

# The Amazing World of Parasites

*A Monograph of Commonly Found Parasites  
and  
How to Get Rid of Them*

By

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A Monograph of Common Parasites and How to Get Rid of Them

## Information for ParaWellness Research Associates

You are receiving this monograph regardless of positive or negative test results. If your results are positive you will be provided with pages to read specific to your situation.

## Information for Patients or Clients of Other Doctors or Practitioners

You will be directed to the pages appropriate to your situation as determined by your doctor or practitioner.

## Disclaimer

This monograph is intended to familiarize the reader with information about parasites from an educational viewpoint and is not intended as a manual for parasite diagnosis or treatment. This monograph may be helpful for doctors and practitioners in the management of people suspected of or having parasite issues. It is not to be used for self-diagnosis or self-treatment. Alternative/natural products have not been evaluated by the Food and Drug Administration and are therefore they are not intended to diagnose, treat or mitigate or prevent any disease.

Every effort has been made to provide accurate information. The constantly changing world of medical science may have altered some aspects of diagnosis or treatment as presented in this monograph.

## Acknowledgements

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# The Amazing World of Parasites

## **The Scope of the Problem**

Today parasites are a hot topic. There seems to be an explosion of information available on talk radio, television shows and Internet articles. And rightly so. The United States has become a melting pot for different cultures from all over the world. International business brings us travelers from other countries and much of our food is imported. I would say that we are more exposed to parasite infestation today in spite of our public health efforts to minimize exposure.

As we enter the second decade of the 21<sup>st</sup> century, significant climate change coupled with weather extremes has led to the elimination of long-standing barriers that used to contain both parasites and their host organisms. Agricultural practices whereby the excrement of animals and even humans, contaminating irrigation water for produce, recently led to an outbreak of *Cyclospora cayetanensis* cysts (protozoa) from cilantro imported from Mexico. Sporadic cases of human diarrhea were the result. And this points out the closeness we share with others across the border and around the world.

## **Definition of Parasite**

At this point I would like to define the word parasite. This is a general term that connotes something that lives off of something else. But in a strict medical sense, a parasite would be any organism that uses another organism for a portion of its lifecycle or for reproduction. This may be thought of as helpful or harmful depending on the parasitic organism and the host in which it resides. From the standpoint of human medical pathology, many parasitic infections are considered pathologic and potentially harmful to the human host.

## **Why Test for Parasites?**

The main reason is that we may be exposed and may not know the source of the exposure. Here in the United States it is generally a water source and/or a food source. When we are outdoors and in contact with the soil we are exposed. When our pets who are in contact with outside water sources and soil come indoors, they may bring with them parasites from the environment into contact with us. Biting insects are always a consideration in the spread of some parasitic infections. It is naïve to think that our public health system and water treatment plants can do a 100% job of keeping us free from contact with potential parasite problems.

Another reason for testing is that many people with chronic or ongoing diseases have problems with their immune system. Being immune compromised due to an illness, medication or other cause can lead to what we call opportunistic infections and parasites must be included in the list of potential infectious causes.

## **Types of Tests**

As we look at the different types of testing we must understand that every test has built-in benefits and limitations. For example, if we are looking for a parasite within a muscle, a sample of urine is not necessarily going to give us the diagnosis. An x-ray of the muscle may show the parasite. A blood test may reveal antibodies against the parasite and thus we are able to make identification. In the realm of parasite testing there are a multitude of different tests available. It is important to know what parasites you are potentially looking for and then match that up with appropriate testing.

## **Experienced Personnel**

In 1988 the Clinical Laboratory Improvement Act (CLIA) was signed into law resulting in significantly less payments for laboratory tests. This resulted in a reduction of the experienced laboratory personnel force in order to save money and keep the labs from closing their doors.

It is most important that properly trained and experienced personnel are performing the specific testing needed. This cannot always be assured in the overworked and understaffed environment of the modern large laboratory system. When it comes to the microscope, the most experienced personnel should be devoted to a lengthy examination of each specimen. Fiscal constraints, personnel qualifications and available time may result in subpar testing producing inaccurate results.

## **Classification of Some Common Parasites**

Parasites can be classified in many different ways. One could conceivably classify parasites by the affinity for the organ or tissue that they wish to inhabit. One could classify them by size or by where they are found in nature. In actual practice, parasites are classified based on their life cycles and organism morphology. Let's look at some examples.

### **1. Protozoa**

Amoebas are single celled organisms that are generally found in different forms. The trophozoite form in the intestine allows the amoeba to move about. Some inch along like a snail, others have a tail called flagellum which propels them about. Another type called coccidia live inside cells and form spores.

When a trophozoite encounters a hostile environment it will ball up into a protective round form called a cyst. This is not to be confused with cysts in various organs. The cyst form allows it to survive until a more favorable environment exists at which point it reenters the trophozoite stage. Of course there are exceptions.

Protozoa that inhabit the intestinal tract can be acquired by contact with infected feces or from a contaminated water source. Intestinal protozoa are worldwide in distribution.

Some common intestinal protozoa are *Blastocystis hominis*, *Entamoeba histolytica*, *Entamoeba disbar*, *Entamoeba coli*, *Entamoeba hartmanni*, *Iodamoeba butschii*, *Giardia intestinalis*, *Dientamoeba fragilis*, *Cryptosporidium species*, *Microsporidia species* and *Endolimax nana*.

Some protozoa are not limited to the intestinal tract but may inhabit other tissues such as *Naegleria fowleri* that can cause severe central nervous system infections; *Toxoplasma gondii* known to cause eye infections; and organisms such as malarial parasites and Babesia that infect the blood.

## **2. Nematodes**

This comprises the roundworm family. They can be found in almost any body tissue. Specific worms have specific sites within the body that are conducive to their lifecycle.

Roundworms found in the intestinal tract include *Ascaris lumbricoides*, *Enterobius vermicularis*, *Necator americanus*, *Strongyloides stercoralis* and *Trichuris trichiura*.

Muscle tissue is the favorite site of *Trichinella spiralis*. Some roundworms may be found in blood or other body tissues.

## **3. Cestodes**

These are the tapeworms. They can be found in a variety of tissues and they come in various lengths. Among those found in the intestinal tract are *Taenia solium* from the pig and *Taenia saginata* from the cow. Fish also harbor tapeworms.

## **4. Trematodes**

Better known as flukes, they can be found in the blood, liver, lungs and the intestinal tract. An example is the *Schistosoma* genus.

## **5. Excessive Yeast**

Most textbooks do not consider yeast a parasite. Yeasts are normal inhabitants of mucous membranes found predominantly in the gastrointestinal tract. However in excessive amounts they can have similar symptoms as other parasitic organisms. They produce waste chemicals known as mycotoxins that may impair the function of cells and organs in other parts of the body.

## Parasite Diagnosis

It is beyond the scope of this paper to discuss all of the possible ways in which parasites may be diagnosed. I will concentrate on the commonly performed testing that is done in some clinical laboratories. I will not comment on research protocols. Suffice it to say that if parasite activity is suspected in a given organ or tissue there usually is a procedure to help uncover the cause.

The gold standard for parasite diagnosis has traditionally been a microscopic examination. This is not to say that if a person passes an organism that can be seen with the naked eye and a determination can be made as to its identity, that a microscopic exam is necessary. The classic example is someone who passes worms in the stool that can be seen and identified.

But most people are not going to see any evidence with the naked eye. Therefore a stool sample can reveal clues as to the identities of organisms causing problems within the gut. After microscope slides are prepared and properly stained, one experienced in parasite diagnosis can search for various organisms and their eggs under the microscope. This type of test is called the Ova and Parasite or O&P exam.

Because this type of examination can be expensive in terms of reagents used and manpower spent preparing and doing the testing, other types of tests have been introduced in recent years. One such lab looks for DNA that matches a panel of known DNA samples for common parasites. This test may have problems with accuracy due to DNA protein cross-reactivity and it cannot tell you to what extent a given parasite is present. Another test uses antibodies looking for antigenic pieces of protein from parasites. Another version is where a test is made to see if the immune system has antibodies against a particular parasite. As in any laboratory test, there are limitations as to the sensitivity and specificity of the procedure being used. Medical science is making progress in this important field of parasite testing.

ParaWellness Research, my program of parasite identification, relies on a combination of both microscopic observations of multiple stool and urine slides prepared in different ways for different parasites as well as selective immune antigen testing. I bring over 45 years of experience to my microscope work and I love what I do and have the time necessary to devote to each person's samples.

Yeast is not seen on routine microscopic examination of stool unless they are in excess. Sometimes yeast cultures are negative yet the yeast can be seen under the microscope. It is important to make note of the presence of yeast when reporting out results of stool or urine parasite testing.

## Medical Bias

Here in the United States most physicians believe that we do not have parasite problems to any significant degree. Although parasite tests such as the O&P are sometimes requested, they rarely ever come back positive. Therefore the person with a parasite may go without appropriate treatment or be branded as having “delusions of parasitosis” based on a single negative lab exam. This is most unfortunate!

## Sources of Error

Every laboratory test has its limitations. There are also things that can go wrong and lead to an erroneous result. Most are the result of human error in the laboratory. For example, improper labeling may cause samples to get mixed up with those of another patient. Or inattention to detail may result in not selecting the best part of the specimen on which to do the test. In our busy overworked laboratories such things occasionally do happen. But the most important reason in my opinion for getting a negative parasite test result when there actually are parasites present has to do with the inexperience of the examiner and or insufficient time looking at specimens under the microscope. In my practice of parasitology, there are quite a few people who have had past negative reports that actually test positive. When a sample is negative on a thorough examination, two more specimens should be requested and examined. If all three are negative then it is reported as negative. This is standard practice in my lab but rarely done elsewhere.

