What Is Herx And How To Manage It Transcript

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What a Herxheimer Reaction Is

Hi, everyone. Dr. Hinchey here again, and I'm going to go over with you how to minimize the effects of a Herx reaction. So let's start out by talking about what herxheimer reaction actually is.

So this is a transient phenomenon that occurs in patients who are infected by Spirochetes, which is the type of bacteria that Borrelia or the Lyme causing organism is.

And usually it's going to be cyclical. And you're going to have the biggest Herx reaction, in the beginning. So what happens is, is we have the release of what's called an endotoxin after the bacteria actually dies during antibiotic therapy.

And what happens is, is the presence of this endotoxin causes an immune response, which is characterized by the release of pro-inflammatory cytokines.

So the chemical messengers of inflammation, which are going to exacerbate or make all symptoms worse. And this really makes sense, right. Because we know that the symptoms of Lyme disease are basically caused by the inflammation caused by these inflammatory chemicals.

So basically when you have the killing of the bacteria, they release their endotoxin called an LPs. That endotoxin is going to increase the chemicals and inflammation, which is then going to make all of the symptoms worse.

And so what happens is that, you know, this is actually something that I take very seriously, because the increasing of these inflammatory cytokines not only makes you feel worse, but it can actually be doing more damage to the cells in your body and causing mitochondrial damage.

But also, since the inflamed portion is ultimately what drives immune dysfunction and makes the body hospitable to these infections. If we don't take this increase in inflammation seriously, we can actually make our bodies sicker.

So, a little bit of history. The first, herxheimer reactions were associated with Syphilis, which is actually a different type of spiral, which is the cousin to Borrelia or Lyme disease.

LPS, Inflammation, and Detox Load

But we now know that it's actually, something that happens when we go after Funguses or other bacteria as well as protozoan infections. So some reactions have been documented in various separate kettle infections like syphilis, leptospirosis, Lyme tickborne, relapsing fever, and also louse spawn.

Relapsing fever. And so like I said, the endotoxin responsible for this is known as an LPs or lipopolysaccharide. And basically it's just a component of the outer membrane of these bacteria that get broken down when they are killed by antibiotics.

So, you know, it's normal for low levels of LPS to be present. What happens is when the levels accumulate and become toxic in the body is not detoxing them, that we have this increase in inflammation.

And it's important to note that these LPS can circulate long after the active infection has been resolved. So it's kind of like at what point has the active infection potentially been eliminated or forced into remission?

But we still have this ongoing inflammatory cytokines cascade and immune dysregulation resulting from these, high levels of ongoing circulating LPS. So obviously, this is going to rely on our body's detoxification systems for removal.

And remember when with me, whenever we talk about detoxification, it always goes back to gut health. And you know, if our, guts are functioning properly and our intestines are actually removing waste and not allowing it to recirculate and be translocated back into the body, into systemic circulation.

More on that in a moment. So oftentimes we see that the quicker we kill things, the higher the toxic load and the more severe the reaction is going to be.

So if the amount of LPS being released from these dying bacteria is building quicker than our body is able to bind it and detox it and get it out of the body, we're going to have more inflammation, more cell damage, more dysfunction, and more symptoms.

herxing can cause a variety of symptoms. You know, typically they are the symptoms that you already had, but they are going to be exacerbated as far as their severity.

Diarrhea is often a symptom because your body is trying to get this organism or not organism, but get these pieces of the organism out of the body and help you to detox.

And a lot of times we will loosen our stools to aid and detoxification. You can see fluctuation in body temperatures, flu like symptoms, sweating. with syphilis this was usually worse within the first 24 hours of treatment.

And it would clear within a couple days. With Lyme disease, it actually is worse about three days or 72 hours into treatment and it can last for weeks.

it can last longer if you have impaired detoxification and increased gut permeability. we're going to talk a little bit more about this moving on.

Gut Permeability and Leaky Gut

But it's just so important to make sure before you start trying to kill any organism inside the body, you make sure that there is not increased gut permeability.

And you really make sure that all of the roots of elimination are working properly, and that detoxification is working not only at the cellular level and with phase one and phase two of the liver, but that you're actually able to remove these toxins out of the body so that we are adequately pooping, peeing, sweating, breathing.

Right. We have all of these other roots to get toxins outside of the body. according to Dr. Burrascano, now, patients with chronic Lyme or late stage Lyme, the worst is usually around four weeks.

And it's similar to serum sickness. Now, usually herxing is underreported because like I said, typically these are symptoms that are already there from the infection themselves.

They just tend to get worse. And so a lot of patients will think, oh my gosh, my treatment isn't working anymore or my infection is growing and it's getting worse.

