4 Ways Fasting Improves Gut Health & Autoimmunity Transcript

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Introduction: Fasting and Gut Health

Hey. Today we're talking about four ways that fasting or intermittent fasting improves gut health and autoimmune conditions. We know that all autoimmune conditions, as well as chronic inflammatory conditions, have something in common.

There's damage in the gut. And so when we look at our small intestine, which is the largest portion of the human gut, the small intestine is only held in by one cell wall, which is almost kind of like my fingers here gliding together.

And then when we're under stress, when we're eating bad foods, when we're not sleeping right, we start to actually tear that intestinal lining, it starts to tear and little openings start to occur.

And those openings can allow large, undigested food molecules to slip into the bloodstream. Bacteria, other pathogens and microbes, and bacterial waste products that end up driving up inflammation in the body.

How Gut Damage Drives Autoimmunity

The body says, wow, there's a lot of potentially problematic proteins in my blood that could kill me quickly because most of our ancestors died from some sort of a infection that got into the blood, typically from some sort of a tissue wound, like if they were hit by a spear or if they had some sort of trauma, they would get a tissue wound, bacteria would get in the blood, spread wildly throughout the body, and then they would end up with meningitis, or they would end up with pneumonia or encephalitis where they get infections in vital organs.

And so because of that, the body is primed to make sure that we don't end up with some sort of infection affecting our vital organs, and it will end up creating inflammation over time.

That inflammation can actually turn into autoimmunity. So in order to heal the gut, in order to heal autoimmune conditions and chronic inflammatory conditions, we've got to heal and seal the gut.

And fasting is one of the best things we can do in order to heal the gut and support the gut microbiome. The reason why is, number one, it actually heals the gut lining.

We're taking mechanical stress off the gut, just like a sprained ankle or a broken ankle. If you want to heal, you can't be walking and jumping on your ankle.

You actually need to rest it. The typical advice is rest it, elevate it right, put ice on it, compress it, and the resting process gives time for the body to heal all that connective tissue.

So we need to rest the gut as well. The good thing is gut lining the cells in our gut lining. They actually turn over every 3 to 5 days, meaning we've got an entirely new intestinal lining every 3 to 5 days.

That's really, really quick healing. Whereas our cartilage, the different tissues that make up our joints, I mean, they can take months if not years to, to like, fully regenerate and heal.

And that's why we typically have to stay off of a damaged joint for something like 4 to 6, sometimes eight weeks, to allow it and give it time to heal with our intestinal lining.

We don't necessarily need to do that.

Fasting Heals and Seals the Gut Lining

In fact, a 2019 study on rats actually the rats fasted for 24 hours and they were actually shown to have an increase in intestinal stem cell production, meaning the body was creating new young, stress resilient stem cells after just, say, 24 hour fast.

Now that is a rat study. It might take a little bit longer for humans, but a lot of people have noticed a lot of anecdotal evidence shows that a lot of people have seen big improvements in their gut health, with things like a 16 hour fast and 18 hour fast 2020 four hour.

Fasting on a regular basis has created better gut health, lower levels of inflammation in the body, lower levels of autoimmunity. And it could be because of some of this intestinal stem cell production.

So that's one of the key things. We actually heal the gut lining. We take the mechanical stress off the gut. Number two is we reduce inflammation in the gut as well as the entire body.

Research has shown that when we fast when we are undergoing intermittent fasting, we help modulate or balance the immune system. And what we do with that is we increase something called T regulatory cells, which basically help to balance the immune system.

And we decrease inflammatory T cells like Th17 cells and different cytokines like interleukin six, which are associated with chronic inflammation. So studies have shown that fasting intermittent fasting reduces inflammation.

That's going to reduce the wear and tear in that gut lining. And of course it's going to reduce overall systemic inflammation throughout the whole body.

Number three is it improves the gut microbiome. And so researchers have been looking at the gut microbiome. And we know that gut microbiome plays a really critical role in overall health and of course all chronic inflammatory conditions.

And we're researchers have shown is that the greater diversity in the gut microbiome, meaning the different number of species, the more of the overall quantity of species of gut microbes, the healthier the individual is.

And when that diversity reduces, the greater propensity for for chronic inflammation and autoimmunity occurs. So research has shown that when we fast, we actually increase the overall alpha diversity in the gut, meaning the overall diversity in the gut has been shown to increase.

In fact, they actually did a study. This was again was on rats. They had a rat due at 18 hour fast daily for five weeks.

Fasting Reduces Inflammation and Balances Immunity

And it showed significant improvements in the overall alpha diversity of the gut microbiome. On top of that, another study, this is actually a meta analysis in the journal Advanced Biology.

It actually showed that when we're fasting, right, when we're doing intermittent fasting, that it actually increases diversity and the production of short chain fatty acids, which have an anti-inflammatory effect in the body.

This is things like butyric acid, which is a preferred fuel source for entero sites for the intestinal cells. And it helps strengthen and create more resilience in the intestinal cells and reduces overall inflammation in the body.

So powerful stuff right there. And in fact, when we look at the gut microbiome, we have two major classifications of bacteria. We have primary feeders which sit on top of the intestinal mucosa.

So riding right along that one intestinal cell line that we talk about in the small intestine is what we call the mucosa. The mucosa is where the primary area of our immune system is.