## Ways Parasites are Acquired

- Visiting known parasite infested areas
- International Travel
- Contact with domestic or wild animals
- Pets that roam outdoors
- Contaminated water such as lakes, rivers, ponds
- Contaminated food such as unwashed produce or meats
- Certain insects
- Poor hygiene such as not washing hands after toilet duty
- Children in daycare; kiddie wading pools; public swimming pools
- Institutional settings
- Weak immune system
- Person to person contact with poor hygiene practices
- Handling or consuming raw or undercooked meat or fish



## Possible Signs and Symptoms

- For some there are no signs or symptoms
- Abdominal pain or discomfort
- Nausea or vomiting
- Bloating
- Foul smelling stool
- Excessive flatulence
- Diarrhea
- Mucus and/or blood in stool
- Constipation
- Stomach pain
- Skin issues
- Weight loss
- Fatigue
- Passing worms in the stool
- Anal itching

The list is endless and most of these signs and symptoms could be attributed to other causes not just parasites.

In my experience people with irritable bowel (IBS) or inflammatory bowel disease such as Crohn's disease or ulcerative colitis have a high incidence of parasite infestation. Also with rare exceptions, I see parasite infections and excessive yeast in many cancer patients. Some forms of arthritis may be due to the presence of protozoa in the affected joint(s).

## Treatment of Parasitic Infections

The concept of treatment can be viewed depending upon whether the problem is urgent (such as life-threatening malaria) or not urgent (such as non-invasive intestinal protozoa). Medicinal compounds are the treatment of choice in all urgent infections. They generally work fast and well to preserve a person's life. The non-urgent infections can be treated with medicinal compounds, natural/alternative remedies and occasionally by watchful waiting for the body to resolve the problem.

Yeast treatment is very controversial in the medical community. Some doctors will only treat for traditional yeast infections such as a skin infection or a vaginal infection but not excessive amounts present in the stool. Some are more open to treatment of excess yeast. Treatment may take the form of a prescription or a natural/alternative remedy. In either case a reduction in carbohydrates in the diet is definitely needed.

## What Will Treatment do for You?

When parasites or excessive yeast are present there is an assumption that a person's symptoms are due to the presence of these organisms. That always is the hope but the reality is sometimes different. The truth is that upon a thorough cleansing program symptoms may be gone and health restored. We can therefore say that the symptoms were due to the problems found and their eradication was successful in restoring health.

Sometimes there are varying degrees of symptom resolution. If the parasite/yeast problem has been successfully eliminated, then most likely the remaining symptoms are due to something else. So there are no guarantees that eliminating parasites and excessive yeast will solve all that is ailing a person.

For patients with cancer there may be an exception. Often the immune system is compromised allowing parasites or excessive yeast to create more inflammation which can support the cancer growth. Parasite treatment will help bring down the level of inflammation and work with the immune system to improve the chances for successful cancer treatment.

## What About Non-Treatment?

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 that they create.

**Worldwide, more people die every year from parasite related problems than any other disease or condition.**

# Parasite Descriptions

## Common Worms

### *Ascaris lumbricoides*

#### **Description:**

In the roundworm family this is the largest worm. The adult female averages 8 inches long and the male about 5 inches in length. The larvae inhabit temperate soils. Females lay about 20,000 eggs at a time.

#### **Transmission:**

Soil to skin or mouth; fecal oral route; contaminated food or water.

#### **Prevention:**

Good sanitary practices. See Appendix C – Preventive Measures

#### **Symptoms and Clinical Disease:**

Depends upon worm location: intestines – indigestion, cramps, or in severe cases blockage; lungs – cough, wheezing, hives and allergy symptoms; other sites: based on organ location and degree of damage. Sometimes no symptoms. In the pediatric population there may be nutritional deficiencies.

#### **Diagnosis:**

Microscopic examination of specially stained stool samples for their eggs. Occasionally worms are passed in the stool.

#### **Treatment:**

Alternative agents: many therapies with moderate to good success – see Appendix A Alternative/Natural Treatment

Prescriptive agents: Albendazole or Mebendazole – see Appendix B Medical Treatment

### References

Diagnostic Medical Parasitology, Fifth Edition, Lynn S Garcia

Diagnostic Medical Parasites: A Public Health Officers Guide

The Medical Letter, August 2004

CDC.gov/parasites

## **Enterobius vermicularis**

### **Description:**

This is a multicellular organism in the family of roundworms that is a very small white silky worm known as the pinworm. This is the most common worm found in the United States. It is more common in small children and those who work with children.

### **Transmission:**

Fecal-oral; contaminated food or water.

### **Prevention:**

Good sanitary practices. See Appendix C – Preventive Measures

### **Symptoms and Clinical Disease:**

Can be asymptomatic or more often there is anal itching that can be ongoing and problematic.

### **Diagnosis:**

Microscopic examination of specially stained stool samples or scotch tape specimens. Rarely found in urine. Can inhabit the vagina.

### **Treatment:**

Natural agents: type, amount and duration vary by clinical symptoms and parasitic load – see Appendix A – Alternative/Natural Treatment

Prescriptive agents: see Appendix B – Medical Treatment

### **References**

Diagnostic Medical Parasitology, Fifth Edition, Lynn S Garcia

Diagnostic Medical Parasites: A Public Health Officers Guide

The Medical Letter, August 2004

CDC.gov/parasites

## ***Necatur americanus/Ancylostoma duodenale***

### **Description:**

Two closely related species of hookworms (nematodes). They are found in warm and temperate climate zones. Man is their only host.

### **Transmission:**

The worm generally penetrates intact skin in contact with the ground. There are some cases reported of direct oral ingestion from soiled food and the fecal oral route. They wind up in the intestine where they hook onto the mucosal lining and feed.

### **Prevention:**

Good sanitary practices. See Appendix C – Preventive Measures  
Foot covering when walking on soil.

### **Symptoms and Clinical Disease:**

Depends upon worm location and amount of infestation: intestines – indigestion, gas, bloating, constipation, blood in the stool; lungs – cough, wheezing, hives and allergy symptoms. They hook into tissues and can cause a great deal of tissue destruction. In severe infestation one can become anemic due to ongoing blood loss.

### **Diagnosis:**

Microscopic examination of specially stained stool samples. Rarely, passage of an intact worm in the stool.

### **Treatment:**

Alternative agents: many therapies with moderate to good success – see Appendix A Alternative/Natural Treatment  
Prescriptive agents: Anthelmintic prescriptive agents – see Appendix B Medical Treatment

### **References**

Diagnostic Medical Parasitology, Fifth Edition, Lynn S Garcia  
Diagnostic Medical Parasites: A Public Health Officers Guide, USAF  
The Medical Letter, August 2004  
CDC.gov/parasites

# **Strongyloides stercoralis**

## **Description:**

Very small roundworm (2 mm) (nematode). Found in tropical, subtropical and temperate climate zones. It lives in soil and in the human intestine.

## **Transmission:**

Soil to mouth; fecal oral route; can penetrate bare skin.

## **Prevention:**

Good sanitary practices. See Appendix C – Preventive Measures  
Footwear when walking on soil.

## **Symptoms and Clinical Disease:**

The life cycle is such that the adult female lays eggs in the small intestine that can develop into the larval stage which often re-infects the individual keeping the cycle going for years.

Symptoms depend upon worm location: intestines – mild infection may be asymptomatic. Heavier or more prolonged infections can produce one or more of the following: indigestion, abdominal cramps, constipation, diarrhea, anemia, rashes, vomiting or weight loss; lungs – cough and sometimes respiratory allergy symptoms.

## **Diagnosis:**

Microscopic examination of specially stained stool samples. Sometimes the actual adult or the immature worm can be seen under the microscope. Otherwise the sample is examined for the eggs.

## **Treatment:**

Alternative agents: many therapies with moderate to good success. See Appendix A Alternative/Natural treatment

Prescriptive agents: Albendazole or Ivermectin – see Appendix B Medical Treatment

Because of the high potential for re-infection a more prolonged course of treatment is recommended. ImmuGuard (Appendix A) may be helpful in prevention.

## **References**

Diagnostic Medical Parasitology, Fifth Edition, Lynn S Garcia

Diagnostic Medical Parasites: A Public Health Officers Guide, USAF

The Medical Letter, August 2004

CDC.gov/parasites

## **Taenia saginata, Taenia solium**

### **Description:**

The Taenia family of tapeworms have a worldwide distribution. The worms are found in cattle (*T. saginata*) and pigs (*T. solium*) as well as fish, dogs and other animals. They inhabit the alimentary canal by attaching to the lining and can grow in some cases to very long lengths. Their eggs hatch and the tiny worms can travel to other organs. As part of their life cycle some of the worms may burrow into the muscles.

### **Transmission:**

Ingesting improperly cooked pork or beef. Handling raw meat. Eating raw or undercooked fish.

### **Prevention:**

- Meat should be rinsed with water and cooked thoroughly.
- Wash your hands after handling any raw meat or wear disposable gloves.
- Good sanitary practices. See Appendix C – Preventive Measures

### **Symptoms and Clinical Disease:**

Depends upon worm location: intestines – indigestion, cramps, weight loss; in some cases diarrhea; other sites: based on organ location and degree of damage.

### **Diagnosis:**

Microscopic examination of specially stained stool samples. Occasionally worm segments (proglotids) or an intact worm are passed in the stool.

