify from a scientific point of view. And we're increasingly I think we're relying on anecdotes. But I'll talk to my friend farmer Jake Wilkie, and his list of anecdotes is approaching his knee in terms of the number of people that say to him, I used to get vomiting, diarrhoea when I ate store-bought pork, but I can eat your pork without any issue. You know, I was... I used to break out in hives or with rashes when I ate commodity feedlot-fed beef, but since I ate your beef, I can tolerate it, fine. And you know, it reminds me of a patient I saw in the emergency department, and it was the most atopic allergic child that I'd ever come across. And his mom would say that if she ate beef from the supermarket and breastfed this baby, the baby would break out in a rash. And so that was the reason she'd gone to highly regenerative beef illustrating and the child, the infant had antibiotic allergies. So, illustrating the fact that whatever antibiotics or chemicals that are being used in the

process of raising these animals is being passed on into through the meat, through the fat, into the human to the food chain. And, you know, if it's in some people more sensitive, in others, maybe they do have other gut or underlying gut permeability or other issues. It's sufficient to cause symptoms in them. So that's a fast... That's just fascinating insights and anecdotes. But it's plausible to me that if we're eating an animal that has been treated with drenches or with antibiotics recently and we don't as consumers don't know what the turnaround or holdout times are, we don't know how the farmer has been adherent or non-adherent to withholding periods before putting his animal into the sale yards and that is contributing to human symptoms. And when we think about the longest time horizon, we didn't evolve eating food with antibiotics in it and confined fed operations by definition use some therapeutic antibiotics because that is the only way that they're able to prevent outbreaks of diseases and within their facilities which are forcing animals to live a species inappropriate way. And that makes me sound a bit like a vegan activist, but honestly, we have carnivores have a lot in common with vegans because we both disagree with confined-fed operations in terms of the raising these animals. So a long-winded way of answering your question, Ron, But yeah, essentially reduce nutrient density and the presence of chemicals that we shouldn't be eating in terms of the the confined-fed or commodity meats.

Dr Ron Ehrlich [00:31:04] I mean, regenerative agriculture, as you probably know, has been a passion and interest of mine for a long time, but it's clearly become a big interest of yours for all the reasons you've outlined there. Not all meat is the same. And I know when I see something advertised as 150-day grain fed or 300-day grain fed, which means this animal has been kept in a pen and fed grains to fatten it up for 150 or 300 or whatever number of days I'd just shy away from. I don't want anything to do with it. And I think this connection between the vegan movement, which I think on many levels are ethically right, you know, mistreated animals, what's good for the animal is good for us and good for the planet. But that doesn't mean stop eating animals because we've had a relationship with them for a long time. You've been particularly interested. I mean, I know you've recently run a workshop down in Albury, which Jalal Khan, who has been a he's a good friend and has been a guest on my podcast before and will be again. Tell us a bit about the workshop that you ran down in Albury

recently, and then we'll talk about this breed of cattle that we were just talking about before we came on.

Dr Max Gulhane [00:32:29] Yeah, no, no, thanks for asking. It was called Regenerate and it's a health summit and... That I basically put on with Simon Lewis who from How to Carnivore and together we put together an event in Albury and the... Basically there's three pillars, of the event that are really trying together and a bunch of factors that I believe that are essential that we need to be striving towards if we're going to get collectively everyone's health back on track. And those are ancestral diets. So particularly a low carb carnivore, animal-based diets, quantum health or circadian biology and regenerative farming. And those are the three pillars of this kind of health movement and this health summit that we are going to continue to hold with to kind of promote and enlighten people and educate people about. So we had about 150 people at it, Splitters Creek, which is here in Albury. We had a farm tour at Jake Wilkie's farm the day before. We had a restaurant night, a dinner welcomed, you know, that stocked locally grown organic lamb and Wilkie regenerative beef. And we had a full day of six sessions for talks on... By Dr Khan, to Anthony Chaffey, myself, and Jake Wilkie and a Q&A panel on being nguni cow. And it was an amazing event and people found a lot of value in actually meeting each other and actually making connections in talking and conversing. The in-person aspect of it, I think was amazing. And it was a privilege to meet so many motivated and interesting people. It was yeah, it was a resounding success.

