TREATMENT OF PARASITES

If you are living with pets or handling animals, eating raw leafy vegetables, lean meats or raw fish, you have an excellent chance of acquiring parasites. It is estimated that 80-95% of the population is plagued by parasites. An unclean colon is a breeding ground for parasites, a foundation of chemicals and other poisons in your body is also a breeding ground.

SYMPTOMS:

Chronic Digestive Issues
Fatigue, Weakness
Changes in Appetite
Itchy Rectum
Anxiety
Teeth Grinding
Depression
Brain Fog
Headaches,
Skin Problems
Abdominal Pain
Chronic Pain
Picking of the nose

WHEN TO TREAT:

Take remedies starting 5 days before full moon (critical for Protozoa). Parasites are recyclers. Wherever there is something stagnant that needs recycling they are found. They work on a 28 day cycle. They sleep around the new moon time therefore are not eating and won't consume the treatment as planned.

Not advised to do parasite cleanse if nursing mother.

HOW TO TAKE HOMEOPATHICS:

Many of the remedies are homeopathics. Wait at least 30 seconds between taking the different ones you may have, 20 minutes is even better. Do not take any peppermint (as in mouthwash, toothpaste, candy) or coffee within an hour of taking homeopathics.

If the homeopathics are little white pills, don't touch them with your hands, dump them into the lid and them under your tongue.

If the homeopathic is liquid you can put it in a little distilled water or just squirt it into the mouth under the tongue. If sensitive to alcohol, put drops into 2 oz hot water to help it evaporate.

HERBAL HELP

Here is the most common herbs used: (complete list follows)

- **Black Walnut Hull is a type of walnut that contains large amounts of a cytotoxic compound called juglone. Research on juglone has revealed the potential to fight bacteria such as S. aureus, Escherichia coli, Bacillus subtilis, Penicillium sp., Aspergillus sp., and Hansenula sp., as well as certain types of fungi. Additionally, black walnut acts as a mild laxative to help facilitate the elimination of dead microbes and waste products that would otherwise accumulate in the digestive tract.**

- **Sweet Wormwood, also known as Artemisia annua, sweet wormwood is an extremely bitter herb with properties that kill parasites. This powerful extract has also been shown to inhibit**

one of the most deadly malaria parasites. Plasmodium falciparum. Some preliminary research also suggests that wormwood contains anti-inflammatory, anti-cancer, and immunoregulatory benefits as well.

- **Garlic may be one of the most traditional remedies to kill parasites and reduce unwanted microbes in the gut. It seems our research has caught up to our intuition with this one because garlic contains powerful, broad-spectrum antimicrobial properties against bacteria, fungi, viruses, and parasites. You can also supplement with a concentrated garlic extract to help kill parasites.**

- **Oregano is not just great tasting on pizza but may also be one of the most powerful antimicrobial substances we currently know of. It has been shown to have diverse activity against bacteria, viruses, fungi, and parasites. Specifically, oregano essential oil has been shown to effectively act on bacteria like MRSA that have become resistant to traditional treatments. It is one of the best herbs to kill parasites and other unwanted microbes.**

- **Grapefruit seeds contain high amounts of citrus bioflavonoids that act as powerful antioxidants and antimicrobials. Specifically, hesperidin, contained in grapefruit seed, may be largely responsible for its antimicrobial effects. Studies have highlighted antibacterial and anti-fungal effects from this potent extract and, when combined with geranium, have even been shown to effectively combat MRSA (an antibiotic-resistant strain of staph infection) (11).**

- **Cloves are one of the richest sources of antioxidants on the planet, and they contain one of the most powerful antimicrobial agents in the herbal kingdom, known as eugenol. This compound impacts bad microbes in the gut but also gets into circulation and kills parasites and their larvae and eggs. It also has profound anti-inflammatory and anti-cancer benefits. Clove essential oil or the dried herb helps protect against worms, amoebas, fungi, bacteria, and viruses involved in things like malaria, cholera, scabies, dengue fever, and tuberculosis (16). Clove is also very strong against H. pylori, which is a bacterium that can lead to stomach ulcers when overgrown in the stomach.**

