

## **Managing through the Herxheimer Reaction by the same LLMD (Lyme-literate MD)**

In 1988, if my borreliosis patients had a Jarisch-Herxheimer-like reaction, I changed their antibiotic. Later it was realized that the reaction was because the antibiotic was working. So patients were told to try to stay on antibiotics during the Herxheimer.

It was then discovered that staying on antibiotics often caused more trouble than good, if patients were having a Herx. Borreliosis patients usually lose ground if they stay on antibiotics when Herxheimers hit.

Some of the saddest borreliosis patients I have are ones that did not take my advice, and stayed on an antibiotic during a Jarisch-Herxheimer reaction. For months, they went downhill and downhill. When they finally quit antibiotics, they often stay worse. They usually do not get back to baseline, much less back to normal.

Your brain will tell you that since the Herxheimer indicate the antibiotic are working, to stay on them. Please ignore your brain. Since 1988, with well over seven thousand borreliosis patients, I assure you, going off antibiotics is the better part of valor. We do not need any heros or heroines. Toughness is not needed. "No pain, no gain" does not apply to Jarisch-Herxheimer-like reactions!

Questions often arise. Patients want to know what to do if the Herxheimer is mild. Worsening of symptoms may be due to the variation associated with borreliosis. One of the classic features of borreliosis is change. Patients have good days and bad days, good and bad weeks or seasons, and good and bad hours. So, what do you do with a mild Herxheimer?

If you are not sure if it is just one of your bad days, or a Herx, then stay on your antibiotics. In an article I have, researchers took 10 ½ months before they could see the *Borrelia burgdorferi* growing in the test tube. This is an incredibly slow growing bacteria! So, if you go off antibiotics to get over a Herx, you are not losing ground like you would with Strep or Staph infections. These bacteria grow very fast, unlike *Borrelia burgdorferi*.

Going off antibiotics for a Herxheimer, usually results in symptom improvement by 1 day to 5 days. This is true, until you use metronidazole, or atovaquone with azithromycin. These antibiotics tend to cause very severe Herheimers, and often take longer than 5 days for the symptoms to get better.

This is a two-edged sword. The worse the Herxheimer, the better the antibiotics are working. So they may also be associated with much better clinical improvement. The key is to start with low doses of these antibiotics, and increase the doses slowly.

Some borreliosis patients have required about a month to come out of a Herx. It is important to get off the above antibiotics at the first sign of a Jarisch-Herxheimer-like reaction. Prolonged recovery times from Herxheimers are usually seen with high doses, or patients that tried to tough it out and stay on antibiotics as their symptoms worsened.

In general, Herxheimer reactions are a worsening of previously existing borreliosis symptoms. But I have learned that a worsening of new symptoms may also be due to a Herx. So, I advise patients that a worsening or existing, past, or new symptoms is a strong indication to go off antibiotics until they feel better.

Two other reactions need to be distinguished from Jansch-Herxheimer-like reactions. These are drug side effects and allergic reactions.

Drug side effects from antibiotics are usually gastrointestinal. Nausea, vomiting, heartburn, gas, diarrhea, bloating, irritable bowel syndrome (spastic colon), intestinal cramps, and constipation are examples. Borreliosis may cause abdominal pain. But most patients have a pretty good idea if the pain is a gastrointestinal drug side effect, versus a Herx.

Allergic reactions are associated with itchy red rashes (drug exanthemas), hives (whelps, urticaria), tightness in the throat, and difficulty breathing or shortness of breaths. Borreliosis may cause hives.

The skin is one of the target organs of *Borrelia burgdorferi*. So a great variety of rashes are seen in borreliosis patients. Again, most patients are able to distinguish an allergic reaction from a Herxheimer. A lot of patients, who think they are allergic to antibiotics, actually experienced a Herxheimer. A history of multiple antibiotic “allergies” is a clue to look for possible borreliosis.

Steroids, such as prednisone, are best avoided if possible. They suppress the immune system and promote yeast growth. But if the Jarisch-Herxheimer-like reaction is severe enough, steroids may be needed. Some patients even have to be hospitalized, due to the Herxheimer! Usually, going off the antibiotics is all that is required for the worsening of symptoms to resolve. Drinking extra water and rest are helpful.

Some patients with borreliosis Herx on the first day they take an antibiotic. Or the reaction may occur months later. My success rate in helping borreliosis patients has skyrocketed since I started using metronidazole or atovaquone / proguanil. Since metronidazole and atovaquone may both cause severe Herxheimers, it would be best in general to not take these together. Patients who have, responded nicely, but very low doses were needed, until the Herxheimer reaction severity was determined.