Dr Ron Ehrlich [00:34:21] Yeah. Fantastic. And you mentioned the New nguni cattle breed, which I hadn't actually heard of, but I'm really interested for you to tell us a bit more about.

Dr Max Gulhane [00:34:30] Yeah, and not many people do. For the listener, the most to the most popular cattle breeds in Australia are what's known as British cattle breeds. So Angus cattle, which are the Black Angus, Hereford cattle and these are the most... The type of cattle that most farmers are running in... Especially in New South Wales, Victoria. And those are the ones that command high prices in the commodity market. But if we think about what constitutes an optimal human diet and what constitutes the healthiest animal meat, then we go back to what we were just mentioning, which is

nutrient density and absence of any kind of contaminants, whether that's antibiotics or other kinds of human treatments to the animal, or if it's herbicides or fungus are all contaminants of the grain that the animal ate. So this is a form of food purism that we're striving for. And when we implement those criteria, then we get to a situation where we want a ruminant herbivore that has eaten its species-appropriate diet. So we can... The options are we can hunt. I mean, wild-caught venison is incredibly nutrient-dense and exactly has... Satisfies those criteria. It hasn't been interfered or intervened by humans. But if we want to get that, if we want to satisfy those same criteria. With cattle, then what we need to do is need to be regenerative grazing them so they constantly move to fresh pasture that isn't sprayed. And two, we want to use an animal that doesn't necessitate that intervention. Because what the problem that we have is if we use the wrong animal in the wrong setting, then it's simply inhumane not to treat that animal. If there's tick-borne illnesses, if there's other forms of... Or bacterial infection that require treatment. So the key point is that we need to be using animal that has the capability and the physiology to be raised in a way that doesn't necessitate human intervention.

Dr Max Gulhane [00:36:46] The ngunis is an African tribal cow so it was basically brought down maybe around 6000 years ago from what is now Northern Africa, Ethiopia. And it came down through the very dense jungle through a range of incredibly harsh climates that include tick-borne illnesses include predation by and by African game animals that included even rinderpest, which was a massive outbreak in the late 1900s, which affected a lot of cows and did kill some in nguni. But one in nguni survives so essentially what we... What they had is that these Zulu people, the Zulu tribes kept their wealth and their... All their possessions in the form of these cows and they stewarded them for their ability and their adaptability, that easy birthing and all those amazing traits. And what essentially happened is that the cow then was selected by nature with a very light guidance from humans to be... Have incredible fertility, to have incredible tick resistance, to taste great, and to be have a very docile and gentle nature. So essentially what you have is what I see is the ultimate ruminant herbivore for human domestication in terms of not only providing the most optimal food as those two criteria

we mentioned, but also as a tool of regenerating the land. And as you know, Ron, regenerative agriculture involves using your herbivores as a tool for improving the quality of the land, moisture retention, the amount of carbon that's able to be sequestered and then a tool and the beneficial the positive externality of that is high-quality meat that we can eat. But the nguni satisfy these on so many different fronts because they're smaller framed animal they have... They can browse non-selectively. So they're eating down a whole bunch of shrubs that might not otherwise be eaten. So they have all these characteristics that make them make them perfect for and... For all these criteria that we're seeking. And that is why I'm so passionate about them, because it's a way forward as far as I see in a world where I'm telling people to eat meat and eat lots of meat.

Dr Ron Ehrlich [00:39:20] Hmm. And that for our listener, Nguni, NGUNI. Is available. Where is that? Is that coming to Australia? Is it here? Where do you find that?

Dr Max Gulhane [00:39:33] Hey, so there's a very small number of purebred nguni animals and they actually got brought to Australia via embryo by a range of South African farmers. They... The places that you can buy nguni now, there's not a lot where you can actually get nguni meat. And essentially it's one farm up in Queensland called Eastwell Farms has a nguni cross Brahman herd and... But the meat tastes absolutely amazing and it's a common rebuttal when I talk to commercial cattle people that okay that's all well and good, but the meat must taste like an old leather boot. Well, no it doesn't. It tastes incredible. And, if it's aged well and hung it's up there with the best steak that you'll eat. So it's not yet widely available. Jake Wilkie down here in Albury has nguni bulls and he's bringing his nguni herd into development but for the time being it's in progress.