- **Wormseed, also known as Chenapodium ambrosides, is an uncommon herb with significant activity against fungi and certain bacteria. It has recently been investigated for its ability to fight H. pylori, which is a common and tricky-to-treat bacterial infection that many people get. Wormseed has also been investigated as a natural alternative to chemical bug sprays, food preservatives, and as a supplement to help prevent intestinal infections in livestock.**

OTHER HELPERS: Pumpkin Seeds, Calimyrna Figs, papaya seeds, Pomegranate, Pineapple, Diatomaceous earth

COMPLETE LIST OF HERBAL REMEDIES FOR PARASITES

Angelica (A. archangelica and A. sinensis)

Along with Echinacea purpurea, are widely used herbs for the treatment of the protozoa, Trichomonas. Angelica contains coumarin compounds that have been effective against this organism, as well as other worms and parasites. The American and European species are two commonly used species of Angelica. A. archangelica, along with the Chinese variety, A. sinensis or dong quai, is also reported to be superior as a treatment for all ailments of the female reproductive system. It also relieves pain by reducing cramping in muscles, but may not be as effective in the treatment of Trichomonas. Pregnant women should not use this herb, nor should diabetics, as it tends to raise blood sugar levels.

Artemisia Annua Extract

Exhibits strong antimalarial properties, as well as being effective against worms and various other parasites.

Berberine-containing plants

Have been used as an antibiotic and antiparasitic for thousands of years around the world. Goldenseal (Hydrastis canadensis), barberry (Berberis vulgaris), Oregon grape (Berberis aquifolium), and goldthread (Coptis chinensis) share similar effects on parasites because of their high concentrations of berberine. It has been used in cases of infection caused by fungi, protozoa, and even viruses and bacteria. It also inhibits the overgrowth of yeast, a common side effect of antibiotic use, nor does it appear to be harmful against the normal flora bacteria. These plants also have a remarkable antidiarrheal property, even in the most severe cases of infection, and are particularly useful in infections that cause profuse diarrhea. It is also known to increase the blood supply to the spleen, thereby improving the body's immune system, plus activating the white blood cells called macrophages. Under supervision, the herb is safely used in treating children. Berberine can be used prophylactically if travelling. Suggested use begins one week before and and ends one week after the trip to areas of anticipated poor sanitation. Berberine is generally considered non-toxic at recommended dosages, but high doses can cause a lowering of blood pressure, difficulty breathing, flu-like symptoms, GI discomforts, and heart damage. Therefore, it is best used under the direction of a knowledgeable herbalist.

Black Walnut hulls (Juglans nigra)

Have been used for a long time to kill many kinds of intestinal worms, especially tapeworms. The active ingredient, however, is only in the green hull surrounding the nut, and must be harvested before the nut falls from the tree. This active ingredient is called juglone and exerts antifungal, antiworm, antiviral, and antibacterial effects. An extract can be used safely in recommended doses for adults, but should not be used for infants or children.

Butternut (Juglans cinerea)

Is a good all-purpose herb to relieve constipation and expel worms, especially threadworms and pinworms. Butternut can be safely combined with any other mixture for decreased bowel tone and as a soothing laxative in cases of chronic constipation, but should not be taken over a long time.

Calendula (C. officinalis)

Is commonly used as a topical remedy for the healing of wounds, pain, or irritations. A tea made from 1 tbsp. Flowers to ¼ quart of water is said to expel worms, as well as to repair tissue damage done by them.

Cascara (C. sagrada and Rhamnus purshiana)

Helps eliminate waste as a mild, but effective, laxative, and is especially good in cases of chronic constipation. Using this one hour after eating raw pumpkin seeds will eliminate from the body the parasites that the seeds have paralyzed. Cascara is milder than Senna, with the main site of action being in the lower bowel.