### **Treatment:**

Alternative agents: see Appendix A Alternative/Natural Treatment

Prescriptive agents: antihelminthic drugs – see Appendix B Medical Treatment

### **References**

Diagnostic Medical Parasitology, Fifth Edition, Lynn S Garcia

Diagnostic Medical Parasites: A Public Health Officers Guide

The Medical Letter, August 2004

CDC.gov/parasites

## **Trichuris trichuria**

### **Description:**

Known as whipworm, this is a small roundworm (nematode) found in tropical and temperate soils.

### **Transmission:**

- Soil to mouth or fecal oral route.

### **Prevention:**

- Good sanitary practices. See Appendix C – Preventive Measures

### **Symptoms and Clinical Disease:**

Usually no symptoms until the worm load becomes heavy at which time intestinal cramps and diarrhea may become present.

### **Diagnosis:**

Microscopic examination of specially stained stool samples.

### **Treatment:**

Alternative agents: many therapies with moderate to good success. See Appendix A Alternative/Natural Treatment

Prescriptive agents: Anthelmintic prescriptive agents. See Appendix B Medical Treatment

### **References**

Diagnostic Medical Parasitology, Fifth Edition, Lynn S Garcia  
Diagnostic Medical Parasites: A Public Health Officers Guide, USAF  
The Medical Letter, August 2004  
CDC.gov/parasites



# Common Intestinal Protozoa

## **Blastocystis hominis**

### **Description:**

Single cell protozoan is an inhabitant of the human intestinal tract.

### **Transmission:**

Fecal-oral, contaminated food or water

### **Prevention:**

- Good sanitary practices. See Appendix C – Preventive Measures

### **Symptoms and Clinical Disease:**

Can be asymptomatic or cause diarrhea, cramps, nausea, fever and abdominal pain. It has been associated with irritable bowel, intestinal obstruction and infective arthritis.

Persons particularly at risk are those who have compromised immune systems such as chronically ill patients, persons institutionalized, those who travel to or from tropical developing countries.

### **Diagnosis:**

Microscopic examination of specially stained stool samples.

### **Treatment:**

Alternative agents: many therapies with moderate to good success. See Appendix A Alternative/Natural Treatment

Prescriptive agents: Metronidazole, Iodoquinol See Appendix B Medical Treatment

Type of treatment, dosage and duration vary by clinical symptoms and parasitic load

### **References**

Diagnostic Medical Parasitology, Fifth Edition, Lynn S Garcia

Diagnostic Medical Parasites: A Public Health Officers Guide

The Medical Letter, August 2004

CDC.gov/parasites

*Blastocystis*: Consensus of treatment and controversies, Uma Sekar and M Shanthi, Trop Parasitol. 2013 Jan-Jun; 3(1): 35–39.

## **Cryptosporidium species**

### **Description:**

Cryptosporidium is a single cell parasite from the Protozoan family that is responsible for inflammation and irritation of the lining of the bowel. Distribution is worldwide. Many domesticated and wild animals serve as the main hosts.

### **Transmission:**

The route of transmission is fecal-oral and from contaminated water. Daycare and Kiddy wading pools in summer are sometimes identified as a source.

### **Prevention:**

- Good sanitary practices. See Appendix C – Preventive Measures

### **Symptoms and Clinical Disease:**

Symptoms may range from minor abdominal discomfort to chronic diarrhea.

### **Diagnosis:**

Microscopic examination of specially stained stool samples. Antigen-antibody tests.

### **Treatment:**

Alternative agents: many therapies with moderate to good success. See Appendix A Alternative/Natural Treatment

Prescriptive agents: Antibiotics are not very effective. Combination therapy with two or more antibiotics is often tried with mixed results with side effects of promoting yeast overgrowth of the bowel. See Appendix B Medical Treatment

Alternative agents: Alternative treatments have been showing better results for some.

Persons on immunosuppressive therapy are at a risk of more intense symptoms. They may need to stop such therapy while on treatment for Cryptosporidia.

## **References**

Diagnostic Medical Parasitology, Fifth Edition, Lynn S Garcia  
Diagnostic Medical Parasites: A Public Health Officers Guide, USAF  
CDC.gov/parasites

# **Cyclospora cayetanensis**

## **Description**

Single celled protozoan can be an inhabitant of the human intestinal tract.

## **Transmission**

Fecal-oral, contaminated raspberries, basil, baby lettuce leaves and snow peas; or contaminated water. A recent outbreak in the USA has been traced to Mexican cilantro. Person-to-person transmission has not been reported.

## **Prevention**

Good sanitary practices

## **Symptoms and Clinical Disease**

Can be asymptomatic or cause diarrhea, diarrhea alternating with constipation, cramps, nausea, fever and abdominal pain. It has been associated with irritable bowel and chronic digestive difficulties.

Persons particularly at risk are those who have compromised immune systems such as chronically ill patients, persons institutionalized, those who travel to or from tropical developing countries.

## **Diagnosis**

Microscopic examination of specially stained stool samples.

## **Treatment**

Alternative agents: many therapies with moderate to good success. See Appendix A Alternative/Natural Treatment

Prescriptive Agents: See Appendix B Medical Treatment

## **References**

Diagnostic Medical Parasitology, 5<sup>th</sup> Edition, Lynn S Garcia  
Practical Guide to Diagnostic Parasitology, 2<sup>nd</sup> Edition, Lynn S Garcia  
CDC.gov/parasites

# **Dientamoeba fragilis**

## **Description:**

Single celled protozoan is an inhabitant of the human intestinal tract. It is cosmopolitan in distribution.

## **Transmission:**

Fecal-oral; contaminated food or water. Some authorities say that this protozoan can “piggy back” into the human body on the eggs of roundworms such as *Ascaris lumbricoides* and *Enterobius vermicularis*.

## **Prevention:**

Good sanitary practices. See Appendix C – Preventive Measures

## **Symptoms and Clinical Disease:**

Although most parasitologists consider this organism a non-pathogen, there is some controversy in this regard. In excessive amounts it may inhibit the absorption of nutrients to some extent and on occasion become an intestinal irritant with possible symptoms of nausea, vomiting, abdominal discomfort and diarrhea sometimes accompanied with mucus. Persons with irritable bowel syndrome or eosinophilic colitis may harbor this parasite.

## **Diagnosis:**

Microscopic examination of specially stained stool samples.

## **Treatment:**

Alternative agents: many therapies with moderate to good success. See Appendix A Alternative/Natural Treatment

Prescriptive Agents: See Appendix B Medical Treatment

## **References**

Diagnostic Medical Parasitology, Fifth Edition, Lynn S Garcia  
Diagnostic Medical Parasites, A Public Health Officers Guide  
Engsbro, Anne, Treatment of *Dientamoeba fragilis* in patients with irritable bowel syndrome.  
Am. J. Trop. Med. Hyg. 87(6) 2012 pp 1046-1052  
CDC.gov/parasites

## **Endolimax nana**

### **Description:**

Single celled protozoan is an inhabitant of the human intestinal tract.

### **Transmission:**

Fecal-oral, contaminated food or water

### **Prevention:**

Good sanitary practices. See Appendix C – Preventive Measures

### **Symptoms and Clinical Disease:**

Although most parasitologists consider this organism a non-pathogen, there is some controversy in this regard. In excessive amounts it may inhibit the absorption of nutrients to some extent and on occasion become an intestinal irritant with possible symptoms of nausea, abdominal discomfort and/or loose bowel movements.

### **Diagnosis:**

Microscopic examination of specially stained stool samples.

### **Treatment:**

Reserved for symptomatic individuals.

Alternative agents: See Appendix A Alternative/Natural Treatment

Responds to prescriptive anti-protozoal therapies. See Appendix B Medical Treatment

### **References**

Diagnostic Medical Parasitology, 5<sup>th</sup> Edition, Lynn S Garcia

Practical Guide to Diagnostic Parasitology, 2<sup>nd</sup> Edition, Lynn S Garcia

CDC.gov/parasites

## **Entamoeba coli**

### **Description:**

Single celled protozoan is an inhabitant of the human intestinal tract.

### **Transmission:**

Fecal-oral, contaminated food or water

### **Prevention:**

Good sanitary practices. See Appendix C – Preventive Measures

### **Symptoms and Clinical Disease:**

Although most parasitologists consider this organism a non-pathogen, there is some controversy in this regard. In excessive amounts it may inhibit the absorption of nutrients to some extent and on occasion symptoms of nausea, abdominal discomfort and loose bowel movements.

### **Diagnosis:**

Microscopic examination of specially stained stool samples.

### **Treatment:**

Reserved for symptomatic individuals.

Alternative agents: many therapies with moderate to good success. See Appendix A Alternative/Natural Treatment

Responds to anti-protozoal prescriptive therapies. See Appendix B Medical Treatment

### **References**

Diagnostic Medical Parasitology, Fifth Edition, Lynn S Garcia  
Diagnostic Medical Parasites, A Public Health Officers Guide  
CDC.gov/parasites

## **Entamoeba histolytica**

### **Description:**

*Entamoeba histolytica* is a single cell parasite from the Protozoan family that may be responsible for inflammation and irritation of the lining of the bowel. Distribution is worldwide. Many animals serve as the main hosts. The organism is usually shed from animal urine.

### **Transmission:**

The usual route of transmission is fecal-oral or accidental ingestion from contaminated food or water.

### **Prevention:**

Good sanitary practices. See Appendix C – Preventive Measures

### **Symptoms and Clinical Disease:**

This organism may cause a variety of problems in the human. Symptoms in the GI tract may range from minor abdominal discomfort to chronic diarrhea. When present in other locations such as the liver or skin symptoms of inflammation of that organ or tissue are present. Immune compromised individuals are more susceptible.

