

Diabetes

here's a muscle cell here some blood sugar outside waiting patiently to come in insulin is the key that unlocks the door to let sugar in our blood enter the muscle cell when insulin attaches to the insulin receptor it activates an enzyme which activates another enzyme which activates two more enzymes which finally activates glucose transport which acts as a gateway for glucose to enter the cell so insulin is the key that unlocks the door into our muscle cells what if there was no insulin though well blood sugar will be stuck on the blood stream banging on the door to our muscles and not be able to get inside and so with nowhere to go sugar levels would rise and rise that's what happens in type diabetes the cells in the pancreas that make insulin get destroyed then without insulin sugar in the blood can't get out of the blood into the muscles and blood sugar Rises

but there's a second way we could end up with high blood sugar what if there's enough insulin but the insulin doesn't work the key is there but sometimes something's gummed up the lock this is called insulin resistance our muscle cells become resistant to the effect of insulin

what's gumming up the door locks and our muscle cells preventing insulin from letting sugar in fat what's called intramyocellular lipid fat inside our muscle cells fat in the bloodstream can build up inside the muscle cell creating toxic fatty breakdown products and free radicals that can block the signaling pathway process so no matter how much insulin we have out in our blood it's not able to open the glucose gates and blood sugar levels build up in the blood this diabetes an incurable disease type 2 diabetes should it get worse all the time as it usually does or it's better

simply that is that the course were
treating it totally wrong or not even
treating it at all that's what I'm going
to talk about with my guest today

[Music]

I'm addressing effort from diet doctor
for Carmen I'm here with dr. Jason Tania
introduced in Canada welcome thanks very
much

so I just watched a presentation by you
I thought was really fantastic you and
see both about how we treat diabetics
today in a medical system and your
nephrologist you meet you meet diabetics
when they're when they're having this is
for a long time and they're really
frantic right yeah so I treat people on
dialysis that's a lot of what I do and
it's very disheartening because what
happens is that when they develop the
disease they're so sick but the diabetes
itself is actually quite reversible and
that's one of the things that I realized
the short while ago and that's what
needs to be understood is that this is
not a disease that needs to progress but
we often tell people so that it's a
chronic progressive disease and that's
not simply me talking but if you go to
the Diabetes Association's whether it's
the American Diabetes Association or the
diabetes Australia they all put out
there that this is a chronic disease and
they tell people essentially that you
have diabetes you'll have it for the
rest of your life you might as well get
used to it but the problem is that
that's simply not true and it's actually
pretty easy to to prove it because if
somebody came up to me and said I've had
diabetes told I had diabetes

I watched my diet I lost pounds I cut
my carbs I cut my sugar and now they
took me off of my medication I'm fine
now that's obviously true nobody would
say oh you're lying right so that
patient who has lost the weight who has
changed the diet has increased their
exercise for instance their diabetes

actually got better and the thing is that if that patient got better what happens to this idea that this is a chronic progressive disease well obviously it's not true because anytime that happen every time it happened it means that the disease is actually reversible you have to know how to reverse it if you don't know how to reverse it then you're just going to get worse and the thing is that the drugs don't actually do anything for the disease and this is also not controversial because the thing is that type 2 diabetes is a disease of too much insulin resistance and that's not controversy acknowledges that right so if you have very high insulin resistance it's going to cause high blood sugar right that's a symptom of the disease the disease is actually too much insulin resistance so the treatments that we give our all targeted at blood sugar that doesn't make any sense because it's almost like to give an analogy if you have an infection if you have a leg infection well you need to treat that infection so what was causing it with bacteria you give antibiotics but that infection can give you a fever but that fever is not the disease if you start treating that fever as if it is the disease then that leg wound is going to fester because you're treating the symptoms of the disease and ignoring doesn't lead but that's what we've done with type 2 diabetes we're treating the blood sugar but it's not a disease of the blood sugar it's the disease of too much insulin resistance so what happens is that because we're not treating the disease the disease tends to progress so what you look at what happens over a period of years years what happens is that you start off with one medication then you take two medications and three then you take insulin and more insulin more insulin and after ten years you

started with one medication now you're on years of insulin thing well you're taking more medication to do the same job to keep that blood sugar the same that means your diabetes is worse even if your blood sugar is better your diabetes is worse than it's ever been because you've never actually done anything about treating the insulin resistance so that patient who wins and lost ways and exercise and cut out the carbs and cut out the sugars they actually reverse their insulin resistance and therefore their sugars came down which is far different than making your blood Sugar's got to go down by force by medication and ignoring the actual disease so that's the fundamental mistake that we've made over this last years right we've created the disease of type diabetes which is too much insulin as if it was type diabetes which is too little insulin so you got to understand that type diabetes has too little insulin so that make sense you should give them insulin to diabetes is too much as one you need to reduce their insulin but instead we're giving more insulin to a disease state that has too much insulin well of course great work that's crazy you had an analogy there as well in your talk you're saying it's like it would be like treating an alcoholic whether exactly so if you have a disease such as alcoholism where is characterized by too much alcohol the very last thing you want to do is give more alcohol and that seems very obvious right but if you look in the short-term as you take away the alcohol they might get the shakes they might get delirium tremens if you give them alcohol they will feel better in the short term right but that doesn't mean you're going to make the alcoholism better right that's the real problem it's the alcoholism you can't treat the short-term thing at the expense of a