Cat's Claw (Uncaria tomentosa)

Is a giant woody vine that grows in the Peruvian tropical forests. It has properties that help in resistant cases of imbalanced intestinal flora, infection, sluggish digestion, poor assimilation, and bile stimulation. It is very effective as an intestinal cleanser and immune system rejuvenator, possessing antimicrobial and antiinflammatory properties. It has the ability similar to white blood cells to engulf and digest harmful microorganisms. It is a good companion herb for treating most parasites except Giardia, which actually thrives when there is bile stimulation. It is virtually nontoxic, but should not be used by pregnant women.

Cayenne
Can be added to a treament plan to kill parasites. The volatile oil, capsaicin, is also recommended for digestive disorders and strengthening internal organs, particularly the heart muscle. It has an analgesic effect similar to ginger, but does present a danger if there is an existing ulcer or chronic irritation of the bowel. Bleeding and serious damage can be exacerbated.

Chaparral (Larrea divaricata)
Is an excellent herbal antibiotic that can be used both internally and externally against viruses, bacteria, and parasites. It is often used for intestinal tract infections, diarrhea, or urinary tract infections, and it is frequently combined with such other antibiotic herbs as goldenseal and echinacea. Externally, chaparral can be applied to wounds as an antiseptic and to the skin for itching, eczema, or scabies.

Cloves (Eugenia caryophyllata)
Is an ancient herbal medicine used for killing internal parasites and their eggs. The spice exhibits a broad range of antimicrobial activity against other organisms as well, including fungi and bacteria. Cloves also helps to increase the circulation of the blood, promote digestion, and eliminate gas and intestinal spasms.

Cranberry concentrate
Is rich in acids (citric, malic, quinic, and benzoic), that aid in the digestion of protozoa.

Echinacea (E. purpurea)
Or purple coneflower, is used to treat all manner of chronic and acute infections. It is one of the most widely used herbs for the treatment of Trichomonas vaginalis and as an effective douche for the treatment of other vaginal infections. Echinacea is also used as an effective blood and lymphatic cleanser and for strengthening the immune system.

Elecampane (Inula helenium)
Is specific for the roundworm (Ascaris lumbricoides), having a paralyzing effect on the worm's central nervous system. It is recommended as the safest herb for children and has been known to be a benefit for lung ailments and digestive disorders.

Essential oils
Have a diverse antimicrobial action that can kill many types of worms and protozoa. The essential oils of peppermint (Mentha piperita) and lavender (Lavandula angustifolia) have the fastest killing effects, acting within twenty minutes and fifteen minutes, respectively. The essential oil thymol is specific for hookworms. Caution should always be taken when using essential oils to treat parasitic infections. Many of them are toxic, especially to children. Those with heart, liver, kidney, stomach, or intestinal disease should also use caution, as well as in pregnancy.

False Unicorn Root
Stimulates digestion and helps to kill and expel worms and parasites.

Fennel seed (Foeniculum vulgare)
Helps to remove waste material, as well as parasites, from the body. Fennel is most often used as a digestive aid and flavoring agent. It is not a dangerous plant, but the oil extracted can cause skin irritation, nausea, vomiting, seizures, and edema of the lungs. This type of fennel should not be confused with other types, including dog fennel.

Ficin (Ficus glabrata)

Is a well-known anti-worm remedy used in the tropics by the natives of South America and the Panama region. The latex gathered from these trees has been commercially exploited for decades because of its enzyme properties of papain and bromelain. Even though the enzymes in the plant digest living worms, it is well tolerated and nontoxic to humans when taken internally. Despite this, it still should not be used by pregnant women.

Garlic (Allium sativum)

Is used worldwide as a food, spice, and medicine. The active ingredient, allicin, is released after the clove is crushed. It is responsible for the characteristic odor. Deoderized concentrates contain only 30-100 parts per million of allicin and are of a questionable value if using for medicinal purposes, especially for parasites. Garlic prevents and fights infections from various sources, including fungi, bacteria, viruses, and protozoa, as well as parasites. As far as parasites are concerned, garlic is effective against roundworms, tapeworms, pinworms, and hookworms, but it can cause dermatitis in some people, as well as irritating the digestive tract. Some may also not be able to detoxify allicin and other sulfur-containing components effectively, but generally, garlic is the best and cheapest means of ridding any infection.