### **Diagnosis:**

Microscopic examination of fresh, unpreserved stool is ideal but rarely performed. Preserved stool with special staining followed by careful microscopic examination is the standard test. Other tests of stool, blood or saliva are sometimes helpful.

### **Treatment:**

Alternative agents: See Appendix A Alternative/Natural Treatment

Prescriptive agents: Albendazole and other agents. See Appendix B Medical Treatment

### **References**

Diagnostic Medical Parasitology, Fifth Edition, Lynn S Garcia  
Diagnostic Medical Parasites: A Public Health Officers Guide, USAF  
The Medical Letter, August 2004  
CDC.gov/parasites

## **Entamoeba hartmanni**

### **Description:**

Single celled protozoan is an inhabitant of the human intestinal tract.

### **Transmission:**

Fecal-oral, contaminated food or water

### **Prevention:**

Good sanitary practices. See Appendix C – Preventive Measures

### **Symptoms and Clinical Disease:**

Although most parasitologists consider this organism a non-pathogen, there is some controversy in this regard. In excessive amounts it may inhibit the absorption of nutrients to some extent and on occasion become an intestinal irritant with possible symptoms of nausea, abdominal discomfort and loose bowel movements.

### **Diagnosis:**

Microscopic examination of specially stained stool samples.

### **Treatment:**

Reserved for symptomatic individuals. Responds to anti-protozoal therapies.

Asymptomatic individuals with a moderate to heavy load may be considered for treatment.

See Appendix A Alternative/Natural Treatment

See Appendix B Medical Treatment

### **References**

Diagnostic Medical Parasitology, Fifth Edition, Lynn S Garcia  
Diagnostic Medical Parasites, A Public Health Officers Guide  
CDC.gov/parasites



## **Giardia intestinalis**

### **Description:**

This is a flagellated single cell organism that is found worldwide. Both humans and animals are hosts. The organism is shed in stool and urine and enters the water supply. It can survive freezing temperatures.

### **Transmission:**

The usual route of transmission is fecal-oral or ingestion of contaminated food or water. Fresh water boaters, swimmers, fishermen and others who recreate in lakes and streams may also be at risk.

### **Prevention:**

Good sanitary practices. See Appendix C – Preventive Measures

### **Symptoms and Clinical Disease:**

Diarrhea is the most common symptom. Stools are often malodorous. Some gas, intestinal noises and indigestion are often present to some degree.

### **Diagnosis:**

Microscopic examination of specially stained stool samples. Other tests.

### **Treatment:**

Alternative agents: See Appendix A Alternative/Natural Treatment

Prescriptive agents: metronidazole and other agents. See Appendix B Medical Treatment

Alternative agents: Wheat germ agglutinin has had success singly and combined with metronidazole.

### **References**

Diagnostic Medical Parasitology, Fifth Edition, Lynn S Garcia

Diagnostic Medical Parasites: A Public Health Officers Guide, USAF

The Medical Letter, August 2004

CDC.gov/parasites

## **Iodamoeba butschii**

### **Description:**

Single celled protozoan is an inhabitant of the human intestinal tract.

### **Transmission:**

Fecal-oral, contaminated food or water

### **Prevention:**

Good sanitary practices. See Appendix C – Preventive Measures

### **Symptoms and Clinical Disease:**

It is considered to be a non-pathogen. However, those persons with chronic diseases generally have compromised immune systems and may have some symptoms such as bloating, abdominal discomfort and possibly diarrhea due to this organism.

### **Diagnosis:**

Microscopic examination of specially stained stool samples.

### **Treatment:**

Prescriptive agents: generally not treated with prescriptions  
See Appendix A Alternative/Natural Treatment

Natural agents: type, amount and duration vary by clinical symptoms and parasitic load

### **References**

Diagnostic Medical Parasitology, Fifth Edition, Lynn S Garcia  
Diagnostic Medical Parasites: A Public Health Officers Guide  
Clinical practice experience, Raphael d'Angelo, MD  
CDC.gov/parasites

## **Microsporidium species**

### **Description:**

Microsporidium is a single cell parasite from the Protozoan family that may be responsible for inflammation and irritation of the lining of the bowel. Distribution is worldwide. There are eight genera and thirteen species of microsporidia. Many animals serve as the main hosts. The organism is usually shed from animal urine.

### **Transmission:**

The usual route of transmission is fecal-oral or accidental ingestion from contaminated food or water.

### **Prevention:**

Good sanitary practices. See Appendix C – Preventive Measures

### **Symptoms and Clinical Disease:**

Various species of this organism may cause a variety of problems in the human. Symptoms in the GI tract may range from minor abdominal discomfort to chronic diarrhea. When present in other locations symptoms of inflammation of that organ or tissue are present. Immune compromised individuals are more susceptible.

### **Diagnosis:**

Microscopic examination of specially stained stool samples. Other detection methods are in the process of development.

### **Treatment:**

Alternative agents: See Appendix A Alternative/Natural Treatment

Prescriptive agents: Albendazole and other agents. See Appendix B Medical Treatment

### **References**

Diagnostic Medical Parasitology, Fifth Edition, Lynn S Garcia  
Diagnostic Medical Parasites: A Public Health Officers Guide, USAF  
The Medical Letter, August 2004  
CDC.gov/parasites

## Fungi

### Candida albicans and other yeast

#### **Description:**

An organism that ferments simple sugars and gives off toxic compounds (mycotoxins) that impair various organs including the immune system. Yeast invade tissues and create inflammation. Although not a true parasite, excess yeast can have a symptom pattern typical of parasites.

#### **Transmission:**

Yeast is ubiquitous and most people have a few in the colon and on other mucous membranes.

#### **Prevention:**

The avoidance of standard prescription antibiotic therapy is the best way. A very limited carbohydrate diet is necessary for prevention. Steroids, birth control pills and diabetes can cause yeast infections, so limiting or avoiding those medications and controlling diabetes will help prevent yeast infections. A few people will have an inherited or acquired immune defect which limits the immune system's ability to deal with this organism.

#### **Symptoms and Clinical Disease:**

The symptoms of yeast infection are too numerous to list. Suffice it to say that the toxins produced circulate in blood and other body fluids damaging tissues and cellular function in many different sites. In the gastrointestinal tract they can cause gas, bloating, abdominal pain, cramps, diarrhea and/or constipation.

#### **Diagnosis:**

Microscopic examination of specially stained stool samples. Special cultures.

#### **Treatment:**

Alternative agents: many therapies with moderate to good success – see Appendix A  
Alternative/Natural Treatment

Prescriptive agents: Anti-yeast prescriptive agents – see Appendix B Medical Treatment

#### **References**

Diagnostic Medical Parasitology, Fifth Edition, Lynn S Garcia  
Diagnostic Medical Parasites: A Public Health Officers Guide, USAF  
The Yeast Syndrome, Bantam Books, John Parks Trowbridge, MD

# \*Important - Before You Begin a Parasite Treatment Program\*

## Hydration

Hydration is important. This program requires that you drink enough water to wash out of your body the dead and dying parasites and their toxins. This will require 50 to 100 ounces of water every day.

To compute how much water is right for you, take your weight in pounds and divide that number by 2. The result is the number of ounces you should strive to drink over each waking day. Increase your water intake gradually aiming for the recommended amount.

For example, if your weight is 120 pounds, one-half of that number is 60. You would drink 60 ounces of water daily.

Our bodies are 70 % water. Our blood is 90% water. Chronic dehydration, which affects up to 75% of Americans, is associated with most every disease<sup>1</sup>. Correcting this with adequate water is often responsible for reducing or eliminating many disease manifestations and symptoms<sup>2</sup>.

1. Pangman, MJ *Hexagonal Water: The Ultimate Solution* 2007, Uplifting Press

2. Batmanghelidi F *Your Body's Many Cries For Water* 1992, Global Health Solutions

## Detoxification, Die-off or Herxheimer Reaction

When parasites and yeast are killed off they release their toxic wastes. The body must gather them up and eliminate them. This process may produce symptoms called the detoxification reaction, the die-off reaction and in medical circles the Herxheimer reaction. Depending on how fast parasites are killed and how many there are, the symptoms may vary from none to very mild to very uncomfortable. The liver is responsible for taking toxic compounds and restructuring them so they can be easily eliminated. But the speed with which this is accomplished will vary from person to person. The dietary supplement Milk Thistle, available in health food stores, helps protect the liver at a dose of 100-300 mg a day.

Detoxification reaction symptoms mimic flu symptoms and may be one or more of the following: headache, fatigue, weakness, lightheadedness, dizziness, nausea, abdominal gas, diarrhea, muscle aches or cramps, sometimes a brief low grade fever or even chills.

Detoxification symptoms are a sign that the removal program is working and not to be mistaken for a new infection. You should increase the amount of water you are consuming and double up on the Milk Thistle herb. Usually the symptoms are less in a day or two and gone in several

days. If they persist beyond a few days cut all doses in half or stop for a few days. This will usually bring this reaction to a quick ending.

## Probiotics

When ridding the body of unwanted intestinal microorganisms it is necessary to provide healthy bacteria to take over the areas of the bowel that have been vacated. Probiotics is a term used to describe friendly bacteria that normally belong in our gut and are necessary for our health. You have the following choices: live bacteria from a milk source, live bacteria from a non-milk source such as coconut, fermented vegetable sources and freeze dried bacteria that come as a powder or in capsules.