Borreliosis, like syphilis, may mimic or imitate virtually any disease, and cause virtually any symptom. So, a Jarisch-Herxheimer reaction may be a worsening of virtually any symptom. But it is more likely to be the symptoms that are typically experienced by borreliosis patients.

On the borreliosis questionnaire, there are about 100 symptoms. This is not an all inclusive list. The classic triad of borreliosis symptoms is fatigue (tired, exhausted), musculoskeletal pain (joints, muscles, back, neck, headache), and cognitive changes (memory loss, decreased mental concentration, trouble remembering what you read, disorientation, getting lost, depression). Eye and neurological problems are also very common. So, a Herxheimer usually includes a worsening of these classic symptoms in these 5 areas.

Sometimes a Herx is a worsening of all symptoms. Or one or some symptoms may worsen, while others are unchanged.

Musculoskeletal pain, or neurogenic (generated by the nerves) pain may require strong pain medicine. More pain from a Herx does not justify using more pain medicine to stay on antibiotics. Patients lose more ground than they gain if they stay on antibiotics during a Herxheimer. Masking or hiding worse pain with drugs is a huge mistake.

Sometimes after going off antibiotics, patients get a mixed picture. The symptoms that became worse while on antibiotics may start to get better. But other borreliosis symptoms that did not change during the Herx, may start to get worse. In this case, try going back on antibiotics. A lower dose may be needed, or pulse therapy.

An example of pulse therapy would be to take a “sliver” of a metronidazole pill every 4 days. I had a patient get better using this regimen.

Since metronidazole or atovaquone with azithromycin may cause severe Herxheimers, many patients do better with low doses. The message I hear over and over from my patients, is that a low dose often works better for many people.

The dose that results in the patients getting slowly better and, if they have a Herx, it is a mild one, is the correct dose. This is a “fairy tale” infection. Believe me, the turtles win the race, not the rabbits!

Everybody wants to be normal and healthy yesterday, but you did not get sick in a day. Almost all borreliosis patients get better. I cannot guarantee anything to anybody. But focus on the good and positive. I am a huge believer in the mind and body connection. Keep telling your brain that you are in the majority that gets better.

The goal is for all borreliosis patients to get healthy, and be able to fire me. I want everyone to go on with their lives, and be normal! Many people joke that normal for them is an unknown.

One of the keys to getting well is finding the correct antibiotic. If an antibiotic works, it usually causes Herxheimers. So, another key to getting well is learning to maneuver around the Herx obstacle course! Please read these guidelines more than once. If you have a question, the answer is probably in the guidelines. This will save you a phone call. But if you are unsure, please call.

Virtually everything written here about borreliosis Herxheimer reactions also applies to babesiosis. Babesia microti, Babesia duncaniis and MO-1 are protozoa. They are not a bacteria, virus, fungus, or yeast. Other examples of protozoal infections would be malaria and giardia. Because protozoa are different types of germs, the usual borreliosis antibiotics do not work.

Many borreliosis patients also have babesiosis. Mosquitoes spread malaria, but babesiosis is spread by ticks. Blood is involved in both. Babesia protozoa like to live in red blood cells, like malaria.

The symptoms of babesiosis are the same as borreliosis, except that babesiosis causes more sweats and fever. So, babesiosis is just as big of a deal as borreliosis, if not bigger. My success rate in helping borreliosis patients dramatically improved when I started searching for and treating babesiosis also!

Babesiosis also is associated with Jarisch-Herxheimer-like reaction. Regardless of whether you have borreliosis or babesiosis or both, all of the Herxheimer guidelines apply. Some patients tell me that they are able to distinguish which symptoms are from which infection. Regardless, just follow the rules. Coloring outside the lines is best left to artists!

About 1992 I had a patient ask me to treat her for intestinal yeast. Like most medical doctors I would not listen to her. Intestinal yeast is not taught in medical schools or residencies. But she kept begging me, so I gave her a prescription for nystatin pills, to kill yeast.

She got dramatically better with the nystatin, and also by changing her diet with adding good bacteria back into her system. This was my first eye-opening experience that there was another world out there, besides traditional orthodox main-stream Western medicine.

The number one risk factor for intestinal yeast is antibiotics. The other 3 are steroids, birth control pills, and pregnancy. Since the number one risk factor is antibiotics, and that is the treatment for borreliosis, I started treating my hundreds and hundreds of borreliosis patients with the yeast protocol. The patients got dramatically better! This forever changed my professional life. Once your eyes have been opened that some alternative treatments have merit, others are worth consideration.