Ginger (Zingiber officianalis)

Works against roundworms, as well as blood flukes, and is effective in treating dog heartworm and Trichomonas vaginali. It is believed to have some analgesic and antispasmodic effects, as well as having properties similar to cayenne that helps relieve inflammation. It also has a long history of treating all manner of digestive upsets.

Grapefruit seed extract

Has been proven to be effective against over 800 strains of viruses and bacteria, 100 strains of fungi, plus a great number of single-celled parasites. No other antimicrobial can make such claims. Despite destroying harmful intestinal parasites, it does not significantly harm the normal bowel flora. For some time in foreign countries, grapefruit seed extract has been used as a broad spectrum antibiotic, antifungal, antiprotozoan, antiviral, antiseptic, disinfectant, and as a preservative in cosmetics. In South America, it has long been used instead of chlorine in swimming pools and sewage treatment plants as well, as in treating drinking water, since chlorine does not kill a variety of pathogens, including Giardia. In Peru, it is used to disinfect agricultural products. The FDA is finally acknowledging that it is as effective as any other amebicide now available and perhaps more effective, without causing the side effects that chlorine is known to cause. When travelling abroad, including Mexico, it is proving to be an exceptional and simple alternative to the more harsh methods of killing parasites and other harmful organisms. Animals also respond well to grapefruit seed extract since it does not cause the side effects common in chemical dewormers.

The extract should never be used full strength when applied to the skin. The standard dilution is 33% extract and 67% glycerin. For some applications, it is best used with almond, olive, sesame, or avocado oils instead of water. Keep it away from the eyes. A few drops can be added to household cleaners and soaps for a germ-free cleanser. By using eight drops to a gallon of water, it makes a safe and effective food wash that increases the shelf life of fruits and vegetables by as much as 400%. The extract should not be used full strength when taken internally. Start with drop drop dissolved in glycerin, and then mixed with a glass of water or fruit juice. Slowly increase according to your reactions. Work up to about eight drops (or a corresponding number of pills) in a full glass of water two or three times a day until symptoms disappear. When the organisms you are trying to kill begin to die, the toxins are released, leading you to feel some discomfort or tiredness. If the symptoms become too uncomfortable, reduce the extract a little and begin to increase it again when you are feeling better. Since grapefruit seed extract can be very bitter, the debittered powder used in capsules may be a preferable choice.

For children, a capsule can be opened and the powder mixed into juice. In pill form, it can take 100-300 mg. per day to be effective for adults. One or two drops in a glass of water once or twice a day can act as a preventative against traveler's diarrhea. The extract is nontoxic and environmentally friendly. Caution should be used if there is a sensitivity to citrus. The extract is not absorbed into the intestinal tissue, so can be safely taken for long periods of time, as in the cases of Giardia and yeast infections where it may take months to eliminate.

Horsemint (Monarda punctata)

Can be used both internally and externally against worms, bacteria, and fungus. Horsemint contains a large amount of thymol, making it a powerful disinfecting agent. Almost 50% of this oil is excreted in the urine when taken internally, making it useful as a urinary antiseptic. There have been no reports of toxicity, but it can be irritating when applied topically. A significant amount of this plant would be needed to be toxic when taken internally.

Male Fern Root

Stuns intestinal parasites, making them easier to expel from the body.

Olive leaf extract (Olea europea)

Is a bitter substance produced by the olive tree, but eliminated from olives once they are cured. A new processing technique applied to an old herbal remedy has produced a nontoxic herbal parasite remedy. Olive leaf is also effective against fungi, molds, worms, and bacteria, and can be used for yeast infections. For about 4,000 years, countries of the Mediterranean, as well as those bordering, have chopped up olive leaves in liquid or salad form to prevent and treat parasitic infections. It also proved to be superior to quinine for treating malaria, but not as easy to administer, so quinine became the preferred treatment. Studies in the 1960s confirmed that olive leaf extract has the ability to counteract the malaria protozoa. The manufacturing method of this product is very important, otherwise, the ingredients bind rapidly to serum proteins in the blood, rendering them virtually useless in living organisms. Those treating parasites that are causing chronic fatigue syndrome or are harboring a large infestation of parasites may experience extreme fatigue when starting this form of therapy. Headaches, muscle or joint pain, or flu-like symptoms may also appear. It is important to reduce the therapeutic dosage to a more comfortable level, and then increasing it slowly, allowing the body time to detoxify at a slower pace. Normally, olive leaf extract does not produce any adverse side effects.

