What Your Doctor Isn't Telling You About Mitochondrial Damage Transcript

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What Causes Mitochondrial Damage

For this one, it's sort of okay, on one For this one, it's sort of okay, on one hand, where is it coming from? The other hand, where is it coming from? The other hand is what are the general aspects of hand is what are the general aspects of my life or whatever else that might my life or whatever else that might oppose the mitochondrial damage. So, oppose the mitochondrial damage. So, I'm Dr. A, welcome to my channel. I've I'm Dr. A, welcome to my channel. I've been working in teaching and researching been working in teaching and researching in the integrative and naturopathic in the integrative and naturopathic community for 30 years now, and I've community for 30 years now, and I've been seeing patients in that same been seeing patients in that same community for decades and use this community for decades and use this channel to answer questions that we get.

channel to answer questions that we get. Now, we have other content that we're Now, we have other content that we're going to link description or in the going to link description or in the inbox about mitochondria, so take a look inbox about mitochondria, so take a look for those. We have a playlist and all for those. We have a playlist and all that. We're going to have a few kind of that.

Ruling Out Genetic Mitochondrial Disease

We're going to have a few kind of punchier versions of some Q&A to get punchier versions of some Q&A to get into subtopics around mitochondria. The into subtopics around mitochondria. The first thing is, whenever you have first thing is, whenever you have somebody and you're concerned, whether somebody and you're concerned, whether it's a child or an adult, that they may it's a child or an adult, that they may have mitochondrial problems, the first have mitochondrial problems, the first thing you need to do is to do testing thing you need to do is to do testing that would make sure it's not a genetic that would make sure it's not a genetic mitochondrial disease. Now, most of mitochondrial disease. Now, most of these are tested for in children these are tested for in children because, of course, they're born with because, of course, they're born with the mitochondrial genetic disorder, but the mitochondrial genetic disorder, but there are some that are genetic there are some that are genetic slowdowns or not quite at the disease slowdowns or not quite at the disease state or at a more of a functional, you state or at a more of a functional, you know, genomic state where the know, genomic state where the mitochondria just aren't working like mitochondria just aren't working like they ought to. So, the first thing they ought to. So, the first thing always is, you know, do no harm and make always is, you know, do no harm and make sure, you know, you're still going to sure, you know, you're still going to have to treat it, but make sure that have to treat it, but make sure that they don't have a hardcore genetic they don't have a hardcore genetic mitochondrial disease. So, that's the mitochondrial disease.

How Toxins and Heavy Metals Harm Your Cells

So, that's the first thing to kind of take off in the first thing to kind of take off in the top on the why question. The next thing top on the why question. The next thing is, the mitochondria are inside of your is, the mitochondria are inside of your cell. There's a lot of them. Each type cell. There's a lot of them. Each type of cell has different amounts of of cell has different amounts of mitochondria. But, the mitochondria are mitochondria. But, the mitochondria are inside your cell and they're running inside your cell and they're running your cell by providing energy to your your cell by providing energy to your cell. So, they're very sensitive to the cell. So, they're very sensitive to the things that go into the mitochondria to things that go into the mitochondria to make energy inside the mitochondria. And make energy inside the mitochondria. And then, they're very sensitive to things then, they're very sensitive to things that build up on the outside of the that build up on the outside of the mitochondria. We have mitochondrial mitochondria. We have mitochondrial respiration, moving in of oxygen and respiration, moving in of oxygen and moving out of CO_2, but also of junk. So, moving out of CO_2, but also of junk. So, what if I were to take things that what if I were to take things that aren't in your body already that are aren't in your body already that are metabolic junk and put them in there?

