

## **Intestinal Parasites: Everything you wanted to know and more!**

After over fifteen years of experience in dealing with intestinal parasites, I have learned quite a bit as to how these persistent organisms can be transmitted, diagnosed and treated. I would like to share this information with you in the paragraphs below.

Since I will be providing a lot of detailed information it is important that you know this information is not meant to diagnose or treat any individual's specific condition. Please do not make any changes to your medical treatment program without first consulting your primary care physician.

I will start with some background information and then cover the specific treatment protocols I currently use in my practice.

### **Introduction**

Intestinal infections have been described as constituting the greatest single worldwide cause of illness and disease. Numerous studies have shown that the incidence of intestinal parasites may approach 99% in developing countries. And in the United States, intestinal infections are the third-leading cause of illness and disease.

Although the present generation of Americans has grown up with modern sanitary conveniences, parasitic infections are still more common than we actually think. One survey of public health laboratories in the U.S. reported a 15.6% incidence of intestinal parasites among all samples checked. In my practice, *greater than 50% of asymptomatic HIV(+) individuals test positive for at least one intestinal parasite.*

The reason these organisms are called "parasites" is that they injure their hosts. By definition, *non-pathogenic parasites do not exist.* The only variable is the intensity of the effect caused to the host. Some parasites, such as *Entamoeba histolytica*, usually cause acute abdominal pain and profuse diarrhea. Others, such as *Giardia lamblia*, are more commonly responsible for chronic malodorous gas and bloating. Still others, such as *Blastocystis hominis*, may produce a state of chronic fatigue as their only noticeable effect.

*All species of parasites cause stress to the immune system and can stimulate HIV to be more active and your fatigue to be worse.*

Twenty years ago, the Centers for Disease Control viewed *Blastocystis hominis* as an acute pathogen. Recently, it has retreated from this position and it now classifies it as a "possible" pathogen. Today, controversy continues to exist surrounding the status of *Blastocystis hominis*. Though sometimes an asymptomatic inhabitant of the gut, *B. hominis* can cause acute diarrhea, chronic fatigue, increased HIV activity, flatulence, nausea, and rectal bleeding.

I believe that all intestinal parasites place a significant stress on the immune system and I treat them with a combination of natural and pharmaceutical means with complete eradication as the goal.

### **Parasite Transmission**

Most intestinal parasites are transmitted through contact with fecal matter. The organisms themselves or their cysts are expelled through the rectum of their host and find their way in some fashion to the mouth of their next host.

This fecal-oral route of transmission can occur in several ways:

***Sexual Behavior:*** Intestinal parasites can be transmitted through sexual activity *much* more easily than the HIV virus. Common safe sex practices, including the use of condoms, are often insufficient at preventing their spread. If a person removes a contaminated condom, then puts their hand to their mouth, they *cannot* contract HIV, but they *can* become infected with parasites. Another common mode of transmission is rimming, a sexual practice where the tongue is put in direct contact with the rectum of another person. This is the most direct way possible to become infected with intestinal parasites.

***Contaminated Food and Water:*** The only way to completely prevent exposure to parasites from food and water is by cooking. Food prepared by individuals infected with parasites who have not thoroughly washed their hands after using the bathroom may pose a risk.

Unfortunately, not all water-borne intestinal parasites are killed by chlorine. Therefore, these organisms can exist in the water supply. Complete elimination can only be achieved by boiling (for at least 5 minutes), filtering with a one micron filter, or drinking distilled water. Bottled spring waters can vary greatly in their preparation methods but are usually safe. To find out about the characteristics of a specific brand of bottled water, call 1-800-WATER-11.

***Household Contacts:*** Individuals who present with recurring intestinal parasite infections, despite implementing careful hygienic measures, may be living in households with infected members. Behavior as innocuous as using the same face towel previously used by an infected roommate can transmit these infections. Surfaces of hot tubs, saunas, and bathhouses, where people sit naked, can also be a hidden source of exposure. If recurring infections are a problem, ask all of your household members (and sexual partners) to be tested. All infected individuals should be simultaneously treated, followed by a repeat test one month after the treatment is complete.

### **Common Intestinal Parasites**

***Blastocystis hominis*** - This organism is more prevalent than any other parasite, but often goes undetected due to poor laboratory technique. Next to fungal overgrowth, *B. hominis* is the most frequently observed pathogenic organism in the fecal samples of HIV(+) patients.

A significant weight of evidence supports treating *B. hominis* as a pathogen. Acute symptoms from this parasite include abdominal pain, bloating, nausea, vomiting, weight loss, diarrhea, insomnia, dizziness, low appetite, and rash. It has also been reported to be a cofactor to many chronic conditions such as irritable bowel syndrome, chronic fatigue syndrome, autoimmune conditions, and arthritis. In my practice, it also appears to be responsible for reactivating HIV activity and may explain why some antiviral drug regimens fail prematurely. When treated appropriately, eradication of this organism is often associated with complete resolution of GI symptoms.

***Dientamoeba fragilis*** - This organism commonly causes parasitic infections but often goes undetected due to poor laboratory technique. It lives in the colon and is transmitted by direct ingestion

through the fecal-oral route. Its symptoms include diarrhea, fatigue, and abdominal bloating.

***The Amoebas: Entamoeba histolytica, Entamoeba coli, Entamoeba hartmanni, Iodamoeba butschlii and Endolimax nana***

- These organisms are cosmopolitan in their distribution. *E. histolytica* is most commonly linked to acute diarrhea and other GI symptoms. However, individuals may harbor *E. histolytica* without experiencing acute symptoms. The other amoebas have been associated with chronic GI symptoms though they are not recognized to be pathogens. Variations in an organism's virulence and/or host resistance factors may explain differences in the severity of the observed symptoms. Amoebas are spread most frequently by ingestion of their cysts. As with all parasites mentioned in this section, complete eradication of these organisms from the GI tract should be the goal.