Picrasma excelsa (Quassia amara)

Is a common Jamaican tree that produces a bitter tonic useful for killing amoebas, giardia, malaria, pinworms, and some roundworms. The herb does not have an odor, but does have an intensely bitter taste, which distinguishes the pure form from adulterations. This herb contains a group of alkaloids known to inhibit protozoa from reproducing by affecting their basic metabolic processes. Considerable evidence suggests that quassia is also effective against mosquito larva. Toxic symptoms are rare, but if they occur, it is usually in the form of diarrhea or vomiting. It is also a nontoxic, inexpensive, and effective means of treating head lice.

Pinkroot (Spigelia marilandicus)

Is a highly effective vermicide originally used by Native Americans, who introduced it to settlers and early physicians. The plant has the ability to cure infections from intestinal worms and is even effective for treating the fevers caused by parasites. It can produce some unpleasant side effects if large doses are taken; therefore, only the recommended lower doses should be given to children.

Pomegranate (Punica granatum)

Roots had widespread use against tapeworms until less toxic substances were discovered. The fruit

rinds and bark are very astringent and effectively used to remove tapeworms and roundworms. The plant does contain an alkaloid that can be toxic if consumed in large quantities, producing such symptoms as muscle weakness, dizziness, vomiting, and diarrhea.

Propolis

Has proven to be 100% effective against some lethal protozoa and will also decrease inflammation associated with parasite infection. It is a natural antibiotic found in leaf buds or the bark of some trees. Bees collect it and add their own enzymes to line their hives, making the environment a sterile place. Propolis can create an antibiotic disease-fighting reaction to almost any illness, stimulating the thymus gland, and enhancing the body's immune system.

Pumpkin seeds (Cucurbita pepo)

Is a traditional remedy for worms, used for both animals and humans. Seeds of several varieties of the species Cucurbita have long held the reputation for paralyzing, but not killing, worms. However, the viable substance that affects the worms varies even in seeds of the same species, causing reliability to vary too much to be accurate. Therefore, it is important to take a natural laxative to move the worms out of the digestive system before they regain function. It is important to leave the fine inner skin beneath the shell intact. Children are given ten to fifteen seeds a day, and adults, twenty to thirty seeds a day for about two weeks, increasing the number of seeds if tapeworms are a problem. Follow this with a laxative about one hour after each dose of seeds. The treatment can be repeated as often as necessary without any harmful side effects -- as long as the laxatives are not taken over a lengthy period of time. When dealing with tapeworms, it is important that the entire worm be expelled, or else it will grow back. Daily consumption of pumpkin seeds may help to prevent parasites from taking up residence in the first place. Another suggestion is for pumpkin seeds and watermelon seeds to be ground to a powder and mixed with a little aloe vera juice and taken on an empty stomach every morning.

Red clover (Trifolium pratense)

Will kill flukes in all stages when used with cloves, black walnut hulls (green), and wormwood.

Sage

The garden variety (Salvia officinalis) and thyme were both used by the Romans as digestive aids, as well as for the treatment of intestinal worms and bacteria. Sage was often mixed with wormseed or white wine to relieve diarrhea or dysentery. Garden sage is not toxic, but excessive amounts can cause a dry mouth or local irritation.

Sarsaparilla (Smilax ornata)

Is a useful blood purifier that can also be used externally to treat skin parasites. When toxins absorbed by the intestines are excessive because the liver is not filtering properly, toxins begin to circulate in the bloodstream. Therefore, this herb can play a vital role in assisting the liver to filter and bind toxic compounds more effectively, especially those released from parasites or bacteria.