The real issue with yeast is the immune system. I have 2 files full of articles showing that yeast suppresses the immune system. If you have a chronic *Borrelia burgdorferi* infection, the last thing you want is a suppressed immune system. Babesiosis and ehrlichiosis may also chronic persistent infections, spread by ticks.

An article in the *New England Journal of Medicine* concluded that intestinal yeast was not a real issue. But they did not change the diet. I could have told the researchers before they started the experiment that the patients would not get better.

Three things have to be done. The yeast has to be killed, usually with nystatin or fluconazole. Diet changes, including avoiding sugar and fructose (the sugar in fruit), along with sometimes avoiding other carbohydrates, is the second component. And lastly the good bacteria, such as *Lactobacillus acidophilus* and *Bifidobacterium bifidus* need to be taken. The good bacteria are called probiotics.

Scientists like to change just one variable in an experiment. If you use nystatin or a placebo pill that looks like nystatin, that would be scientifically ideal. But 3 things have to be done. So it is a less than perfect research model. In the real world of day-today medical practice, intestinal yeast is absolutely huge.

The yeast questionnaire is included in my Family Practice intake questionnaire. It is amazing how much is seen in a typical practice that is due to intestinal yeast. Irritable bowel syndrome (spastic colon), premenstrual syndrome (PMS), migraine headache, hypoglycemia (low blood sugar), allergies, and chronic fatigue are just some of the diseases that may resolve with the yeast treatment protocol.

A lot of overlap exists between the symptoms of intestinal yeast borreliosis and, babesiosis. Likewise, the symptoms of adrenal dysfunction and low metabolism are similar. Many borreliosis patients have hormone imbalances.

An overlap of symptoms is not the issue. The key in treating borreliosis patients is to see how many of these other disorders are “straws” breaking the camels back of your health. The more stones I may turn over, the better my chances are of helping you. Each added arrow in my quiver enhances success. In any disease, it is always better to treat the underlying causes, as opposed to throwing medicine at the symptoms.

When I first meet a new patient for an evaluation for possible borreliosis, I do not treat for intestinal yeast, or other diseases. It is critical to treat one new thing at a time. For instance, if I start a patient on doxycycline for borreliosis and nystatin for yeast, and the symptoms change, I will not know which one caused the differences.

The number one priority is to try to establish whether or not a patient has borreliosis. Once the clinical and/or laboratory diagnosis is made, then it is reasonable to add the yeast protocol.

After patients are on the yeast protocol, and are also on antibiotics for borreliosis, babesiosis, ehrlichiosis, or whatever infection that is being targeted they need to continue the nystatin with diet changes and taking probiotics (the good bacteria). Even if it is 10

years later, antibiotics should be accompanied by the yeast protocol in my opinion, to avoid immune suppression and yeast symptoms.

When yeast die in the intestines from nystatin, symptoms may result. It is like a Jarisch-Herxheimer-like reaction. Some yeast experts, like William Crook, MD, call it a die off reaction. Some call it detoxifying, detoxing, or a detox reaction. But it is the same mechanism of toxin release, as in a Jarisch-Herxheimer-like reaction.

If the protocol on the yeast handout is followed, this die-off reaction from yeast is usually not an issue. But virtually all patients cheat, and when they do, they cheat themselves. When patients eat sugar, their symptoms often get worse. So I do not have to fuss. It is better to be a cheerleader, and encourage patients.

Patients often ask about whether to take nystatin or fluconazole when they are off of their borreliosis antibiotics due to a Jansch-Herxheimer-like reaction. One expert recommends 40 days of the yeast protocol after stopping any antibiotic. Since I am not aware of any scientific proof to support that, it would be reasonable to stay on nystatin while off antibiotics for borreliosis. But if you want to go off nystatin or fluconazole, it would be acceptable. After you restart antibiotics though, jump back on the yeast protocol bandwagon.

In summary, the key to getting well is finding the correct antibiotic, going off antibiotics during Jansch-Herxheimer-like reactions, treating intestinal yeast, and looking for other facets to the illness. The most common of these other facets, are coinfection, low metabolism, adrenal dysfunction, and hormone imbalance. Almost everybody gets better. Focus on the good and positive. If so inclined, pray. Try to keep a sense of humor. Realize you are not alone. There are hundreds of borreliosis patients just like you. And almost all of them are getting better!