Dr Ron Ehrlich [00:40:32] And for the time being grass-fed and finished you know, beef... Cow... You know, animals is still a preferable alternative until nguni comes onto every plate in Australia?

Dr Max Gulhane [00:40:48] Yes. And I do really want to make that point. And thank you, Ron, is that if you... If there is a farmer who is raising fully grass-fed animals that don't require intervention. Don't require any form of vaccination or drenching or any...

And he's able to do that ethically then that beef is going to taste just as good. I'm not necessarily making a claim that that being nguni will be superior, all else considered. But given the land that we live in, live in the dryness and the arid nature and the marginal nature of so much of Australia, it makes sense that this animal particularly can be used to help regenerate that land. But yes, I agree with you on if you can get access to fully grass-fed beef, no matter what breed, that is going to be the best food for you.

Dr Ron Ehrlich [00:41:41] Grass-fed and finished.

Dr Max Gulhane [00:41:41] And finished.

Dr Ron Ehrlich [00:41:41] And finished and not that they're put into a feedlot for the last 30, 60, 150 or whatever number of days, just grass-fed and finished. They have one bad day in their life.

Dr Max Gulhane [00:41:54] Exactly. And look, that's another great point before we finish this topic is that what we want to do is actually meet the farmer that's growing this food because there can be grass-fed, grass finished, but it was in a feedlot and was being fed grass, pelletized grass. Well, that's not what we want. So essentially, the extension of this approach is to really take it into your own hands and meet the person who is actually growing your food. And you can verify for yourself that the provenance of the meat, the animal welfare that was respected and the lack of use of chemical inputs. These are all questions that you need to ask your farmer and start having some input and some oversight into what you're putting on your plate for yourself and your family. Because when you outsource that responsibility, then you're at the whim of a supply chain that has incentives, economic incentives that are divergent from your health interests.

Dr Ron Ehrlich [00:43:00] Yes, I remember 15 or 20 years ago going into my local butcher, and when I asked about the beef, it was a grass-fed or grain-fed. He looked at me like I was, What the hell are you even talking about? I thought he was going to take a knife to me. But interestingly, now he advertises on his window 15 to 20 years later, grass-fed meat. So, you know, asking is the beginning of an important conversation. Now, I'm really

interested because, you know, you've been on a journey through your own health challenge and it's taken you into low-carb, carnivore regenerative, and you've mentioned it already. But the importance of the circadian clock and our whole relationship with the sun and light and all of that, that's that's the evolution that I've been on. I used to think that sleep and breathe were absolutely fundamental, but I've now got into this world of quantum biology. Tell us a bit about that again, I know you've mentioned the suprachiasmatic nuclei and all that, but let's just take a few steps back and give us circadian clock and health 101, why it's important, what it is and why.

Dr Max Gulhane [00:44:21] Yes. So fundamentally, I think about circadian biology as the fact of respecting the fact that for millions of years, we've evolved in the... In a very strict rhythm of the day, which involves bright light during the day, which what... Which basically builds in different natural light frequencies throughout the day and then changes throughout the day through that day and then basically disappears. So you've got a waxing and waning some natural radiation from the sun and including visible and non-visible light, and then a complete absence of light during the night time. So the reason why that's important is because we have a roughly 24-hour clock that has evolved to be constantly regulated, basically feeding information from that cycle and the key facets of our biology and all contain these clock-type mechanisms that have that function that is regulated by the time of the day or the absence of light. And that the circadian information the sun basically is offering to us. What that means is that for the listener is that we're living in a profoundly different environment to which our ancestors and our ancestral lineage existed in. And when we... When you take someone out of the environment, which they thrived in and we evolved in, then you you had cause problems. And what the modern electricity grid facilitated was immense development of human technological advancement and convenience. But the invention of artificial light has essentially disrupted in a very, very major way the... Our bodies, our ability to respect our circadian... Our circadian biology needs essentially by exposing ourselves to inadequate light during the day because we're locked in inside and excess light or artificial light at night. And the combination of those two things and basically plays havoc with that, this finely tuned 24-hour rhythm. And you basically get disease, cancer, metabolic disease, neurodegenerative disease in many ways through mediated through the effect of... On the

mitochondria, which is the tiny organelle within many organelles within ourselves. So that's that's a high-level view of how I think about circadian disruption. And the key point is that some people have a light problem and food can't quite solve a light problem. And I think that is where in many cases Carnivore gets people close, but it doesn't solve every problem.