Senna (Cassia angustifolia and Cassia senna)

Is an ancient herb known for its laxative action. Today it is one of the most popular stimulant laxatives and is generally regarded as being safe for short term use, but long term dependence can develop. Senna's chief action is on the lower bowel, causing mucus secretions with rapid contractions. It is best to use it in combination with such other aromatic herbs as cardamom, ginger, fennel, etc., to reduce the cramping. As in the case of Cascara, Senna can be used one hour after eating pumpkin seeds.

Slippery elm (Ulmus fulra)

Is a soothing herb that quickly heals irritations of the intestinal tract, including ulcers and Crohn's-like symptoms often caused by parasites. It also normalizes bowel function, relieving constipation or

diarrhea. In addition, it is an excellent binder and cleanser. Externally, slippery elm can be moistened and applied to sores, wounds, and infected areas.

Tansy (Tanacetum vulgaris)

Is largely used for expelling worms in children, but only under the supervision of a qualified herbalist since there are some side effects if used improperly.

Tea Tree Oil (Melaleuca alternifolia)

Is a powerful all-purpose antiinfective, especially against Trichomonas vaginalis, when used as a daily douche (0.4% solution of oil in 1 quart of water twice a day).

Thyme (Thymus vulgaris)

Is an ancient remedy used as a digestive aid, antiseptic, and for treatment of intestinal worms. It should not be used in large amounts, however. Externally, it can be used as a mouthwash and for cleansing the skin. It will destroy such fungal infections as athlete's foot and such skin parasites as scabies, crabs, and lice. For these purposes, a tincture or an essential oil is used. When used internally, essential oils leave very little margin for error, so use it only with supervision from a knowledgeable herbalist.

Turmeric (Curcuma longa)

Is a common root used in Indian dishes. It has long been used to treat dysentary and to expel worms from the body. It is also known as a body purifier, and can be use both internally and externally to heal wounds. Turmeric contains a substance that limits the inflammation caused by extensive tissue damage from parasites. Because turmeric may also stimulate the production of bile, it should be avoided when treating the amoeba, Giardia, since bile stimulates the growth and proliferation of this organism. Regular use poses no threat, but high doses can cause ulcers.

Wormwood (Artemisia absinthium) - aerial parts

Is an ancient remedy used to kill various parasites -- as indicated by the name. It is effective against a variety of worms, including the giant intestinal roundworm (Ascaris lumbricoides). Wormwood is intensely bitter, and parasites are generally repelled because of this. The dried and powdered flowers are excellent for expelling worms, and the leaves are sufficient to eliminate all live worms and many other parasites. WORMWOOD IS MORE TOXIC WHEN USED ALONE, so it is best to combine it with other herbs. The oil of wormwood is especially toxic. Avoid giving it to children.

The Chinese wormwood (Artemisia annua) is known as the sweet variety used to treat the parasite that causes malaria, Plasmodium falciparum. It contains the chemical artemesin, not found in any other species of Artemesia, and is now being viewed as a possible prototype for a new antimalarial medicine. This herb shows a broad spectrum of activity against protozoa and yeast. It is also effective against the liver fluke (Clonorchis sinensis), the blood fluke (Schistosoma japonicum), and the amoeba Giardia and other protozoa. This herb has a low toxicity level, and no side effects have been reported. It appears safe to use, even with heart, liver, or kidney diseases, as well as during pregnancy. The herb is not only effective, but quick-acting. It is able to cross the blood-brain barrier, making it effective against amoebic infections of the brain. High doses of antioxidant supplementation should be withheld during treatment of protozoan infection, especially when using A. annua. When taking for a Cryptosporidium infection, use 1000 mg. three times a day for twenty days. This herb may be given along with grapefruit seed extract or other antiparasitic herb. When treating malaria with A. annua, use for ten days. A. cina is very effective against worms. Since this herb is very bitter, it is advised that children take it in pill form. A. cina combines well with Cassia marilandica (American senna). HOWEVER, this herb can be fatal, so it must be dosed out accurately and only under the care of a knowledgeable herbalist.