And a lot of times it's just the opposite. It's that you're effectively killing these organisms, but your roots of detoxification and elimination are not functioning.

as much as we need them to. And so you're having this toxic accumulation inside of the body. And so really, we need to, focus on undoing what is happening to be able to deal with that herx.

So the main points are remove the LPS. Right. So that's what starts this whole phenomenon. So we need to make sure that we are binding it. And we are detoxifying it and removing it from the body.

We obviously have to deal with the inflammatory cytokine cascade that is kicked off by the presence of this LPS. We have to deal with the acidity of the body because oftentimes you will become more acidic when you have an

overload of toxins in the body and or you're dealing with infections.

And then we have to deal with the oxidative stress, cell damage, and mitochondrial damage that can result from this increase in inflammation and increase of toxins.

So I'm going to digress for a moment here, but I really want to talk about the importance of detoxification and reducing the toxic load to be able to mitigate or herxheimer reaction.

so detox can be impaired by genetic snips, by micronutrient deficiencies, by an unhealthy microbiome, an imbalance of phase one, phase two and phase three of our liver detoxification systems.

Poor elimination and stress, and of course, increased intestinal permeability. Okay, so real quick here, this is just to show there are a multitude of vitamins and minerals that are needed in order for phase one of the liver's detoxification or the cytochrome P450 enzymatic enzyme system to work.

And then there are others that are needed for phase two or the conjugation pathways. And so we want to be careful when we're adding in detoxification nutrients.

Because if we push phase one to work more quickly than phase two, we will actually have a buildup of these intermediate metabolites, which are actually more, toxic and more damaging than the original toxin itself.

So one of the things that I love to use is an Acetylcysteine or NAC, because it is helpful in both phase one and phase two of the liver pathways, and it also acts as a very powerful antioxidant.

so NAC or an acetylcysteine being one of my, absolute favorites, but you guys can look at this in more depth. I will make sure that there is a downloadable PDF of this for you guys.

Detoxification Strategies and Binders

Okay. So also it's very important to see here if we divide this slide into three sections, you can see the first section is showing a symbiotic environment where we have good intact microvilli which are those little like finger like projections there on the cells that separate the inside of our intestine.

to the outside. And we can see here as we develop dysbiosis where we don't have the healthy balance of good in and not so good bacteria, and we start to degrade those finger like projections and break down the, the brush border here we see that we can have like some translocation of LPs, maybe some undigested, food matter and things like that.

And then when we get all the way over to leaky gut syndrome, you can see that, like, those microvilli are just completely gone and there is no more tight junction.

So the tight junctions where like those little, you know, it looked like equal signs in between the yellow cells. So we can see over here like all the yellows gone, all the brush border is gone, the tight junctions are gone.

And we have these various pathogens that we should be eliminating like out through our gut that are leaking in. We have food particles that aren't completely digested leaking in, which is going to, you know, increase food sensitivities.

We have toxins leaking back in, and this is going to cause, an inflammatory response and ultimately lead to autoimmunity. And so this is where we are going to have the systemic inflammation, endotoxin reabsorption.

We're going to end up overburdening the liver and detoxification systems leading to central nervous system inflammation, and ultimately an increased severity of a Horkheimer reaction and increased inflammation and cell damage, oxidative stress, etc..

And it just turns into this really, really vicious cycle. So again, to summarize, we have this lime induced cytokine response that breaks down the tight junctions in the gut.

And this increases permeability to toxins to undigested polypeptides from foods. And all of this is going to cause an overreaction of the immune system.

It's going to create a histamine response, and it's going to lead to more inflammatory compo rounds being generated and ultimately central nervous system inflammation, and dysfunction.

And here are just some studies backing this up. And here's just a closer view here to, you know, the outside of the intestine, or the tube, the intestinal tube.

And then we have that, you know, one cell thick lining. And then we have basically getting inside of the body and systemic circulation. So really this slide is showing a closer view here of the connection between leaky gut systemic inflammation and immune hyper reactivity.

So we have these little penta markers which are galectin three. And they basically are igniting or exacerbating the stimulation of this one inflammatory cytokines called nuclear factor kappa beta which kicks off a further inflammatory cytokines cascade of tumor necrosis factor alpha, interleukin six and interleukin one beta, which are the major and, inflammatory cytokines.

So, it's important to manage galectin three levels, which you can do using G3 or GL actin three modulator, which is a specialized form of modified citrus pectin available through lime core.

I'll get to that later. Okay. So detoxification strategy step number one we need to avoid the exposure. So obviously there are tons of other toxins that we are exposed to in our er food, water, household personal care items.

We have bio toxins emfs, mycotoxins, all of that stuff. But we are specifically talking right now about the LPs. So the LPs again is what kicks off this cytokine and cascade.

And we need to bind it and get it out of the body, clear it, detox it in order to be able to shut this whole thing down. It's also important to note that when you can't clear these cytokines, it results in acid imbalance, which further impairs other enzymes that are needed to maintain a normal pH in the body.