### **Choose ONE or TWO of the options below:**

**# 1** In many health food stores you will find **Kefir** – a buttermilk type of product that has the live cultured bacteria in plentiful amount. **Take two tablespoonsful a day** with or without food during the treatment period. When you have finished the parasite treatment, continue with the probiotic for two more months. Another choice would be **yogurt with the live culture. Take two tablespoonsful a day** throughout the treatment and two months following completion of treatment. These are found in health food stores and some grocery chains.

**#2** If you are unable to use a milk product due to an allergy or personal preference, there is a product called **Coconut kefir** which some health food stores will stock. **Take two tablespoons a day** with or without food. Again, continue two additional months after the end of the parasite treatment. This is found in many health food stores.

**#3** If neither of these options are desirable for you then use **freeze-dried capsules or powders** of probiotics. There are many brands out there. For this type of probiotic make sure it has strains of Lactobacillus and Bifidobacterium included in the mix of organisms. These are taken as **2 capsules a day** on an empty stomach; or **one teaspoon of the freeze-dried powder a day** on an empty stomach. Wash them down with non-chlorinated water as the chlorine may kill the bacteria before they have a chance to grow. Again, this is continued for an additional two months beyond the end of the parasite treatment. These can be found in health food stores.

**#4 Fermented vegetables** with most meals: Learn to eat the way God intended, with nutrient dense, nourishing food and recipes for fermented healthy bacteria-rich vegetables. These are mostly made at home or can be found in select health food stores.

### **Other resources:**

- [www.keybiotic.com](http://www.keybiotic.com) an excellent probiotic available online. The site has one of the most informative videos on sugar and yeast – worth watching!
- <http://www.globalhealingcenter.com/natural-health/probiotic-foods/>

## Nutrition and Dietary Concerns

Before undertaking a parasite treatment program I want to answer some common concerns people raise about diet. Much could be said and many books have been written about what we should eat and must avoid to stay optimally healthy. Not all authorities are in agreement.

When it comes to parasite treatment there is really nothing more to include or avoid beyond your usual diet. Some people have such compromised gut function that their nutritional choices are very limited.

Suffice it to say that the human body needs some protein, some good oils, and a few carbohydrates. Vegetarians do well with legumes for protein, vegetables and some fruits. I recommend for them a Vitamin B-12 supplement and to use a little healthy oil like olive or coconut. The rest of us may substitute eggs, fish or meat as protein sources. Again, it is important to eat a wide variety of fresh organic vegetables and a little fruit. Use some of the good oils and Omega 3 oils.

When the yeast is in excess their favorite food needs to be minimized. This can be done by restricting carbohydrates especially refined sugar. The various authors on the subject of restriction vary in their recommendations. Some say no fruit, no breads, no starches, no grains and no pastries. Others say to keep the total daily carbohydrate load below 60 grams a day which I think is more reasonable for our purpose.

What are we trying to accomplish with such low carbohydrate intake? In my experience, diet alone may lower the yeast load but it will take a very long time – months, maybe a year or two. If you combine an anti-yeast treatment with diet you get a relatively quick reduction of excess yeast. Staying on a reduced carbohydrate diet will then help to keep the level of yeast steady. Some people will be able to advance the carbs and do okay while others must be strict about carb reduction. Each person will have to find out what works best.

The strictest diet I know of is the RAVE diet program that is designed specifically *for people dealing with cancer*. Because cancer cells feed on sugar and the products of inflammation, this diet is the most anti-inflammatory and has the least amount of carbohydrates. If this is your situation I would advise you to look into this program. More information can be found at [www.RAVEdiet.com](http://www.RAVEdiet.com).

This information does not answer every conceivable situation. However, the main point is that your diet will play a major role in your overall health. I am asked often if one's diet will interfere with the parasite treatment program. The answer is it will not.

## Appendix A – Alternative/Natural Treatment

There are a multitude of alternative treatments reported to have the ability to kill parasites and/or promote their evacuation. Doctors tend to shy away from using a natural approach due to lack of familiarity with alternative treatments and the fact that they have not undergone rigorous clinical trials. One therefore must realize that this type of treatment is built upon case reports and the accumulated experience of integrative physicians and various types of practitioners in North and South America as well as overseas.

Nevertheless, they should be considered because, in my opinion, they can be used long enough to get all the stragglers whereas the prescriptive treatments often are limited to a shorter course by side effects or toxicity.

Practitioners that treat parasites with alternative methods have found their list of remedies by trial and error. They tend to stick with the ones that work for them.

The following list is certainly not a complete list of all possibilities, but I can vouch for the eradication results over many years of use.

### ***Energy Methods***

The use of frequency generators such as the Rife technology, microcurrent, the Zapper and other similar devices have had some success in reduction of parasitic activity but rarely produce a cure based upon examination of post treatment specimen analyses. They may interfere with homeopathic treatments but they do not interfere with botanical treatments such as herbs and essential oils.

### ***Foods***

In this category we have onions, shallots, cilantro and garlic. They do have activity against parasites however they would have to be consumed in a large quantity on a daily basis. The ordinary amount of these foods in the diet may be helpful in maintenance following parasite eradication.

### ***Minerals***

#### **Iodine**

Iodine has antiseptic properties and a long track record of use in cleaning up contaminated water. Care must be taken because of the uptake of iodine by the thyroid gland. If it is used it must be limited to preventive maintenance and the dose must be individualized.

#### **Silver**

Since ancient times this metal has been used in various ways to prevent or treat infections. The Romans kept a silver coin in their water jugs which seemed to keep the water fresh. Today



there are various medical treatments that use silver. A few that come to mind are silver nitrate to cauterize bleeding or infected tissue, silver drops in the eyes of newborns at birth, silver coupled with antibiotics for wound and burn treatment.

In liquid form there are colloidal silver, mild silver protein, and oxygenated silver.

## ***Herbal Remedies***

There are many forms in which herbs can be prepared for treatments. Most are taken as liquids or in capsules. I like the liquid form for its ease of ingestion and accurate dosing that can be easily individualized. See Formula HP Appendix B

## ***Essential Oils***

Essential oils are called the “life blood” of the plant. They too have been around since ancient times. There were traces of the scent of frankincense, myrrh and cedarwood in empty clay jugs when the tombs of the pharaohs were excavated.

In modern times essential oils have been helping in the treatment of infections as supportive agents and in some cases first line therapy. Parasite infestation and excess yeast eradication generally respond well to specific essential oils. In Germany, France, Italy, Australia and other countries the doctors and practitioners are very familiar with the effective use of essential oil therapy for these organisms. Using their experience I have formulated mixtures of certain essential oils for use in my ParaWellness Research program.

**My essential oil arsenal:** Formula AZ, Formula PZ, Formula HP, Formula MZ and AromaTab. See their respective uses below along with Argentin 500 and ACS200 ES.

### ***For Excess Yeast:***

AromaTab, Argentin 500, ACS200 ES, Formula HP\*

### ***For Protozoa:***

Argentin 500, ACS200 ES, Formula PZ, Formula HP\*, Formula AZ\*

### ***For Roundworms, Tapeworms, Flukes:***

Argentin 500, ACS200 ES, Formula MZ, Formula HP\*

\* used for resistant organisms

## Remedies – Detailed Instructions

### **AromaTab™**

This is a proprietary essential oil blend that is in tablet form. It has the unique patented ability to dissolve in the small intestine and then is absorbed into the lymph vessels of the intestine. The result is a timed release distribution into the blood.

AromaTab™ has excellent action on microbial parasites of the yeast family and pathogenic bacteria as well as other pathogens such as viruses, Lyme, MRSA, etc. I use this for the treatment of excess yeast although it has some action on protozoa and worms.

#### **Adults:**

***Take 2 tablets morning and evening until the recommended number of tablets is used up. If you are “sensitive” to medicines or supplements reduce the dose to 1 tablet once or twice a day initially and gradually advance your dose to the recommended dose as tolerated.***

#### **Children:**

***Age 12 and older take the adult dose. Age 8-11 take 1 tablet morning and evening. Age 5-7 take ½ tablet morning and evening. Do not crush or chew the tablets. They are swallowed down with a liquid and can be taken with food.***

**Start this as soon as you receive it.**

**Take it continuously till the recommended number of tablets is used up.**

## Background Briefing for AromaTab™

In 2008 I became aware of a compounding pharmacist who had a process whereby he could take medicinal oil and make a tablet form of the medicine that would initially bypass the liver and get into the body through the lymph system, thereby keeping the medicine in its active form.

At my request this patented process was tried out on a special essential oil formula I had used for years to treat a myriad of infectious and immune conditions. The tablet manufacturing was successful!

Since that time over 8,000 patients ranging in age from 5 years to over 84 years have used AromaTab™ with most not having to add a prescription antibiotic to resolve a problem. An 18

month clinical study using AromaTab for a variety of outpatient infections is reported in an international aromatherapy journal:

d'Angelo R, AromaTab™ - A Novel Essential Oil Tablet.  
Aromatherapy Today Vol 47 Mar 2010:10-12

At one time this was offered as a dietary supplement without a prescription. However AromaTab is now made in a specific compounding pharmacy and requires a prescription. Any licensed prescriber may authorize a prescription by contacting Belmar Pharmacy 303-763-5533. It is hoped that in the near future AromaTab™ will once again be available as a dietary supplement.