Dr Ron Ehrlich [00:47:36] Hmm. It's interesting to hear you say we are inside and stuck in light and we have nature... And artificial light. But there's a third part, too, which has been the demonisation of this thing that's had a pretty significant impact on planetary evolution. It's called the sun. You know, that's been a big part of the problem as well as an.

Dr Max Gulhane [00:48:03] Incredibly and look... It really mirrors the demonisation of saturated fat and cholesterol and animal fat. And it's a very it's quite it's a complex I mean, to go into the specifics of it, but essentially the sun has incredible power to heal and it has incredible need from a biological point of view. We need exposure to ultraviolet light, we need exposure to infrared and all these UVA and all these forms of various forms of natural solar radiation. It's not only a convenience, it's actually a physiological and a biological need. And when we, and when I say we, medical and scientific establishment Institute recommendations that hubristically we presuppose that this giant orb that we evolved that all life on the planet evolved it being exposed to when we... When they say that that is a problem and that's harmful and that's disease-causing, then we really need to take a step back and be very, very, very careful before we implement those types of recommendations. Because essentially what it's saying, it's presupposing that nature's made a mistake and Dr Jack Kruse, who had done extensive research with, he makes the point that nature never makes mistakes and it doesn't. And that's inherently true. Nature doesn't make a mistake. We as humans simply haven't yet understood or fully comprehended the reason why. So some things are why they are. And to basically demonise ultraviolet light specifically is absurd when you understand the biology of certain function. And we could talk about the function of UV light, which is not only to make vitamin D, but influencing a very, very, very important polypeptide hormone called Propionic hormone, which I mentioned Dr Jalal and I talked about recently. And essentially not to derail your question too much, Ron, but propionic hormone and this ties

into the low carb and the nutrition aspect is a master, one of the master regulators of body composition and energy metabolism so that the leptin melanocortin pathway is the... Is that the feedback loop or the mechanism by which the body understands how much energy it has on board. And this hormone leptin that gets made by your fat cells and basically puts back to the hypothalamus and tells the body how much energy is on board.

Dr Max Gulhane [00:51:03] When you disrupt the circadian rhythm, the ability to of the body to understand how much energy on board is disrupted, the patient, people get leptin resistant and they become hyperphagic. They become, they need to eat more. The way that propionic hormone fits into this is that this polypeptide hormone gets cleaved up into a bunch of different hormones, just like imagine a long ticket and you cut the ticket up in eight different places and each ticket got you entry to a different theme park. That's one way of thinking about it. But one of the key things that gets cleared off this polypeptide hormone is involved in the suppression of appetite and what stimulates the release of propionic hormone. It's UV light. So when you understand that, you can see that the key mechanism to regulate appetite and reduce feeding behaviour is stimulated by ultraviolet light. You can see that the sun then is having a profoundly anorexic or reducing the need to eat. And it does so physiologically because there's energy involved in exposure to solar radiation and through the use of melanin, which is a pigment that makes up a brown skin which is again secreted by alpha, a signal by alpha MSH, which is cleaved off POMC. We can actually use solar radiation to draw out energy through the melanin pigment. So when you raise that this type of point and then you step back and you realise that we've been told to block UVB with sunscreens and wear sunglasses and put them on little Johnny, whenever Johnny goes to the playground, it becomes absolutely baffling and completely nonsensical. So that would be my point and to give you an illustration, Ron, about how ancient this pathway is, the... 500 million years ago is the origin of this polypeptide propionic hormone. So these jawless fishes that existed in the proto-planet before the tetrapods even existed, before amphibians diverged. This is how old this polypeptide hormone is. And again, it was regulated by sunlight. Sunlight is what shaped life and the development of us as humans. And so to claim that somehow we need to be blocking UV light when you understand the function of...

