I keep getting asked, "So, What is Metabolic Health?" Transcript

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Introduction and show theme

What metabolic health means

Macronutrients as information

From food to ATP energy

Mitochondria and cellular energy

How metabolic health is assessed

Diet, inflammation, and mitochondrial dysfunction

Why metabolic health matters

hi I'm Dr Chad Larsson and this is keep hi I'm Dr Chad Larsson and this is keep it real keep it real is all about Real it real keep it real is all about Real Talk based on my 20 plus years of Talk based on my 20 plus years of clinical experience what we're really clinical experience what we're really talking about is real food real medicine talking about is real food real medicine and real change hello and welcome back and real change hello and welcome back so today I'm going to uh answer a so today I'm going to uh answer a question that I've been asked quite a question that I've been asked quite a bit recently which is what is metabolic bit recently which is what is metabolic health so I talked to patients uh a lot health so I talked to patients uh a lot about metabolic health and about metabolic health and I've write about it and I've used that I've write about it and I've used that phrase in videos before and so people phrase in videos before and so people have asked what is this metabolic Health have asked what is this metabolic Health that you're talking about so what it that you're talking about so what it speaks to is the change of currency that speaks to is the change of currency that happens in the human body so what I mean happens in the human body so what I mean by that food is basically information by that food is basically information for the system and by information for for the system and by information for the food what I mean specifically is the food what I mean specifically is they are all of our foods are made up of they are all of our foods are made up of three main macronutrients carbohydrates three main macronutrients carbohydrates fats and proteins and these fats and proteins and these carbohydrates fats and proteins are carbohydrates fats and proteins are information that helps to dictate what information that helps to dictate what the body does how it functions and how the body does how it functions and how the body is able to utilize those the body is able to utilize those particular nutrients hence carbohydrates particular nutrients hence carbohydrates fats or proteins are actually not usable fats or proteins are actually not usable by the human body at least from an by the human body at least from an energetic standpoint it's the wrong energetic standpoint it's the wrong currency so the body has to convert food currency so the body has to convert food currency into human currency it's if you currency into human currency it's if you go to a restaurant and you're going to go to a restaurant and you're going to pay for your meal and you're in the pay for your meal and you're in the United States and you pay with Japanese United States and you pay with Japanese Yen they're like oh we don't take Yen they're like oh we don't take Japanese Yen here so you got to go Japanese Yen here so you got to go exchange that currency for US Dollars exchange that currency for US Dollars that's basically what's happening in the that's basically what's happening in the human body is these carbohydrates fats human body is these carbohydrates fats and proteins aren't usable for cellular and proteins aren't usable for cellular energy the body wants to use something energy the body wants to use something called ATP adenine triphosphate and that called ATP adenine triphosphate and that has to be converted that currency has to has to be converted that currency has to be converted so the body does is all be converted so the body does is all these nutrients get absorbed into our these nutrients get absorbed into our cells after they go through the cells after they go through the gastrointestinal tra and metabolized and gastrointestinal tra and metabolized and a very long chain of events in the body a very long chain of events in the body they eventually find their way into the they eventually find their way into the cells and inside the cells is the cells and inside the cells is the currency conversion machine it's called currency conversion machine it's called the mitochondria most of our cells have the mitochondria most of our cells

have hundreds if not thousands of these hundreds if not thousands of these little exchange units and so these little exchange units and so these macronutrients carbohydrates fats and macronutrients carbohydrates fats and proteins feed into this currency system proteins feed into this currency system into the mitochondria and then the into the mitochondria and then the mitochondria is associated with things mitochondria is associated with things that you might remember some terms from that you might remember some terms from high school biology high school biology like the electron transport chain the like the electron transport chain the the kreb cycle and so these things get the kreb cycle and so these things get fed through the crep cycle the TCA cycle fed through the crep cycle the TCA cycle and also through beta oxidation and and also through beta oxidation and these macronutrients get converted into these macronutrients get converted into human energy those things help to go human energy those things help to go into those systems and then they create into those systems and then they create a Denine triphosphate and the body could a Denine triphosphate and the body could use ATP for fuel to help uh Power all use ATP for fuel to help uh Power all the different organ systems your heart the different organ systems your heart your brain your kidneys your muscles all your brain your kidneys your muscles all these things require this type of fuel these things require this type of fuel that come from this fuel source what that come from this fuel source what happens in metabolic health is when happens in metabolic health is when there's a healthy exchange of this there's a healthy exchange of this currency and there's ways that we could currency and there's ways that we could evaluate from basic blood work even or evaluate from basic blood work even or basic clinical evaluation how somebody's basic clinical evaluation how somebody's metabolic health is and the way that we metabolic health is and the way that we do that is we evaluate things like waste do that is we evaluate things like waste circumference um increase waste circumference um increase waste circumference with fat accumulation circumference with fat accumulation around the waist that's that's an around the waist that's that's an indication of poor metabolic Health we indication of poor metabolic Health we could measure things like blood pressure could measure things like blood pressure we could run blood work and evaluate we could run blood work and evaluate things like insulin and glucose we can things like insulin and glucose we can look at things like triglycerides look at things like triglycerides important inflammatory markers like important inflammatory markers like homocystine and C reactive protein these homocystine and C reactive protein these are windows into understanding how a are windows into understanding how a person's metabolic health is so that's person's metabolic health is so that's why this clinical evaluation is really why this clinical evaluation is really key to understand where a person person key to understand where a person person is at on the metabolic Health spectrum is at on the metabolic Health spectrum and if they're at a point where they're and if they're at a point where they're showing signs of metabolic dysfunction showing signs of metabolic dysfunction which is incredibly common then there's which is incredibly common then there's things that we can do to help regenerate things that we can do to help regenerate their system help to improve the sort of their system help to improve the sort of metabolic flexibility metabolic function metabolic flexibility metabolic function of their mitochondria and much of this of their mitochondria and much of this comes down to diet because remember what comes down to diet because remember what feeds in what influences the feeds in what influences the mitochondria are is the food information mitochondria are is the food information that's going in there could be uh good that's going in there could be uh good beneficial information there could be beneficial information there could be unhealthy information think of foods unhealthy information think of foods that are highly processed that have lots that are highly processed that have lots of sugar in them this is not what our of sugar in them this is not what our human bodyology is expecting body is human bodyology is expecting body is expecting natural whole type foods that expecting natural whole type foods that humans have eaten for Millennia but if humans have eaten for Millennia but if we start to consume things that are we start to consume things that are outside of what are genetics and what outside of what are genetics and what our biology is expecting then things our biology is expecting then things like inflammation tends to ACC like inflammation tends to ACC accumulate fat accumulates and then accumulate fat accumulates and then there's overall decrease of normal there's overall decrease of normal exchange of this energetics ATP and exchange of this energetics ATP and mitochondrial function go down part of mitochondrial function go down part of the function and health of the the function and health of the mitochondria is something called myoc mitochondria is something called myoc mitochondrial biogenesis it's like the mitochondrial biogenesis it's like the Regeneration mitochondria to replace old Regeneration mitochondria to replace old mitochondria and on the old side there's mitochondria and on the old side there's something called mitophagy or the something called mitophagy or the ability for mitochondria to recognize ability for mitochondria to recognize when they're old and malfunction and when they're old and malfunction and they need replaced by new ones so these they need replaced by new ones so these things are also influenced by this food things are also influenced by this food information and the type of food that we information and the type of food that we introduce in our system very much introduce in our system very much dictates the health and function of dictates the health and