So remember, again, it's not just about the LPs or the inflammation, but it's also about acidity. And we have to, you know, jump in to that and deal with that acid imbalance as well.

So further detoxification strategies I love these because a lot of these are free. So absence are very cheap and salt baths. making sure that you are hydrated doing deep breathing exercises, doing dry skin brushing or doing contrast therapy between like let's say, hot and cold showers or doing like an ice plunge in your bath.

things that obviously are not free would be using binders using a far infrared sauna. doing and an official cryotherapy or, castor oil packs, things like that.

But all of these things go a very, very long way in helping the body to detox. And you can do them yourselves in your own home. Okay. So in summary, managing a similar reaction.

So binders are helpful to bind that LPs. And so my favorite is called perks actually I'll show you a picture of that in a moment. And it contains small ax Glassboro cleavers and high levels of molybdenum.

Herx Support Products and Closing

and it's a wonderful formula that helps to bind LPs, purify the blood, and convert fat soluble into water soluble toxins. next, I love g3, packed to soar as a binder.

It's a weak binder, meaning that it isn't going to bind your nutrients or things that you don't want to bind. What G3, is wonderful at binding. It's the LPs.

Also heavy metals. it helps to break down biofilms in the body. It actually has, a dual or I would say actually triple effect because it helps to, decrease interleukin six and interleukin one beta.

And it also helps to, to heal up those tight junctions that are broken down with leaky gut. So hands down, G3M PectaSol is one of my favorite things to use.

not only to manage a herxheimer reaction, but I actually put almost every single lyme patient on this because of its far reaching effects. it's one of the handful of things that I would say, unless there is a contra indication every single lyme patient takes it.

I use less bentonite clay, zeolite clay, and activated charcoal. They're a little bit stronger of a binder. And, you know, I just prefer to only use them when necessary.

I love chlorella. Chlorella is probably my second favorite binder, and it also has the dual action. So not only does Chlorella bind, but it doesn't bind your nutrients.

It binds the LPS and other toxins. Heavy metals. but it also is very UL colonizing to the body and anti-inflammatory. So we're getting I love it when things give us more than just one effect.

another helpful thing are SPI's. So spies can help to bind other opportunistic bacteria in the gut as well, and can help to heal the tight junctions. Now, as far as detox goes, we could do a whole two hour presentation on detox alone, but I hope you got the main points.

We need to heal up those tight junctions. We need to work on gut health. We need to coordinate phase one and phase two of the liver. Make sure that we're not pushing phase one faster than phase two.

We need to make sure that we're using all of the various micro nutrients that are needed to run our biochemical reactions, that detoxify our bodies. We need to make sure that we are pooping, peeing, breathing, sweating.

We need to incorporate some of these detoxification self-care techniques like sauna, Epsom salts, dry skin brushing, etc. and then there are various herbs that we can use to help to inhibit the inflammatory cytokines cascade.

My favorites being an acetylcysteine. Japanese knotweed and Chinese skullcap. We, also need to make sure that we are protecting the body against free radical damage.

I love using NAC and glutathione for this. And then also we need to make sure that we're replenishing minerals and vitamins that are needed to support biochemical reactions.

I specifically say minerals here because minerals overall are alkaline icing, right? And again, that's one of our sort of three pronged approach here to dealing with a herx is to alkaline, or bring out colonization to the body.

Now, Dr. Horowitz has a protocol, to alkalis and combat the acidic environment that lyme creates and improve methylation. So this includes using 1500 milligrams of liposomal glutathione to juice of one lemon, two Alka-Seltzer gold tablets, and eight ounces of water.

Okay, so here are some of my favorite products for Herxing. So you can see in the middle there the G3M Lyme Powder. so it's a little scoop of powder that you would mixed with water.

And again the benefits of using G3M PectaSol are it's going to bind the LPS and decrease herxing. It is going to help to break down biofilms. It helps to decrease interleukin six and interleukin one beta.

It actually increases natural killer cell production and helps to heal up those tight junctions in the gut, as well as increases healthy collagen production.

And when you have an infection that is eating up your collagen. It is obviously super important to be able to kind of push the development of healthy collagen.

over to the left, you see HERX. And so this is the original, HERX formula that I developed to basically help to bind the LPS, purify the blood and encourage detoxification.

So that's where you're going to find your, Smilax glabra, your cleavers and your high dose molybdenum. And then over to the right you can see BIND, which is a proprietary blend of Chlorella and some other herbs that are necessary, to, to help with out colonization and liver detoxification.

But I would say the main ingredient here in the most important ingredient is the chlorella. So thank you so much for listening, and I hope this information was helpful and helps you on your journey to Healing Lyme.

Take care. I'll see you next time.