Would begin to understand it. I'm not to say that I understand it at all, yet it's that complex. But when you begin to understand the implications of a propionic hormone, it becomes incredibly hubristic and harmful to say that we should be avoiding the sun. And the last point I'll make about that and I haven't... Just to hammer home the point is that beta-endorphin is an endogenous neuro opioid chemical. It is cleaved off POMC. So nature literally made us to be addicted to the sun because POMC is expressed in the skin, it's expressed in the brain. And when you expose the skin in the end of the body to ultraviolet light, you're making an endogenous opioid chemical. So how can that be inherently harmful? It's really... That gives it context, I think. And it's a real food for thought.

Dr Ron Ehrlich [00:54:51] It's so interesting to hear you mention all of those things with leptin and the endorphins. And you think about the epidemic and the demonisation of sunlight and the epidemic in obesity and mental health, and then you factor in poor sleep through our exposure to all these lights within our home. You know, it's a perfect storm. And you'd think, why on earth would... What is the rationale behind public health messages that just keep on getting perpetuated like this? And it doesn't seem to make sense at all until you use two words. And I hate to sound cynical, but those two words are business model. A good health may make sense, but it doesn't make dollars. And that is difficult for patients and practitioners to understand or realise. But our health industry is not about good health, it's about managing chronic disease and...

Dr Max Gulhane [00:56:03] You're right, Ron. I'll make the point... No, I'll make the point that pharma knows about the effective proper amount of control on body regulation of body weight. And they do they do that because they've invented medication that basically targets the system. So there's medication, a combination of naltrexone and bupropion that is basically potentiates the effect of POMC in the hypothalamus, stimulating POMC to make alpha MSH and reduce appetite. And with in combination with naltrexone, which is opioid inhibitor, that removes a negative feedback loop on that process. So in certain patients this can help them lose weight. So you can see that it's a known pathway and the literature is very well established that UV light and sunlight is a prime stimulator of POMC. So you can see that keeping people out of sun it is profitable

because it's good you avoid the sun. You people are going to get fat and sick and there's going to be health issues. So no, I don't blame you at all for the cynical take, I think it's very... I think it's correct.

Dr Ron Ehrlich [00:57:21] And let's just put a very quick disclaimer in here in that we are not suggesting that people go out and get sunburn. It's not an all or none thing. There are you know, it's using this resource which is provided free to us every single day to its maximum. But let's come back to because, you know, the sunlight is one thing, but you've mentioned sitting in a room, the lights, the computer. Tell us a little bit about our relationship with modern... With light and energy in its modern forms and the impact that can have on us.

Dr Max Gulhane [00:58:01] Yeah, the... There's a couple of facets to it, but essentially human-derived or manmade light doesn't contain any form of non-visible light, and it doesn't wax and wane with the natural with that... As the sun naturally does. So in the first thing in the morning, there's lots of red light, there's lots of infrared light, and then there's UVA comes in and then and then closer later in the day there's UVB and then the peak noon. You've got a very high proportion of blue light, but it's always balanced with red light and then the basic process mirrors. And throughout the end of the day, it's a mirror image. But when you're sitting on the LED globes, which since late 2010 or early 2010 governments all around the world have mandated, that is a profoundly alien spectrum to live under, because it is it has a massive peak of a blue emission, and it's not balanced by any red light and it doesn't contain anything not non-visible. So the way I explain this to patients is just like there is junk food. Similarly, there is junk light, and any form of human artificial light is exactly that. It's junk light and the effect that that has on our biology is that it is has the effect of stimulating, stimulating a midday signal. And again, if our bodies are expecting absence of of light after the sun's gone down from a hormonal point of view, what that is doing to our ability to make very important hormone called melatonin that we make after dark, it destroys it. It turns it off completely. Well, not necessarily completely, but it drastically reducing its secretion. So that's how I think about the effect of artificial light on humans is that it's an alien light, it's junk light, and it's not what your biology evolved under. It's not what you need to survive, to thrive.

Dr Ron Ehrlich [01:00:20] Well, I know this is a very, very big topic. And I did actually listen to your series with Jack Kruse. And, you know, I mean, it went on I think there was around six or 9 hours of it at least. And it is complex, you know, like understanding all the POMC and the different leptin which helps us metabolise fat and all these other hormones this is quite an important point and you go into it in a lot more detail if we would just now. People have been sitting listening to us talk about low carb, about meats, about regenerative agriculture, about circadian clock and artificial light if we were going to leave our listener with a couple of basic easy can-do tips that we should be incorporating into everyday. And I'm sure you tell your patients this regularly. I wondered if you might leave us now with a few tips.