function of these mitochondria which is really at these mitochondria which is really at the root of our metabolic health so the root of our metabolic health so first of all we understand this currency first of all we understand this currency exchange we know clinically how to exchange we know clinically how to evaluate a person's metabolic health and evaluate a person's metabolic health and we know how to then regenerate their we know how to then regenerate their mitochondrial function by by changing mitochondrial function by by changing things in their diet one one of the things in their diet one one of the things that is a natural process of this things that is a natural process of this this process of currency exchange from this process of currency exchange from food currency to ATP is production of food currency to ATP is production of something called reactive oxygen species something called reactive oxygen species R it's an inflammatory byproduct and R it's an inflammatory byproduct and there's a certain amount that the body there's a certain amount that the body is very used to very adapted to it's no is very used to very adapted to it's no problem and there's balancing mechanisms problem and there's balancing mechanisms to help uh decrease in the adverse to help uh decrease in the adverse effect of this type of reactive oxygen effect of this type of reactive oxygen species but what happens when we are species but what happens when we are consuming unhealthy food information consuming unhealthy food information then we're going to get an over then we're going to get an over production of this R and is going to be production of this R and is going to be stuck in a pro-inflammatory state that's stuck in a pro-inflammatory state that's why so many of these signs of why so many of these signs of mitochondrial dysfunction like elevated mitochondrial dysfunction like elevated waist circumference elevated waist circumference elevated triglycerides high blood pressure high triglycerides high blood pressure high blood sugar high inflammatory markers blood sugar high inflammatory markers the reason why these are associated with the reason why these are associated with cardiovascular disease neurocognitive cardiovascular disease neurocognitive decline diabetes obesity and other decline diabetes obesity and other conditions is because inflammation is conditions is because inflammation is very much at the root of that this very much at the root of that this inflammation is for the most part being inflammation is for the most part being produced at the level of the produced at the level of the mitochondria and it makes the the mitochondria and it makes the the mitochondrial function sick and out of mitochondrial function sick and out of balance and this is really the onset of balance and this is really the onset of many of these chronic diseases that many of these chronic diseases that we're trying to avoid hopefully in a we're trying to avoid hopefully in a nutshell you understand that's what nutshell you understand that's what metabolic health is it's the exchange of metabolic health is it's the exchange of sort of food information food energy sort of food information food energy into human energy into ATP this exchange into human energy into ATP this exchange happens in the Cell at the level of happens in the Cell at the level of mitochondria and there's lots of things mitochondria and there's lots of things that we could help to improve the that we could help to improve the function of the mitochondria and there's function of the mitochondria and there's lots of things that we can do to destroy lots of things that we can do to destroy the function of our mitochondria and so the function of our mitochondria and so that's what I would like people to that's what I would like people to really understand about when they're really understand about when they're shopping for food is this healthy and shopping for food is this healthy and supportive to my mitochondria or is it supportive to my mitochondria or is it not and that would really translate into not and that would really translate into General Health of the rest of your body General Health of the rest of your body so hopefully that little primer on what so hopefully that little primer on what metabolic health is helps to um shed metabolic health is helps to um shed some light if you have any questions some light if you have any questions about that just let me know if there's about that just let me know if there's any other topics in the future that you any other topics in the future that you want me to discuss let me know until want me to discuss let me know until