### Recommended Number of Tablets

The number of tablets is calculated based upon the degree of excess yeast. **If the excess yeast is rare or few then a one month supply is authorized. (Adults: 120 tablets)**

**For a moderate or heavy amount of yeast then a two month supply will do the job. (Adults: 240 tablets).**

### Refills

AromaTab™ usually comes with extra refills. This is for your use optionally in the future to combat other infections such as sinus infections, throat infections, bronchitis, flu and others. If you want a refill please contact Belmar Pharmacy directly 303-763-5533.

Available by prescription from Belmar Pharmacy, Lakewood, Colorado 303-763-5533.

## ***Argentin 500***

This is a special formulation of oxygenated nano-silver, a natural antibiotic and not to be confused with colloidal silver. This formulation is in use by the military to conquer infections of all kinds when prescription antibiotics are not working or unavailable. It is of value in parasite and yeast infestations and many other types of infections.

### **Recommended Dosages Argentin 500:**

Adults: 1/2 teaspoon in approximately one ounce of water twice daily on an empty stomach.

*If you have been quite ill for a long time, start out with ¼ teaspoon twice daily for a few days before going to the half teaspoon dose. People who are sensitive and children: cut the dose to a drop or two per dose and gradually advance to ¼ teaspoon dose as tolerated.*

Do not take Argentin 500 within one hour of taking any citrus juice or oral Vitamin C as this may inactivate it. People on IV Vitamin C may take Argentin 500 2 hours after the IV is finished.

Do not take Argentin 500 at the same time as other remedies, medicines or supplements. Wait at least 30 minutes before taking them.

**Argentin 500 is started as soon as you receive it** and it is taken until the bottle is finished. At the recommended dose of ½ teaspoon twice daily the 4 ounce bottle will be finished in approximately 25 days, longer if you are using a reduced dose. As it is a powerful remedy this is not refilled.

## Background Briefing on Argentin 500

Argentin 500 is a name that we give to a unique form of mild silver protein. Unlike colloidal silver which is a silver atom connected to a salt molecule, Argentin 500 is a silver attached to an oxygen molecule. By its very nature the silver is carried to wherever oxygen is needed. It is certainly very effective in its action. The size of the silver-oxygen cluster is 17 nanometers making it a very small particle that can easily penetrate its intended targets. Vitamin C is strong enough to pull apart the oxygen off of the silver. This is why one should allow an hour on either side of taking the silver when taking Vitamin C.

As this is made for the Department of Defense, it is not available in the retail markets. However there is some that has been made available for research and that is how we are able to provide this on a limited basis.

Because of cold winter temperatures it may be shipped in a larger container to avoid breakage by freezing.

## ACS 200 ES

Far more advanced in both safety and efficacy than Colloidal Silvers, Silver Sols or Nanosilvers, Advanced Cellular Silver (ACS) 200 Extra Strength is effective against an enormous array of disease causing organisms; literally oxidizing the cell wall of gram positive and gram negative bacteria, spirochetes, virus, fungus, parasites and more without harming healthy flora or damaging human tissue.

### Recommended Dosages ACS 200 ES:

Adults: 12 sprays in the mouth twice daily. Spray, swish and swallow. After two minutes you may eat and drink. The duration is to use up one 4-ounce bottle.

Children: 2-4 years – 2 sprays twice a day; 5-8 years 4 sprays twice a day; 9-11 years 6 sprays twice a day. Age 12 and older use the adult dose.

*If you have been quite ill for a long time, start out with 6 sprays twice daily for a few days before going to the 12 sprays twice daily dose dose. People who are sensitive and chronically ill children should cut the dose to one or two sprays twice daily and gradually advance to the recommended dose as tolerated.*

**ACS 200 ES is started as soon as you receive it** and it is taken until the bottle is finished. One bottle will do the job. Refills are not necessary. For pediatric patients the duration is 2 months of twice daily use and then stop.

## Background Briefing on ACS 200 ES

ACS 200 Extra Strength provides 200 parts per million of uniquely energized silver molecules, suspended in “wetter water”; a proprietary micronutrient transport medium, enabling rapid absorption and utilization by all biological systems. No single immune system support formula provides a more effective treatment or prophylaxis than ACS 200 Extra Strength, proven the most effective, broad-spectrum antimicrobial available to physicians today. ACS 200 Extra Strength achieves 99.9999% (complete) kill against *Borrelia burgdorferi*, *Legionella pneumophila*, *Pseudomonas aeruginosa*, *Salmonella bongori*, *Candida albicans* and MRSA as proven via independently derived in vitro, kill-time studies. ACS 200 Extra Strength is prescribed by doctors in over 15 countries.

## ***Formula PZ***

This is a proprietary formulation of medicinal essential oils in black cumin oil. This is taken in capsules that are provided for you. Make up capsules\* as follows: gently pull apart the capsule. The larger end is the one you fill using the dropper. Make up one or more capsules at a time. After placing the required number of drops in a capsule, carefully place the top of the capsule on the filled end and gently squeeze them together until you feel or hear a click indicating the capsule has been sealed closed.

### **Recommended Dosages Formula PZ:**

Adults: 5 drops per capsule Sensitive Adults: 2-3 drops per capsule

Children: Age 5-7 – 2 drops Age 8-11: 4 drops Age 12 and older: 5 drops

Parasites are progressively more active as the moon goes from half full to full and then for a time as the moon wanes. The best chance to rid your body of them using this remedy is during this period of time each month. The protozoa cysts however are often resistant to treatment. Therefore it is necessary to do three cycles of treatment (one cycle per month for three months).

*For Formula PZ a cycle is a 20 day course taking one capsule three times a day. After taking the capsules for 20 days they are stopped until the time of the next month's moon cycle at which time the cycle is repeated for another 20 days. The third month's moon cycle will be the start of the final cycle of 20 days.*

### **Dosing Schedule of Formula PZ for each Cycle:**

**Three capsules are taken each day, preferably on an empty stomach. One in the morning time frame, one in the afternoon and one in the evening. If this does not fit your schedule then take 2 capsules at one time of day and one capsule at the opposite time of day.**

**Use the recommended drops of Formula PZ in each capsule. These are taken on an empty stomach spread out over the waking day – one in the morning, one in the afternoon, one in the evening. We have found that it is also effective if taken with a small amount of food such as a snack.**

**Formula PZ is taken daily for 20 days each month for three months. Use the start date below that corresponds to the upswing of the moon phase for best results.**

**If you have an upset stomach taking this formula** you can do one of three things: you can refrigerate the capsules and take them cold; or you can take them with a few bites of food; or

you can reduce the number of drops by half for a few days; or you can do a combination of these suggestions.

**\*CAUTION: Fill only the capsules for use for the day you are taking them.** Do not fill a whole bunch of capsules at one time because the essential oils have the ability to eat through the capsules if left standing for a few days. Quite a mess!

**For 2016, the half full moon start dates are:**

October 9, November 7, December 7, 2016

**2017 Moon Cycles\*\* Start Dates for Formula PZ** – we start at about the half full moon (called the quarter moon on some calendars) and take the capsules three times a day for 20 days doing one cycle a month **for three consecutive months** :

January 5, February 3, March 5, April 3, May 2, June 1, June 30,

July 30, August 29, September 22, October 27, November 26, December 26, 2017

**2018 Moon Cycles\*\* Start Dates for Formula PZ** – we start at about the half full moon (called the quarter moon on some calendars) and take the capsules three times a day for 20 days doing one cycle a month **for three consecutive months** :

January 24, February 23, March 24, April 22, May 21, June 20,

July 19, August 18, September 16, October 16, November 15, December 15, 2018

Note: Can start a few days earlier or later if necessary but in any case finish out the 20 day cycle.

\*\*When **the moon looks about half full** that is a good Time to start 20 days of Formula PZ.

**Ingredients for PZ:** Essential oils of:

*Ocimum basilicum* Sweet Basil

*Salvia officinalis* Sage Dalmatian

*Abies balsamea* Balsam Fir

*Eugenia caryophyllata* Clove Bud

*Nigella sativum* Black Cumin Carrier Oil

If you are having problems tolerating this formula cut the number of drops to about half. You may also stop this for a day or two and then resume the PZ remedy. Most people tolerate this very well, but if there is a concern please contact the office of your doctor or practitioner.

A 3 month supply is in a premixed dropper bottle with empty capsules.

## **Formula MZ**

This is a proprietary formulation of medicinal essential oils in black cumin oil. This is taken in capsules that are provided for you. Make up capsules\* as follows: gently pull apart the capsule. The larger end is the one you fill using the dropper. Make up one or more capsules at a time. After placing the required number of drops in a capsule, carefully place the top of the capsule on the filled end and gently squeeze them together until you feel or hear a click indicating the capsule has been sealed closed.

**\*CAUTION: Fill only the capsules for use for the day you are taking them.** Do not fill a whole bunch of capsules at one time because the essential oils have the ability to eat through the capsules if left standing for a few days. Quite a mess!

### **Recommended Dosages Formula MZ:**

Adults: 5 drops per capsule Sensitive Adults: 2-3 drops per capsule

Children: Age 5-7 – 2 drops Age 8-11: 4 drops Age 12 and older: 5 drops

**On or about the day of the full moon take one capsule three times a day for three days.**

**This is repeated again for the following two months at the full moon.**

You may take this with Formula PZ and/or AromaTab if you don't have a sensitive stomach, or at a time away from the other two if you do.