In fact, our gut, they say, is 70 to 80% of our immune system is in our gut. And it's actually right in the intestinal mucosa. So this layer of mucus right on top of the intestinal cells, there's primary feeders that live right above the mucus.

And then they're secondary feeders in the gut that are inside of the mucus. And these secondary feeders, many of them can actually eat the mucus. In fact, there's one key bacteria called Mantia mucin Ofelia mucin Ofelia means mucus.

Loving it actually can eat the mucus, loves to eat the mucus, and will actually produce different post biotic nutrients from that that are very healing and reparative for the gut lining.

And so what happens is, when we're constantly eating every few hours, we're constantly feeding ourselves, we actually end up overfeeding what's called the primary feeders, right?

Fasting Improves the Gut Microbiome

They start to overcrowd, so they start to overpopulated and overcrowd, and they starve out some of the secondary feeders or they crowd out, I should say, the secondary feeders in the intestinal lining.

We actually get a reduced level of gut mucosa and we have less secondary feeders. And the way that I think about this is that actually, like my yard, I've got an apple tree and I've got a blueberry bush.

And so our apple tree, its branches will grow. And every single year we actually have to cut back some of the branches in the apple tree in order for the blueberry bush to get enough sun, because the, the branches, the apple tree will actually crowd out and shade the blueberry bush so it doesn't get the sun.

It needs to produce blueberries. So in our gut, we'll have these primary feeders which overcrowd the secondary feeders. And now we get a lower production of secondary feeders, particularly Ackerman's.

Ackerman's is called the keystone bacteria in the gut because it's been associated in studies with when we have enough occur with lower rates of autoimmunity and chronic inflammatory conditions.

So we really want to support Acker Mantia. So intermittent fasting actually has been shown to reduce the overpopulation of primary feeders. And that allows for the proper production of the gut mucosa and the secondary feeders that live in the gut mucosa.

Ackerman will eat some of that. Gut mucosa will actually stimulate the goblet cells in the gut to produce more mucus. So we get a stronger, thicker, healthier mucous lining.

That's where the immune system lives, right? Again, right above that, that small intestinal lining. And that helps protect the small intestine from pathogens, from bad bacteria, bad bacterial toxins.

Right. Endotoxins, different things like that that drive inflammation. So we need that healthy gut mucosa. Ackerman's is key for that. So going back to that apple tree blueberry bush example, we actually have to cut the tree that cut some of the branches.

We have to trim the hedges and the branches. We have to prune them back in order for enough sun to now get on the blueberry bush. So we get a good harvest of apples on the apple tree, as well as blueberries on the blueberry bush. That's really what we want.

This is all part of an ecosystem, so we want the proper diversity of primary feeders and secondary feeders. Intermittent fasting gives us time between meals and allows for that to happen.

In fact, a study a 2020 study actually showed that when and this again was a rat study, it took three groups one one group fasted for 12 hours overnight, the other group fasted for 16 hours and another group fasted for 20 hours.

What they showed was that basically the group that was fasting for 16 to 20 hours showed dramatic increases, right? An optimization of Ackerman's levels.

And so doing something like a 16 hour overnight fast at least a few times a week can be really beneficial for supporting the diversity of the gut microbiome and the production of these secondary feeders, like occur, which strengthen the mucosa, the gut mucosa and the gut immune system, right?

Fasting Supports Mucosa and Akkermansia

So they help balance the gut immune function and help protect against leaky gut syndrome and chronic inflammation in the gut. So really powerful there.

And then the fourth thing is the fasting increases intestinal cell resilience. And here's why. When we have optimal levels of Zia Ackerman's will eat polyphenols from our diet.

So let's say we take in some extra virgin olive oil or some oregano or some berries that we consume some blueberries or something along those lines we will get these polyphenols, polyphenols.

You know, the primary feeders will eat some of those. Some of them will drop down into the mucosa. The secondary feeders like Acker Mancilla will eat them.

Acker Mantia as a post biotic when it's after it's had healthy food, healthy polyphenols or gut mucosa, it will produce something called Euro Thins. These Euro listeners will actually go into the mitochondria in the intestinal cells and stimulate what we call mitochondrial biogenesis or the formation of new mitochondria.

And also they'll do something called mitos, where they'll stimulate the breakdown of old, damaged, senescent mitochondria, these aged mitochondria, and the formation of new, healthy, stress resilient mitochondria.

And really, ultimately, the mitochondria will produce all the energy in the cells. The healthier the mitochondria are, the healthier the cell is. The more the healthier the cell, the more stress resilient the cell becomes.

That means the cell can now handle more mechanical stress. It can now handle higher levels of inflammation and toxins and be able to adapt and recover to it.

Fasting Boosts Intestinal Cell Resilience

So ultimately, the quality of our life is going to come down to the amount of stress resilient mitochondria that we have in the cells of our body, and in particular in the cells of the small intestine, because it's so absolutely vital for protecting the bloodstream from these large, undigested proteins that trigger inflammation throughout the body.

So these are the four ways that fasting improves gut health and helps improve autoimmune conditions. Again, heals the gut lining by reducing mechanical stress, reduces inflammation, helps balance the immune system, improves the overall diversity of the gut microbiome, and helps improve the levels of keystone bacteria like Ackerman's mRNA.

And then number four is it actually helps to improve the intestinal cell resilience so your body can handle more stress and successfully adapt to it. So you can really thrive in life.

Hopefully you guys enjoyed this and we'll see you in a future video training. Be blessed.