

## **Your Health and Parasites Part I: Finding the Hidden Invaders**

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A major principle I learned in my holistic medicine studies is that much of our ill health starts in the gut. In practice this is very true. When you think about it, the tube that goes from the opening of the mouth to the opening of the anus is a long convoluted continuous tunnel that is open to the outside world. What goes in and does not get absorbed into the body will ultimately be eliminated. This rule does have an important exception. Many organisms will find the environment down in the gastrointestinal tract to be just what they need to survive and flourish. As any microbiologist would tell you, the number of living organisms down there are in the trillions and outnumber the cells of the human body. It therefore becomes necessary to sort out friend from foe. This can be a daunting task when it comes to the identification of the hundreds of parasites that can potentially inhabit the human body.

The microscopic examination of specimens has always been the gold standard for parasite identification. To get a thorough examination using the microscope, specimens have to be specially prepared and stained in different ways. Then a knowledgeable examiner must spend the time thoroughly examining the microscope slides. It takes dedication and persistence as well as expertise in sorting out debris and artifacts from true parasites under the microscope. Furthermore, parasites don't always appear like pictures one finds in the textbook. Processing and staining will usually alter parasite morphology to some degree.

In the 1980s Congress passed the Clinical Laboratory Improvement Act which resulted in a significant reduction in payments to laboratories for medical tests. Reduced reimbursements resulted in unfortunate reductions in highly trained medical technologists, the most expensive part of a laboratory's budget. Microbiology departments were no exception. To meet the workload which was ever increasing, medical lab assistants were hired to replace the vacancies.

Labs are always on the lookout for ways to improve accuracy, reduce costs and improve the time it takes to get test results out. Parasitology testing is no exception. A comprehensive parasite evaluation can be extremely accurate but doing it in a complete and proper way does not reduce cost and actually adds to the time needed to get the test results out. Examining multiple slides for each client or patient can be tedious work. A well-trained technologist or microbiologist gets tied up for the microscope work and away from other duties. Processing shortcuts become commonplace and the time under the microscope gets reduced. Given the

present state of affairs, it is no wonder that most parasite examinations done by laboratories in the United States come back negative.

Some laboratories employ technology to take the place of an experienced technician spending time under the microscope. These specialized tests use a variety of methods. Some are based on finding parasite DNA in the sample. Others look for certain proteins on the parasite with an antibody antigen reaction. Every laboratory determination no matter what type of test is being done will have some limitations. These are built into the nature of the test. Parasite testing has no exceptions. Specimens that are improperly collected or insufficient in amount may turn out negative no matter what test is used. When technology takes the place of the microscope, there may be inconclusive results due to cross-reactivity of various proteins or DNA particles. Also there may not be enough parasite material to be picked up by these types of tests. As you can see, a thorough and accurate parasite examination is actually hard to come by.

I took my training in the United States Air Force as a medical laboratory technologist in the 1960s. I spent one year in Vietnam performing parasitology examinations for a large Air Force hospital. We saw every kind of parasite you could imagine and some that did not even have names. Some people would say that the methods used back then are outdated today. We did careful processing of all specimens, made multiple slides that were stained with different stains for different parasite types, and then the time was spent in careful microscope examination. With this attention to detail, parasites were found in both sick and healthy military personnel and their civilian dependents, overseas and stateside.

After Vietnam I came back to the states and pursued a medical degree. Initially I wanted to be a pathologist and continue microscopic evaluation of diseases. However I was always a people-person so family medicine was a better fit and I kept a basic medical laboratory attached to my practice. Upon semi-retirement in 2011 I opened a private parasitology research laboratory and have been doing comprehensive parasite evaluations for interested individuals and the patients/clients of doctors and practitioners. I enjoy what I am doing. I give it my full attention. And I do it the old-fashioned way that involves using expensive reagents, multiple slides stained in different ways and the necessary time examining all of these specimens under the microscope. As a result there are very few people who have a truly negative parasite exam.

Unfortunately, most doctors do not believe that we really have a parasite problem. How has this come to be?

First of all there is a perception that parasite problems are relegated to third world countries. Secondly, there is a belief that public health measures for the most part prevent parasite infections. And lastly, parasite testing done by most laboratories rarely if ever come up with a parasite. Let us take a moment and examine these assumptions.

Hundreds of years ago populations were isolated by geography and lack of mobility. Today with high mobility and air travel, people from all over the world come into contact with the American public. Moreover our food is now produced in many different countries and brought in across our borders along with the parasites that exist in their soil and water. Microscopic organisms called protozoa live mostly in water. They are in the surface waters of the United States just like every other country in the world. Chlorination and freezing are not very effective in eliminating protozoa. Filtration seems to be the best method. However even the filters at the water treatment plants have to be cleaned by back flushing and this is when protozoa can make it into the regular water supply. Furthermore not all well water is clean. And as far as the labs finding very little evidence of parasites, I think I have explained that aspect in sufficient detail.

There are those who feel that parasites are a normal part of human existence and do not need to be identified or treated. We must realize though that nature is not always kind and considerate when it comes to living organisms. Parasites can cause minor to major problems with the health of humans that harbor them. Consideration must be given to the number and location in which they are found, the nutrients they consume, the damage they cause to the tissue they are inhabiting, the toxins they excrete and the inflammation they create. Worldwide, more people die every year from parasite related problems than any other disease or condition.

How would a person know whether or not they have a parasite problem?

There may be symptoms that could be attributed to parasite activity but this is not always the case. Some people have no symptoms at all while others suffer a great deal. Although some symptoms are common with parasite problems, the best way to know is to get a thorough parasite evaluation.

Gastrointestinal symptoms may consist of one or more of the following: flatulence, bloating, constipation, diarrhea, abdominal discomfort or cramping, maldigestion, malabsorption, irritable bowel, nausea, acid reflux, leaky gut syndrome, blood/mucus in the stool and odorous stool.

Nonspecific symptoms may include one or more of the following: fatigue, pain, skin disorders, allergies, insomnia, headaches, weight changes, nervous and sensory disorders, muscle weakness, immune deficiencies, night sweats and fever.

Because these different symptoms could be associated with non-parasitic conditions some of which are very serious, it is important to rule in or out a parasite cause of the symptoms. To send a specimen off to a regular lab and get a negative test result does not rule out a parasite problem. This is sad to say but unfortunately it is very true. I have seen it time and again in my own practice and that is one of the main reasons why I do the parasite testing myself.

My parasite research laboratory is called the ParaWellness Research Program. It is a private membership research organization. Clients become Research Associates by signing a statement that protects their constitutional right to direct their own health care and contract with me to perform the parasite analysis, provide them with the results, and if necessary provide treatment options. I provide a test kit that contains vials with preservatives, one for stool and one for urine. The collected specimens are sent back to my lab. When I have completed the tests looking for yeast and parasites, a report is sent to the client and his/her doctor or practitioner. For those clients without someone to supervise their treatment I can step in and recommend state of the art personalized natural treatments in consultation with each individual.

This program is private, the cost for comprehensive testing is \$297, and it cannot be covered by any government or private insurance program. No exceptions. Sometimes a health savings account or a cafeteria plan may cover the testing and treatment. More detailed information about the program can be obtained by a visit to the website at [www.ParaWellnessResearch.com](http://www.ParaWellnessResearch.com) or a call to the office at 303-680-2288.

I have the time and devotion to give your exam a complete analysis. I love what I do and I want the best outcome for your health.

Raphael d'Angelo, M.D.

ParaWellness Research Program

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