We start at the **full moon** and take the capsules three times a day for 3 days doing one three day cycle a month **for three consecutive months:**

### **For 2016, the full moon start dates for Formula MZ are:**

October 16, November 14, December 13, 2015

### **2017 Moon Cycles\*\* Start Dates for Formula MZ –**

January 12, February 10, March 12, April 11, May 10, June 9, July 8, August 7  
September 6, October 5, November 3, December 3

**\*\*When the moon appears to be full is a good time to start this formula.**

**Ingredients for MZ:** Essential oils of:

*Artemisia absinthium* Wormwood

*Salvia officinalis* Sage Dalmatian

*Thymus vulgaris cv linalool* Sweet Thyme



*Melaleuca alternifolia* Australian Tea Tree  
*Abies balsamea* Balsam Fir  
*Aniba roseodora* Rosewood  
*Eugenia caryophyllata* Clove Bud  
*Nigella sativum* Black Cumin Carrier Oil

If you are having problems tolerating this formula cut the number of drops in approximately half. You may also stop this for a day or two and then resume at half the drops per capsule. Most people tolerate this very well, but if there is a concern please contact the office of your doctor or practitioner.

A 3 month supply is in a premixed dropper bottle with empty capsules.

## ***Formula AZ***

This is a proprietary formulation of medicinal essential oils in black cumin oil. This is taken in capsules that are provided for you. Make up capsules as follows: gently pull apart the capsule. The larger end is the one you fill using the dropper. Make up one or more capsules at a time. After placing the required number of drops in a capsule, carefully place the top of the capsule on the filled end and gently squeeze them together until you feel or hear a click indicating the capsule has been sealed closed.

### **Recommended Dosages Formula AZ:**

Adults: 5 drops per capsule    Sensitive Adults: 2-3 drops per capsule

Children: Age 5-7 – 2 drops    Age 8-11: 4 drops    Age 12 and older: 5 drops

On or about the day of the half-full moon start taking two (2) capsules three times a day for five (5) days. Then one (1) capsule three times a day for (7) seven days. You will then stop this formula until the start date of the second month and again a third and final month.

**So in summary, you take these capsules as directed above 12 days per month for three consecutive months, using the start dates below as a guide.**

**For 2016, the half full moon start dates for Formula AZ are:**

October 9, November 7, December 7, 2016

**2017 Moon Cycles\*\* Start Dates for Formula AZ** – we start at about the half full moon (called the quarter moon on some calendars) and take the capsules as directed for 12 days doing one cycle a month **for three consecutive months** :

January 5, February 3, March 5, April 3, May 2, June 1, June 30,  
July 30, August 29, September 22, October 27, November 26, December 26, 2017

**2018 Moon Cycles\*\* Start Dates for Formula AZ** – we start at about the half full moon (called the quarter moon on some calendars) and take the capsules as directed for 12 days doing one cycle a month **for three consecutive months** :

January 24, February 23, March 24, April 22, May 21, June 20,  
July 19, August 18, September 16, October 16, November 15, December 15, 2018

Note: Can start a few days earlier or later if necessary but in any case finish out the 12 day cycle.

**\*\*When the moon looks about half full that is a good Time to start 12 days of Formula AZ.**

Note: Can start a few days earlier or later if necessary but in any case finish out the 12 day cycle.

\*\*When **the moon looks about half full** that is a good Time to start 12 days of Formula AZ.

**CAUTION:** Fill only the capsules for use for the day you are taking them. Do not fill a whole bunch of capsules at one time because the essential oils have the ability to eat through the capsules if left standing for a few days. Quite a mess!

**Ingredients for AZ:** Essential oils of:

*Coriandrum sativum* Coriander

*Ormenis mixta* Chamomile, Moroccan

*Thymus vulgaris cv linalool* Sweet Thyme

*Nigella sativum* Black Cumin Carrier Oil

If you are having problems tolerating this formula cut the number of drops to approximately one half the dose per capsule. You may also stop it for a day or two and then resume at half the drops per capsule. Most people will tolerate this very well, but if there is a concern please contact the office of your doctor or practitioner.

A 3 month supply is in a premixed dropper bottle with empty capsules.

## ***Formula HP***

This is a proprietary formulation of medicinal herbal tinctures. A tincture is a medicinal remedy prepared by adding the herb to a consumable form of alcohol. It is then further diluted to the appropriate concentration for use. This is taken as drops in water or juice. You may start this formula as soon as you receive it. Take it as a drink once daily until the formula is gone.

### **Dosing:**

Adults: 20 drops

Adolescents (12-17): 15 drops

Children (6-11): 10 drops

Young children (2-5): 5 drops

For “sensitive” individuals start out with  $\frac{1}{4}$  or  $\frac{1}{2}$  the recommended dose and advance to the recommended dose as tolerated.

**Directions:** place the drops into juice or water, mix and drink down preferably on an empty stomach. This is taken once a day until the bottle is finished. The amount of liquid should be enough to make the drops palatable, as undiluted they will have a harsh taste. The drops may also be stirred into a hot herbal tea by adding boiling water to the tea and then the drops. Allow to stand 10 minutes for the alcohol to evaporate and then consume it hot or cold.

**Ingredients for HP:** Herbal tinctures of:

Oregon Grape 1:2 *Mahonia aquifolium*

Wormwood 1:5 *Artemisia absinthium*

Black Walnut Hulls 1:10 *Juglans nigra*

Cat’s Claw 1:2 *Uncaria tomentosa*

Milk Thistle 1:1 *Silybum marianum*

Astragalus 1:2 *Astragalus membranaceus*

It comes premixed in a 2 ounce dropper bottle.

## **ACZnano ES Zeolite**

**Heavy metal toxicity** and the like paralyze immune blood cells creating tissue malfunctions on multiple levels. As a result people with excess yeast/Candida will experience great difficulty clearing the yeast. With the removal of toxins, immune cells are better able to clear out unwanted microorganisms like yeast, parasites and pathogenic bacteria.

ACZnano Extra Strength selectively and irreversibly binds and removes toxic heavy metals, chemical toxins, VOC's, radioactive toxins and free radicals of all types through the urinary tract, without removing vital nutrients. These results have been verified in multiple, independent urine challenge studies.

ACZnano Extra Strength is the only detoxification product formulated to remove fluorine and chlorine, two of the strongest oxidizing agents known and found in most drinking water.

### **Recommended Dosages ACZnano ES:**

**Adults:** 12 sprays in the mouth twice daily. Spray, swish and swallow. After two minutes you may eat and drink. The duration is to use up one 4-ounce bottle.

**Children:** 2-4 years – 2 sprays twice a day; 5-8 years 4 sprays twice a day; 9-11 years 6 sprays twice a day. Age 12 and older use the adult dose.

*If you have been quite ill for a long time, start out with 6 sprays twice daily for a few days before going to the 12 sprays twice daily dose. People who are sensitive and chronically ill children should cut the dose to one or two sprays twice daily and gradually advance to the recommended dose as tolerated.*

**ACZnano ES is started as soon as you receive it** and it is taken until the bottle is finished. You may refill this product after a one month rest. For pediatric patients the duration is 2 months of twice daily use and then stop. Check with your doctor or health care provider regarding refills for pediatric patients.

**Note:** Be sure and stay well hydrated.

## Background Briefing on ACZnano ES

ACZ nano Extra Strength is the only nano zeolite formula available with zeolite crystals existing within the Nanoscale as calculated via SEM analysis. Competing liquid and powdered zeolite formulations utilize micronized zeolite, with particles over one thousand times larger than the nano zeolite crystals provided in ACZ nano Extra Strength.

## **IMMU-GUARD™**

This is an essential oil blend that was formulated for Dr. d'Angelo's patients wanting to boost their immune system and have a trustworthy infection preventative. Over 14 years of use by thousands of people attest to the fact that it works.

**Indications:** Prevention of parasitic infestation; and treatment of viral, fungal and bacterial infections; and for Immune support.

**Contraindications:** None at recommended doses

**Precautions:**

- Keep out of reach of children
- Cap tightly when not in use
- Do not remove orifice reducer
- Do not use near eyes or in ear canal or on genital or rectal tissue

**Dosing: For Parasite Prevention, Infection Prevention and Immune Support:**

- Ages 12 to adult: one drop on tongue, mix with saliva, swallow, 2-4 times a day
- Ages 3 – 11: dilute one drop in honey; or place one drop in food; or place one drop on Altoid® and give 2-4 times a day
- Under 3: as recommended by doctor or aromatherapist

**For Treatment of Acute Infections (Best if used at FIRST SIGN of infection):**

- Ages 12 to adult: one drop on tongue every 5 minutes. Continue until symptom(s) start to subside. Then space out doses to every 10-15 minutes until symptoms are gone.
- Ages 3 – 11: place 5 drops in ½ teaspoon (2.5 ml) of jojoba or other vegetable oil and apply to the soles of the feet with a massage action. Cover with socks. Repeat hourly until symptoms are gone. Note: If child can tolerate a drop on the tongue, use same approach as 12 to adult. Does not apply to children less than 3 years of age.
- Infant to age 2: place 2-3 drops in ½ teaspoon (2.5 ml) of vegetable oil and use the instructions for ages 3 – 11.

**Adverse Events:**

- Accidental Poisoning: give 1-2 tablespoons of any edible vegetable oil orally to dilute the essential oil. Do not induce vomiting. Generally, no further action is required.
- Skin or Mucous Membrane Irritation/Localized Allergic Reaction:  
Overlay the area with a vegetable oil and wipe off. Repeat until reaction subsides. Follow with a cold compress for a few minutes.

- Accidental Splash in Eyes: apply a few drops of vegetable oil into the eye(s) first to dilute the essential oil. Then proceed to rinse out thoroughly with water for at least 10 minutes. Seek medical attention if irritation persists.

**Remarks:** Can be used diluted or undiluted on skin for minor skin infections, cuts, insect bites, pustules, and on skin around ingrown nails.

