

# Microorganisms Making You Ill?

## Combat bad bacteria, endotoxins and heavy metals with charcoal

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**If you've been through survival field training or if you're into prepping or simply enjoy trekking in the woods and surviving of the land like a true bushman, you know that diarrhea is one of the most common issues you're faced with in the wilderness. Diarrhea is the body's natural defense against a lot of microorganisms like amoeba, viruses, protozoa, and even bacteria. It is the body's way of "trying" to flush itself out. One of the most common remedies to ease the onset of diarrhea and stomach upset is with pulverized charcoal mixed in water. This substance has micro pores on its surface that will adsorb several times its own mass in toxins. That is also the reason why charcoal is used in water purifiers. And even if you never set your foot in the wilderness, charcoal can still do a lot of good for you in several different scenarios.**

A lot of people today have an overgrowth of bad bacteria within their intestines (from consuming fiber from plant food and/or too much sugar), which can for example lead to swelling of the gut, pain and cramps, bloating, diarrhea, gassiness, brain-fog and low energy levels. Sometimes these symptoms are barely noticeable (as you get used to them) and at times they can actually worsen if you clean up your diet and/or introduce more fiber. I've seen this in several of my clients over the years. Most of the time this occurs because the overgrowth of bacteria produces endotoxins, or release them, when lysis (breaking down of the cell membrane) occurs during new dietary protocols or treatments.

When you embark on a new diet or when you start a treatment for gut bacteria overgrowth and you start to feel worse, that reaction is commonly called the "Herxheimer Reaction". This reaction is also very common during treatment of systemic *Candida albicans* infections and similar yeast infections.

The Herxheimer Reaction is a short-term (from days to a few weeks) detoxification reaction in the body. As the body detoxifies, many people experience flu-like symptoms including headache, joint and muscle pain, body aches, sore throat, general malaise, sweating, chills, nausea or other symptoms. This is a normal and it indicates that parasites, fungus, viruses, bacteria or other pathogens are being effectively killed off. In other words, it's an immune system reaction to the toxins

(endotoxins) that are released when large amounts of pathogens are being killed off, and the body cannot eliminate the toxins quickly enough.

The biggest problem with the Herxheimer reaction is that people stop following the dietary protocol and/or stop taking the supplement or medication that is causing the reaction, and thus discontinue the very treatment that is helping to make them better. Although the experience may not make you feel particularly good, the Herxheimer Reaction is actually a sign that healing is taking place.

This reaction is very similar to what we see in sickly vegans that finally give up on their nutrition-deficient diet and switch to consuming meat again. The elimination of the toxic and damaging antinutrient oxalate will cause many of the symptoms mentioned above.

Endotoxins are most often parts of the membrane of normal bacteria, almost always gram-negative bacteria, such as *Nisseria*, *Escherichia coli* (*E. coli*), *Klebsellia*, *Pseudomonas*, *Enterobacter*, and *Salmonella*. The lipopolysaccharides (LPS) are the chief endotoxins studied in relation to chronic low-grade inflammatory states and diseases in humans. Gram-negative bacteria are more often antibiotic resistant than gram-positive bacteria, and antibiotic therapy often leaves a colony of gram-negative bacteria in abundance, and relatively dominant over gram-positive bacteria.

So, what can be done to reduce endotoxin release and lessen the Herxheimer Reaction symptoms? Or at the very least help to speed up the process by facilitate their detoxification and clearance from the body? What can we do to shift the balance of bacteria and endotoxins after using antibiotics? Apart from supplying our body with pro- and pre-biotics from aged/fermented foods, is there anything that can be supplemented to absorb the endotoxins in the digestive tract before they overload the liver or enter the bloodstream and cause extensive inflammation and these flu-like symptoms? Yes, there is. And you guessed it – it's activated charcoal.