Dr Max Gulhane [01:01:17] Yeah, I think most simply mind your food diet. So eat mostly high-quality animal products and seasonal food with an emphasis on which is naturally going to be low carb. If you are on the eating, what's growing in that local area. Mind your light diet and spend as much time that you can be regulated by the sun and respecting your circadian biology, which means seeing the sunrise, seeing the sunset going out during the day for breaks without sunglasses or sunscreen on and respect your Fitzpatrick skin type, respect your position in your latitude, the latitude that you're living in compared to your your biology. And obviously everyone's got a different amount of melanin based on their racial origin. So you have to respect that as well. And so respect your light, respect your light diet, you go out and meet your farmer because if you do those three things, then the by-product of that approach is that you're going to be eating hyper-locally. You're going to have knowledge of exactly what you're eating. You're going to be eating a high-quality, nutrient-dense, animal-based diet, and you're going to be regulating the circadian rhythm. And obviously part of the second part, the light diet is blocking artificial light at night with a pair of blue light-blocking glasses or set up your home with red, which don't have the same or don't have as intense affect on your circadian rhythm. So I guess through diet, light diet and meet you farmer Those would be my three takeaway points.

Dr Ron Ehrlich [01:03:00] Fantastic. Max And just so that, you know, I'm a committed, you know, I've got my glasses right here. I would have worn them. I should have worn them through this interview. But listen, I wanted to say thank you for joining us today.

Thank you for all the great work and great podcast you're doing. And we will definitely be having links to those and your website on our show notes. So thank you so much.

Dr Max Gulhane [01:03:25] Yeah, thanks so much, Ron. I really appreciate it and looking forward to having you on my podcast and we'll have a chat too.

Dr Ron Ehrlich [01:03:32] Thanks, Max. Now I got first introduced to Max through the low carb movement, specifically Dr Rob Szabo, who we've also had on as a guest and many other. We've explored low-carb nutrition, on many other episodes. The Carnivore Diet is also an interesting one that we've explored every now and again. And when you think about plants and plants formed the basis of so many diets that or eating plans or nutritional plants. But it's also worth noting that plants are also potentially toxic. I mean, plants protect themselves from predators, and we are one of those predators and they have chemicals on in and on them that are toxic and potentially harmful to humans. Those include phytates, salicylates, fodmaps, lectins and the list goes on. So plants. So we do need to be aware, I've had many patients coming in to my practice over the years telling me they're on a terrific diet. You know, they're vegetarian and yet they may not be enjoying good health. And while vegetables are an important part of healthy eating, not for everyone. And it is nuanced. So the carnivore diet really is one that seems to have had some real success, particularly in autoimmune conditions. But anyway, it was interesting to hear Max's perspective on that and his own personal experience, which is often what motivates many medical practitioners to go beyond the narrative which they learn at university and from the journals. So that's interesting. And of course the whole area of quantum biology and Max has really explored that in his Regenerative Health podcast. And he referenced a series that he did with Dr Jack Kruse. He did, I think he did three, three-hour episodes with Dr Jack Kruse. And of course, the more recent, most recent one was with Dr Jalal Khan, who I've had on the podcast as well. And I will have returning to discuss this issue, which we all need to be engaging with. I used to think that sleep and breathe were foundational pillars like I obviously are, but something even more foundational is how we interact with the sun and the earth and nature in general. And that has a power... That is a powerful tool that we should all be engaging with on a daily basis.

Anyway, I will have links to Max's podcast in the show notes. I hope this find you well. Until next time. This is Dr Ron Ehrlich. Be well.

Dr Ron Ehrlich [01:06:22] This podcast provides general information and discussion about medicine, health and related subjects. This content is not intended and should not be construed as medical advice or is a substitute for care by a qualified medical practitioner. If you or any other person has a medical concern, he or she should consult with an appropriately qualified medical practitioner. Guests who speak in this podcast express their own opinions, experiences and conclusions.



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