long-term what we've done is treat the short-term we say wow your blood sugar is high let me get it down ready but it's like for what's happening to the disease so here's what's happening to the blood sugar what's happening to the disease it continues to get worse so it's just like that alcohol too much alcohol the disease too much alcohol The Cure cannot be to give more alcohol right so to be care giving insulin to my touch to diabetic Lee it's like giving our code

exactly exactly so too much is insane in fact it's not simply that it's not treating it it's going to actually make it worse just like giving that alcohol the other disease which is characterized by too much insulin you're living more insulin you're not making it better you're actually making it worse so the patient gained weight and they were their insulin resistance we just work exactly yeah and the funny part is that the patient's all know this because this is what happens and I talk to a lot of patients and they say they go to their doctor they start insulin then they gain pounds pounds right which is we all know that happened that's not a secret because insulin is what really drives weight gain so what happens is that they taking insulin they gain weight and they go back to the doctor and say doc what's this you tell me I need to lose weight to get better then you rollin give me a medication that makes me gain pounds this is not good the doctor always says something like well what are you gonna do you need to take the insulin go exercise right but the problem is that it was not these lack of exercise that made them gain weight

it was the insulin that made them gain weight so you need to treat that you need to reduce it so what do you do what do you do if you're a type diabetic well the thing is that it's a dietary

disease right and if you're a type diabetic it's a dietary disease a disease of essentially too much sugar so if you understand it like that then the answer is to get that sugar out get it down so the first thing you need to do is cut out all the sugars cut out a lot of these refined carbohydrates which are just sugar and so the brad's in the past was right so they're all chains of sugars that's all carbohydrates are chains of sugar as you eat them they get broken down into sugar so if you have too much sugar diabetes is essentially too much sugar

you gotta stop taking sugar otherwise you're going to make it worse so that's probably the first thing you can do more exercise try and burn it off and the other thing that you can do is try to do something more extreme such as fasting for instance you can add more extreme than a strict low-carb is

[Music]

you

[Music]

I have the best job in the world I'm a doctor

no believe me that's not why I'm at obesity doctor obesity is a disease it's not something created by lack of character it's a hormonal disease and there are many hormones involved and one of the main ones is a hormone called insulin most obese individuals are resistant to this hormone insulin so what does that mean exactly to be resistant to insulin

well insulin resistance is essentially a state of pre pre type- diabetes insulins job is to drive glucose or blood sugar into the cells where it can be used in a nutshell when someone is insulin resistant they are having trouble getting blood sugar where it needs to go into those cells and it just can't hang out in the blood after we eat or we would all have a diabetic crisis after every meal so when someone is

resistant to insulin the body's response to this is to just make more of it and insulin levels will rise and rise and for a while years even this is going to keep up and blood sugar levels can remain normal however usually it can't keep up forever and even at those elevated levels of insulin are not enough to keep blood sugar in the normal range so it starts to rise that's diabetes diabetes is a state of carbohydrate toxicity we can't get the blood sugar into the cells and that causes a problem in the short term but the long term consequences are even greater and insulin resistance is essentially a state of carbohydrate intolerance so why oh why do we want to continue to recommend to people to eat them the American Diabetes Association guidelines specifically state that there is inconclusive evidence to recommend a specific carbohydrate limit but those guidelines go right on to say what we all know carbohydrate intake is the single biggest factor in blood sugar levels and therefore need for medication these guidelines then go on to say hey look if you're taking certain diabetic medications you actually have to eat carbs other your otherwise your blood sugar can go too low okay so let's take a look at the vicious cycle that that advice just set up so it's eat carbs so you have to take medicine then you have to eat more carbs you avoid the side effect of those medications and around and around we go even worse is that no we're in the ABA guidelines is the goal of reversing type diabetes this needs to be changed because type diabetes can be reversed in many if not most situations especially if we start early not only do we need to let people know this but we have to start giving them the practical advice so they can do this consider car first here's a shocker for you we don't need them seriously our

minimum daily requirement for carbohydrates is we have essential amino acids those are proteins essential fatty acids but nope no essential carb a nutrient is essential if we have to have it to function and we can't make it from something else we make glucose plenty of it all the time

it's called gluconeogenesis so we don't need them the overconsumption of them is making us very sick yet we are continuing to recommend to patients to consume close to if not more than half of their total energy intake every day from them it doesn't make sense let's talk about what does cutting carbs a lot yes in my clinic we teach patients to eat with carbs as the minority of their intake not the majority so how does that work

well when our patients decrease their carbs their glucose goes down and they don't need as much insulin so those insulin levels drop and fast and this is very important