### **Detoxing with activated charcoal**

Activated charcoal comes from burning a carbon source until it yields a blackish porous material. There are many different grades of activated charcoal and they all differ in their absorption ability. In this article, we will refer to the standard food grade or medical grade activated charcoal that you can buy in most pharmacies and health food stores.

Activated charcoal is more than just for "detoxing" as it serves a medical purpose. There is medical grade activated charcoal that is used for accidental oral overdose and poisoning (depending on the substance) in hospitals across the world.

Activated charcoal only binds to larger molecules, non-polar molecules, or molecules that have a negative charge, since activated charcoal itself has a slight positive charge.

Some things that activated charcoal cannot bind to include: alcohol (activated charcoal, however, can bind to some impurities found in alcohol), glycols, strong acids or bases, some heavy metals like lithium and iron.

We are lucky, though, as activated charcoal can bind to endotoxins produced in the gut when ingested. Binding of endotoxins in our digestive tract reduces inflammation, improves liver / kidney function, and helps reduce symptoms of a Herxheimer reaction.

It can absorb lead acetate, strychnine, DDT, many drugs (including cocaine, penicillin, aspirin, phenobarbital), and inorganic substances (chlorine, lead, and mercury).

Activated charcoal can absorb thousands of times its own weight in heavy metals, poisons, and other chemicals; thus, render them ineffective and harmless.

Activated charcoal can also absorb excess gas produced by overgrowth of bacteria and/or poor digestion, which in turn might reduce bloating and abdominal pain. It might also alleviate headaches caused by allergy, minor arthritic symptoms, menstrual pains, sore throat irritation, cold sores, and tooth abscesses.

Another of the benefits of activated charcoal is that it helps eliminate bad breath, because it cleanses both the mouth and the digestive tract.

This is one of the reasons why charcoal is popular in natural toothpastes.

### How to use Activated Charcoal

First of all, do not be surprised if your stool darkens when ingesting activated charcoal, that is perfectly normal. Activated charcoal has no side effects or known cases of any allergic reactions. It has an infinite shelf life, but it must be stored in a tightly sealed container, because it readily adsorbs impurities from the surrounding atmosphere.

Activated charcoal can be purchased in tablets, capsules, or powder form. Tablets have one-half the potency of the powdered charcoal and the capsules are expensive but are easy to use. About 14 capsules equals a tablespoon of powder. Because food will reduce the effectiveness and benefits of activated charcoal, take it between meals. Swirl the charcoal in a glass of water and then drink it down; or mix it with coconut oil and spoon it into your mouth. Powdered activated charcoal achieves maximum adsorption within a minute or so after absorption. The most economical way is to purchase activated charcoal in powder form.

Be aware that activated charcoal can interfere with your medications or supplements. I would take it at least two hours away from supplements or medications (just as you would do with meals).

If you take too much, there is also a possibility that it can cause gastrointestinal blockages, but most of the time this is only seen in medical emergencies where too

much might be accidentally given to try to help someone who overdosed. If you have severe abdominal pains from ingesting normal amounts of activated charcoal, you might want to notify your doctor or go to the emergency room because you might have an intestinal blockage. Most blockages are due to consuming too much fiber, especially from fruit (or fiber mixed with sugar) where the sugar ferments in the intestines.

During Candida or yeast treatments, 20-35 grams of activated charcoal a day in divided dosages on an empty stomach is recommended until the problem is eliminated.

For heavy metal detoxifying, a usual recommendation is a total of 20 grams per day, spaced in two to four doses over a 12-day period.

Some prefer taking a heaping tablespoon first thing in the morning, well before breakfast for general detoxification during a few weeks a couple of times a year.

For treatment of nervous diarrhea, traveler's diarrhea (turista), spastic colon, indigestion, and peptic ulcers. Take between 1 to 1 1/2 tablespoons of powdered activated charcoal up to 3 times a day.

If you're following a gut health protocol or recovering from the use of antibiotics, I suggest about one gram of activated charcoal an hour after taking your antimicrobial supplements or between meals.

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