metabolic junk and put them in there? Those things might damage your Those things might damage your mitochondria. Now, some of these things mitochondria. Now, some of these things you already would think of, toxins, you already would think of, toxins, heavy metals for example, especially heavy metals for example, especially cadmium, other heavy metals, very toxic cadmium, other heavy metals, very toxic to the mitochondria, chemical toxins, to the mitochondria, chemical toxins, huge mitochondrial toxins. There are huge mitochondrial toxins. There are online resources that mostly are used by online resources that mostly are used by researchers and physicians where you can researchers and physicians where you can put in the chemical name and it tells put in the chemical name and it tells you how, how much, and where it damages you how, how much, and where it damages the mitochondria. We have tens and tens the mitochondria. We have tens and tens of thousands of chemicals in the of thousands of chemicals in the environment today that we didn't have a environment today that we didn't have a hundred years ago. So, the mitochondria hundred years ago. So, the mitochondria aren't used to these things and so those aren't used to these things and so those are natural mitochondrial poisons. A are natural mitochondrial poisons.

Mold, Alcohol, and Cigarettes as Mitochondrial Poisons

A mitochondrial poison that a person might mitochondrial poison that a person might knowingly ingest would be something like knowingly ingest would be something like smoking cigarettes, there's number of smoking cigarettes, there's number of constituents by that would be alcohol, constituents by that would be alcohol, drinking alcohol can do that, and many drinking alcohol can do that, and many other things for example, but also other things for example, but also environmental exposure, biotoxins. So, environmental exposure, biotoxins. So, things that are in our environment that things that are in our environment that are made by biologic things like a mold are made by biologic things like a mold mycotoxin can be a mitochondrial damage.

mycotoxin can be a mitochondrial damage.

Why Poor Diet Slows Mitochondrial Function

The mitochondria run on a lot of The mitochondria run on a lot of nutrients for intermediates. So, lot of nutrients for intermediates. So, lot of B vitamins in there, coenzyme Q10 is in B vitamins in there, coenzyme Q10 is in there, lots of trace minerals go through there, lots of trace minerals go through there, whole bunch of nutrients go there, whole bunch of nutrients go through the mitochondria. So, poor diet through the mitochondria.

How Chronic Illness Drains Cellular Energy

So, poor diet and nutrient insufficiency or frank and nutrient insufficiency or frank deficiency will slow your mitochondria deficiency will slow your mitochondria down. Other insults, chronic illness.

down. Other insults, chronic illness. Chronic illness will have a feedback Chronic illness will have a feedback mechanism by which the body will go to mechanism by which the body will go to the parts of the cell that set the rate the parts of the cell that set the rate that the mitochondria run at and that the mitochondria run at and literally turn the rate down because literally turn the rate down because you're chronically ill and the body's you're chronically ill and the body's protecting you from having too much protecting you from having too much energy, which seems like a bummer and it energy, which seems like a bummer and it truly is if you have a chronic illness.

truly is if you have a chronic illness. So, chronic illness actually is a So, chronic illness actually is a self-supporting mitochondrial damage. self-supporting mitochondrial damage.

So, part of dealing with chronic illness So, part of dealing with chronic illness is unwinding that. So, then the other is unwinding that.

How to Repair and Protect Your Mitochondria

So, then the other side of the question is what do I do side of the question is what do I do about it? Well, the main

thing is once about it? Well, the main thing is once we rule out a genetic cause for we rule out a genetic cause for mitochondrial problem, the majority of mitochondrial problem, the majority of mitochondrial problems are functional.

mitochondrial problems are functional. They're acquired and usually they're They're acquired and usually they're acquired by things like toxic acquired by things like toxic influences, drugs. There's a lot of influences, drugs. There's a lot of drugs that we use and take that are drugs that we use and take that are mitochondrial damaging drugs, outside mitochondrial damaging drugs, outside influences like alcohol, cigarettes, influences like alcohol, cigarettes, etc., obvious toxins like toxic metals, etc., obvious toxins like toxic metals, chemicals, and then biotoxins like mold chemicals, and then biotoxins like mold toxin. So, the first thing is is to take toxin. So, the first thing is is to take a look at the landscape of your life and a look at the landscape of your life and reduce all of that as much as possible.