***Giardia lamblia*** - *Giardia lamblia* most often resides in the small intestine. It attaches itself via a sucker to the mucosal cells of the intestinal wall and causes an inflammatory state to occur. When it detaches, it is swept into the fecal stream and transforms itself into a cyst before being expelled from the body. Infection is spread by the fecal-oral route, either directly or through food and water. Other sources of infection include mountain streams, well-water, and even some chlorinated community water systems.

**Diagnosis**

The diagnosis of intestinal parasites is straightforward. The name of the test to get is called a Stool for Ova & Parasites and three samples (one from three separate bowel movements) are required (it is abbreviated as Stool for O&P X 3).

While local hospital laboratories usually do a decent job at identifying intestinal parasites, specialty laboratories are able to significantly increase the yield of the test because of their additional expertise.

For example, batching the samples together and putting them through a concentration step helps improve the sensitivity of the test. The increased training the staff of a specialty laboratory receives, as well as the greater number of samples per day they process, plus the

higher quality equipment that they often use, are all factors that improve their ability to find parasites in your sample.

The lab I have used for this purpose for the past ten years is the Great Smokies Diagnostic Laboratory ([www.gsdl.com](http://www.gsdl.com)). Their website contains a lot of information you may find interesting. The test that I routinely order is called a “Comprehensive Parasitology - Random” and it not only looks for intestinal parasites but tests for fungal and bacterial imbalances in your gut as well. This is not the lab’s most expensive test, but it does a very good job at evaluating the health of a person’s intestinal system at a reasonable cost (prepay price: \$132). Unfortunately, it must be ordered by a physician or other health care practitioner (chiropractor, acupuncturist, etc.).

### **Treatment**

In my opinion, there is no such thing as a good parasite. By definition, these organisms sap your energy, interfere with the gut’s absorption of nutrients, and most importantly, they put an added stress on your immune system (which is definitely not what someone with HIV infection needs).

A highly respected researcher presented the following information at a recent high profile HIV conference – “The vast majority of CD4 cells reside in the mucosal lining of the gut, not in the blood or lymph nodes. The more these immune cells are activated and stimulated, the more quickly CD4 cells will die from HIV.”

Gut pathogens, such as intestinal parasites, activate CD4 cells and due to this activation make it much more likely that they will be infected by HIV. They are then more prone to die off leaving the CD4 count negatively affected. This is one of the hidden reasons that, despite taking antiviral medications for several years, many people do not see their CD4 counts continue to rise. It is also one of the reasons for ongoing symptoms of chronic fatigue and intestinal symptoms such as gas and loose stools in people with undetectable viral loads.

Most physicians have been taught that the first line treatment for parasites is Flagyl (metronidazole). They were taught this thirty years ago and have been prescribing it ever since. There are two main

problems with this approach. First, Flagyl can cause terrible side effects in many people. These can range from headaches to a metallic taste in the mouth to psychotic behavior. It is also often ineffective because, over the past thirty years, most common parasites have developed resistance to this medication.

This brings me to a very important point. One must always retest for intestinal parasites one month after finishing a treatment to make sure that they have been completely eradicated. I then recommend retesting on a yearly basis to make sure that you stay parasite-free.

The following protocols are what I use to treat most cases of intestinal parasites in my practice. These medications have been well tolerated in my patient population during the past fifteen years.

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### Treatment for Non-complicated Parasite Infections

*\*Note: If any of the individual drugs listed below are not available you may substitute Metronidazole (Flagyl) 500 mg (taken the same number of times per day) for the unavailable medication.*

Very effective against: Blastocystis hominis, Endolimax nana, Iodamoeba butschlii, Entamoeba histolytica, Entamoeba fragilis, and Entamoeba coli.

- 1) Humatin (paromomycin) 250 mg 2 pills 3X per day for 10 days
- 2) Iodoquinol 650 mg 1 pill 3X per day for 20 days
- 3) Metagenics Candibactin BR 1 pill 3X per day for 20 days  
(800-692-9400)

Start all of the above on the same day. Take together in between meals with a full glass of water (at least 30 minutes before or two

hours after a meal). Mild to moderate gas, bloating, nausea, and even cramping may occur. Stop all the medications if frequent vomiting or a rash occurs.

Following this treatment, take a high potency probiotic supplement for at least one month. I recommend:

Custom Probiotics - Adult Formula CP-1,  
1 capsule 2x/day with or without meals  
(800) 219-8405

### Treatment for 3 Parasite Infections or Resistant Parasites

- 1) Humatin 250 mg 2 pills 2x/day for 14 days
- 2) Albendazole 200 mg 1 pill 2x/day for 14 days
- 3) Iodoquinol 650 mg 1 pill 2x/day for 14 days

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#4) Metamusil (psyllium seed husks) 1 tablespoon 2x/day for 14 days

#5) L-Glutamine Powder 1 teaspoon 2x/day for 14 days

Start all of the medications together. Take them with #4 and #5 in a full glass of water or juice at least 30 minutes before or two hours after a meal. Mild to moderate gas, bloating, nausea, and even cramping may occur. Stop all the medications if frequent vomiting or a rash occurs.

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Following this treatment, take a high potency probiotic supplement for at least one month. I recommend:

Custom Probiotics - Adult Formula CP-1,  
1 capsule 2x/day with or without meals  
(800) 219-8405