**Available sizes:** 5 ml 10 ml 30 ml bottles

## ***Limonene Power***

Contains equal parts of citrus essential oils naturally high in the compound **limonene**.

### **Glossary**

Limonene- a terpenic hydrocarbon present in some citrus essential oils that gives off a lemon-like scent

Apoptosis- the ability of a cell to die when its lifespan is over

### **Science**

Limonene has shown the ability to induce normal cell death (apoptosis) in laboratory studies of cancer cell populations.

Cancer cells use various mechanisms to block apoptosis. Limonene is thought to help cancer cells die instead of continuously living and growing.

The National Institutes of Health is currently conducting various studies to show how it induces apoptosis and which cancer patients may benefit from its use.

### **Application**

Although not yet fully proven to eliminate a patient's cancer, it makes sense to include limonene in any natural approach to cancer treatment or prevention.

### **Dose**

2 -3 drops of Limonene Power into a glass. Fill with water and drink down, Repeat 2-3 times a day.

### **Side Effects**

Limonene as contained in citrus essential oils is non-toxic and very well tolerated orally.



## Appendix B. Medicinal Treatment

The following recommended drugs are from the prestigious journal The Medical Letter, August 2004. This is not a complete list of all possible parasite prescription treatments. New drugs and investigational drugs may have been added over time. The potential for the Herxheimer reaction or die-off symptoms may accompany medicinal or natural treatments. Side effects of drugs must also be taken into consideration. As with any medicinal treatment the potential risks must be weighed against the expected benefits.

### ***Ascaris lumbricoides***

Albendazole 400 mg once (adult and pediatric) OR

Mebendazole 100 mg 2xday x 3 days or 500 mg once (adult and pediatric) OR

Ivermectin 150-200 mcg/kg once (adult and pediatric) OR

Nitazoxanide 500 mg 2xday x 3 days (adult) 100 mg 2xday x 3 days (1-3 yrs) 200mg 2xday x 3 days (4-11 yrs)

### ***Blastocystis hominis***

Metronidazole 750 mg 3xday x 10 days; generally effective but some resistance has been noted (adult) OR

Iodoquinol 650 mg 3xday x 20 days (adult) 30-40 mg/kg/day (max. 2 gms) in 3 doses x 20 days OR

Trimethoprim-sulfamethoxazole DS 1 tablet 2xday x 10 days (adult) TMP 5 mg/kg, SMX 25 mg/kg 2xday x 10 days (pediatric)

### ***Candidiasis***

Many agents and dosages for pediatric and adult patients

### ***Cryptosporidium***

Nitazoxanide 500 mg 2xday x 3 days (adult) 100 mg 2xday x 3 days (1-3 yrs) 200mg 2xday x 3 days (4-11 yrs)

### ***Cyclospora cayetanensis***

Trimethoprim-sulfamethoxazole DS 1 tablet 2xday x 7-10 days (adult) TMP 5 mg/kg, SMX 25 mg/kg 2xday x 7-10 days (pediatric)

### ***Dientamoeba fragilis***

Iodoquinol 650 mg 3xday x 20 days (adult) 30-40 mg/kg/day (max. 2 gms) in 3 doses x 20 days OR

Tetracycline 500 mg 4xday x 10 days (adult) 40 mg/kg/day (max. 2 gms) in 4 doses x 10 days (pediatric) OR

Metronidazole 500-750 mg 3xday x 10 days (adult) 20-40 mg/kg/day in 3 doses x 10 days (pediatric)

***Endolimax nana, Entamoeba coli, Entamoeba hartmanni, Iodamoeba butschii***

See Appendix B. Natural Treatment

***Entamoeba histolytica***

Iodoquinol 650 mg 3xday x 20 days (adult) 30-40 mg/kg/day (max. 2 gms) in 3 doses x 20 days OR

Paromomycin 25-35 mg/kg/day in 3 divided doses for 7 days (adult and pediatric) OR

***Enterobius vermicularis***

Pyrantel pamoate 11 mg/kg base once (max. 1 gm) repeat in 2 weeks (adult and pediatric) OR

Mebendazole 100 mg once, repeat in 2 weeks (adult and pediatric) OR

Albendazole 400 mg once, repeat in 2 weeks (adult and pediatric)

***Giardia intestinalis***

Metronidazole 250 mg 3xday x 5 days (adult) 15 mg/kg/day in 3 doses x 5 days (pediatric) OR

Nitazoxanide 500 mg 2xday x 3 days (adult) 100 mg 2xday x 3 days (1-3 yrs) 200mg 2xday x 3 days (4-11 yrs)

***Microsporidium species***

***Enterocytozoon bieneusi, Enterocephalitozoon intestinalis***, others: individualize treatment based upon body location and immune status of the patient.

***Necator americanus***

Albendazole 400 mg once (adult and pediatric) OR

Mebendazole 100 mg 2xday x 3 days or 500 mg once (adult and pediatric) OR

Pyrantel pamoate 11 mg/kg (max. 1 gm) x 3 days (adult and pediatric)

***Strongyloides stercoralis***

Albendazole 400 mg 2xday x 2 days (adult and pediatric) OR

Ivermectin 200 mcg/kg/day x 2 days (adult and pediatric)

***Taenia saginata, Taenia solium***

Praziquantel 5-10 mg/kg once (adult and pediatric) OR

Niclosamide 2 gms once (adult) 50 mg/kg once (pediatric)

***Trichuris trichuria***

Mebendazole 100 mg 2xday x 3 days or 500 mg once (adult and pediatric) OR

Albendazole 400 mg once (adult and pediatric) OR

Ivermectin 150-200 mcg/kg once (adult and pediatric) OR

Nitazoxanide 500 mg 2xday x 3 days (adult) 100 mg 2xday x 3 days (1-3 yrs) 200mg 2xday x 3 days (4-11 yrs)

# Appendix C. General Recommendations for Parasite Avoidance

## Food Precautions

1. No raw meat, fish, chicken or pork. Wash off and cook thoroughly.
2. Salad bars may have improperly washed produce.
3. Wash thoroughly all vegetables and meats before use. Place vegetables in a sink of water to which ½ cup of vinegar has been added and soak for 20 minutes. Rewash and put them up.
4. Wash your hands before, during and after handling or preparing foods.
5. Utensils should be properly cleaned before each use.
6. Cutting boards should be cleaned off with hydrogen peroxide after use.

## Drink Precautions

1. Treated tap water does not kill all parasites. Some survive chlorine and even freezing.
2. An uncertain water source that is boiled for 20 minutes should be considered parasite free. Filtered water, Reverse Osmosis water, bottled water is generally safe.
3. Do not drink from rivers, streams, ponds or lakes.

## Hygiene

1. Wash hands thoroughly after use of the bathroom or after gardening.
2. Clean your nails often.
3. Wear disposable gloves when cleaning the toilet or fecal soiled clothing.
4. Coughed up mucus should be spit out, not swallowed.

## Pets

1. Cats, dogs, domesticated animals often harbor parasites.
2. Take precautions when cleaning up excrement, litter boxes, etc.
3. Have your pets wormed on a regular basis.
4. Don't allow any pet to sleep with you.
5. Clean floors and carpets often.
6. When pets lick you, clean the skin. Don't allow pet contact with your mouth.

## Hunters and Fishermen

1. Game harbor parasites. Keep contaminated hands away from face and mouth. Wear disposable gloves when cleaning game.
2. Wash hands often and thoroughly.
3. Parasites can be on or in fish. The water in the lake or stream on your line or bait bucket can be a source of contamination.

# ParaWellness Research Program

Visit [www.ParaWellnessResearch.com](http://www.ParaWellnessResearch.com) for detailed information on parasite testing.

The office phone: 303-680-2288

The email address: [info@parawellnessresearch.com](mailto:info@parawellnessresearch.com)

This is a private research laboratory providing stool and urine parasite/yeast testing.

We also work with doctors, practitioners and clinics who utilize our testing for their patients and clients.

The processing, staining, microscope exams and other tests are performed by Raphael d'Angelo, MD at his lab locations in Colorado and Florida.

## Julia Rose Botanicals

Since its inception in 2000, Nancy d'Angelo, a certified clinical aromatherapist has offered essential oils of impeccable quality which she sources from around the world. Nancy formulates for doctors, massage therapists, nurses, hospices, nursing homes, hospitals and individuals as well as provides essential oils and supplies to other aromatherapists and clients. Many of the natural remedies described in this monograph are made specifically for the ParaWellness Research Program from Nancy's Julia Rose Botanicals.

Visit [www.JuliaRoseBotanicals.com](http://www.JuliaRoseBotanicals.com) for essential oil products and formulas. Most natural remedies in this monograph are not available online. Contact the office for these remedies.

Office phone: 303-668-4884

The email address: [essentiallynancy@cs.com](mailto:essentiallynancy@cs.com)

### ***Brief Biographies***

**Raphael d'Angelo, MD** has over 45 years' experience as a medical technologist with emphasis on microbiology and parasite diagnosis; 4 years' experience in anatomic and clinical pathology and 35 years as an integrative family physician. Dr. d'Angelo has conducted research on the natural treatment of infections with current investigations in parasite eradication.

**Nancy d'Angelo, CCA** is a certified clinical aromatherapist who formed Julia Rose Botanicals in 2000, a full service essential oil program for the medicinal application of essential oils utilized by doctors, naturopaths, massage therapists, hospitals, nursing homes, hospices, aromatherapists and individuals. Clients and patients of the ParaWellness Research program benefit from Nancy's expertise in the formulations used in treatment.

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