reduce all of that as much as possible. That might mean making sure that you That might mean making sure that you cook with filtered water to filter out, cook with filtered water to filter out, you know, metals and chemicals. A lot of you know, metals and chemicals. A lot of people will get deionized water, which people will get deionized water, which is kind of pure, especially if they live is kind of pure, especially if they live alone and they use up a jug every week alone and they use up a jug every week and that's what they drink and cook with and that's what they drink and cook with and all of that. The next thing would be and all of that. The next thing would be if you're ingesting knowingly toxins, if you're ingesting knowingly toxins, you might want to consider those habits you might want to consider those habits and, you know, take those out of your and, you know, take those out of your lifestyle. You might want to start to lifestyle. You might want to start to use some filtration devices for the air use some filtration devices for the air around you. If you do have some known around you. If you do have some known mold or you know you have some moldy mold or you know you have some moldy carpet or what I'd get it remediated and carpet or what I'd get it remediated and removed. Lower your burden through all removed. Lower your burden through all means possible. But, then remember the means possible. But, then remember the other one, which is mostly in our other one, which is mostly in our control, is diet and nutrition. And control, is diet and nutrition. And because the mitochondria use so many because the mitochondria use so many nutrients, they use a bunch of B nutrients, they use a bunch of B vitamins, they use many trace minerals, vitamins, they use many trace minerals, they use other nutrients substances like they use other nutrients substances like coenzyme Q10. And then there's other coenzyme Q10. And then there's other things that are just helpful to the things that are just helpful to the mitochondria, even though the mitochondria, even though the mitochondria doesn't use them directly mitochondria doesn't use them directly usually, like alpha-lipoic acid. We use usually, like alpha-lipoic acid. We use that a lot in mitochondria rescue with that a lot in mitochondria rescue with people. Or maybe the more active forms people. Or maybe the more active forms of vitamin B3, which your mitochondria of vitamin B3, which your mitochondria use a lot like NAD or NMN or use a lot like NAD or NMN or nicotinamide riboside, things like that nicotinamide riboside, things like that that we might use clinically. So getting that we might use clinically. So getting your nutrition back up to speed and your nutrition back up to speed and maybe you might need to supplement more maybe you might need to supplement more in the beginning to kind of get it back in the beginning to kind of get it back up to speed. So once you've kind of up to speed. So once you've kind of dealt as much as you can with toxins, dealt as much as you can with toxins, once you dealt as much with diet and once you dealt as much with diet and nutrition, then the other thing is if nutrition, then the other thing is if you have a chronic illness and you have you have a chronic illness and you have this feed-forward mechanism slowing your this feed-forward mechanism slowing your mitochondria down because you have a mitochondria down because you have a chronic illness and this is slow and chronic illness and this is slow and hard, but you want to work with somebody hard, but you want to work with somebody who works with chronic illness to who works with chronic illness to improve your health overall and that improve your health overall and that will slow down those signals to your will slow down those signals to your mitochondria to be working slowly. So mitochondria to be working slowly. So your own body telling your mitochondria your own body telling your mitochondria to slow down, we can make that better to slow down, we can make that better over time. Now it's not a switch the over time. Now it's not a switch the light on quick thing, but that's the light on quick thing, but that's the other general way that we look at doing other general way that we look at doing it. All right, I'm Dr. Axe. I hope this it. All right, I'm Dr. Axe. I hope this answered the question. We're going to do answered the question. We're going to do a bunch of other mitochondrial content.

a bunch of other mitochondrial content. Check out some of the links up here on Check out some of the links up here on the screen. Check out our playlists on the screen. Check out our playlists on the main YouTube site. Thank

you so much the main YouTube site. Thank you so much all new subscribers. Please like, share, all new subscribers. Please like, share, subscribe and do the notifications and subscribe and do the notifications and