Yellow gentian (Gentiana lutea)

Is an ancient herb used for treating malaria. This gastric stimulant is used to improve digestion, and has antiseptic properties. It also possesses a strong activity against the protozoa, Entamoeba histolytica, as well as expelling other intestinal worms. Yellow gentian strengthens the body system, and is an excellent tonic when combined with an herbal laxative. This prevents gentian from becoming toxic. In addition, because it is a bitter herb, combining it with an aromatic herb, makes it more palatable. It is not well tolerated, however, by those with high blood pressure or pregnant women.

OTHER:

Diatomaceous Earth - 1 tsp mixed in water or juice. Will shred the skin off tapeworms.
Peppermint helps relieve gas during parasite cleansing
Turmeric root helps irritable bowel and gastro disorders.
Licorice root can be anti-inflammatory, heling expel mucous.

GENERAL HERBAL TREATMENT MOST OFTEN USED

- **Take parasite remedies before meals when stomach is empty (say 20 min before).**
- **Black Walnut Bark kills many types of worms, even tapeworm.**
- **Wormwood is very effective against worms, especially roundworms.**
- **Cloves kills worms and is reported to also kill the eggs.**
- **Garlic has been used for centuries to kill ane expel parasites and worms.**
- **Grapefruit seed extract helps eliminate protozoa and fungus on contact.**
- **Homeopathics specific to each type of parasite may be recommended by the health practitioner.**

OTHER REMEDIES:

- **up to 4 glasses a day of pomegranate juice (no sugar of course) is good for tapeworms**
- **for tapeworms fast two days on fruits and vegetables, then eat nothing but pineapple for 3 days, then do another day of fruits and vegetables. Do this around the full moon time of course.**
- **papaya seeds can be used in salad dressings chew well, or grind fine pumpkin seeds (1/4 - 1/2 cup) and add to cereals or salads**
- **2 cloves of raw garlic a day for roundworms, pinworms, tapeworms, hookworms. Garlic works well for spirochete but not for protozoa so clear protozoa first, then do the garlic. If buying supplements, you need to get the real stuff, usually have to bring it in from another country - there is no allicin in garlic! It needs to be converted into allicin by nature. Allicin has a half life of 10 days - so all the garlic being sold will detox people etc. but to make garlic effective you have to produce Allicin. Allikinaise is destroyed by stomach acid so the taking garlic has to be at the end of the meal to work. Garlic handles E coli, cryptosporidium, amoebas, giardia as well as other bugs, but not protozoa.**
- **for protozoa a combination of grapefruit seed extract, garlic, slippery elm, and cranberry concentrate. If you put into capsules, use 2-4 capsules before each meal for 2 weeks at full moon, then another 2 weeks at next full moon.**
- **12 a day of 1 gram salt tablets (1,000 mg) but can with vit. C - deworms everything. Do for 360 days. We found sodium chloride tablets on Amazon and ordered them without difficulty.**
- **enemas may be helpful. It dislodges and removes toxins in the large colon. You can use garlic enemas (blend 1-2 cloves in the enema water); vinegar enemas (2 tbsp apple cider vinegar to 1 qt water); blackstrap molasses**
- **enema (1 tbsp to 1 qt water.); Sterilize tubing and bag after each use.**

SUPPORTIVE THERAPEUTIC DIET:

- **A diet composed of 25% fat, 25% protein and 50% complex carbohydrates works well**
- **Low sugar foods are best. Parasites feed off simple carbohydrates (white flour, white or brown sugar, refined processed foods).**
- **Eat sufficient, properly cooked protein (meat, fish, chicken, eggs). Ordinarily it is not wise to eat much acid forming foods such as animal meats however in this case it is preferable to have an acid environment.**
- **Eliminate dairy products during and after treatment (esp. if any giardia present).**
- **Reduce intake of wheat and rye and to a lesser degree oats and barley esp. if you have a protozoa infection.**
- **Heavy intake of raw fruits and vegetables, cold or iced foods and drinks should be cut back which cause intestines to contract, holding in toxins rather than releasing them.**
- **If you are vegetarian or depend upon protein sources like beans, nuts, seeds, peas, legumes you will need to restrict your intake of such foods. If you have a parasitic infection they can cause flatulence and irritate the gastrointestinal tract. If you are vegetarian take spirulina or chlorella or B12 supplement.**
- **Add water-soluble fiber supplements such as psyllium seed husks, rice bran and oat bran if you need more fiber.**
- **These are less irritating. A high-fiber diet helps prevent giardiasis.**
- **Soy products should be used in moderation, say 1-2 times a week. Soy leaves an alkaline residue in the system.**
- **Do not take B vitamins when doing a parasite cleanse.**
- **You need a sufficient amount of unprocessed oils each day (at least 1-2 tbsp daily) from cold pressed safflower, sesame, flaxseed, or canola. Do not cook with these oils.**
- **Diets deficient in Vit. A indicate increase in tissue penetration by larvae. Include lots of carrots, squash, sweet potatoes, yams, greens.**
- **Fresh pineapple and papaya contain high amounts of natural protein digesting enzymes like bromelain and papain which help cure worm infestations. Because of the sugar content, take them in supplement form where the extracts are often conbined with pepsin and hydrochloric acid.**
- **Note: As parasites die off you may experience some nausea.**

SUPPLEMENTS

- **Decreased absorption of fats and proteins and vitamins including beta-carotene, vitamin A, folic acid and B12 is common in parasite infection. A fish tapeworm is able to obtain 75-100% of a physiological dose of B12 before the vitamin is absorbed. Therefore taking spirulina, or chlorella, or a B12 supplement may be necessary. Note: it can take up to one year for B12 levels to return to normal after eliminating a fish tapeworm from the body.**
- **Taking regular B vitamins during the cleanse (not incl. B12) should be stopped, especially during their feeding time from 7 days prior to the full moon to the new moon.**
- **Take 50,000 IU Vitamin A a day. If you have roundworm or giardia they interfere with Vit. A absorption.**
- **If you have hookworm, you will need extra iron. Get the vegetable source at your health food store or eat dessicated liver, molasses, organ meats, prune juice, oysters, dried apricotes.**
- **Taking ox bile or bile salts should be avoided, esp. if you have giardia.**
- **Onions, carrot tops, radish roots, kelp, raw cabbage, ground almonds, blackberries, pumpkin, sauerkraut, and fig extract have anti-parasitic qualities.**

REBUILDING AFTER PARASITE CLEANSING:

- **It is important to reintoduce friendly bacteria into the intestinal tract. Take 2 acidolphilus capsules in the morning and 2 in the evening for a month.**
- **Lungs were affected: Vit. A, E, Sound breath for 3-4 weeks.**
- **Intestines were affected: Acidolphilus, Vit. A, Aloe Vera juice, minerals**
- **Liver was affected: Goldenseal, goldenrod, cloves, B complex, Vit. E, maple syrup and calcium.**
- **Blood flukes or Spirochete: 1 gallon hyssop tea a day for 2 days, no food during this time.**
- **Protozoa: 2 tsp liquid chlorophyll in 4 oz water twice daily. Minerals.**
- **If you have had hookworm, use Spirulina or Chlorella each day for the next 6-12 months.**

PREVENTION OF PARASITES:

- **Make your own salad dressing with apple cider vinegar. 2 tbsp a day is needed.**
- **Pumpkin seeds help keep away. Raw pumpkin seeds also have lots of zinc.**
- **Garlic is a worm destroyer. Include it in the diet or take garlic capsules.**
- **Mix:**
  1 part apple cider vinegar
  2 parts apple juice
  1 part apple brandy
  Take 1 tbsp every day in the water.
- **Moisten the skin after cleaning it with soap and water with a little vinegar water (1 tbsp vinegar, 3 tbsp water). Dab all over body. Soap is alkaline and vinegar is acid which protects you against infection and parasitic influences.**
- **For the intestines: apple cider vinegar and cranberry juice.**
- **Tyrosine is a favourite food of worms. We often take it for thyroid conditions. If you have a parasite problem, stop taking it until the infestation is cleared.**
- **Also, foods to add to diet:**
  Pumpkin seeds.
  Calimyrna figs (tears the skin off the worms).
  Garlic
  Apple Cider Vinegar
  Cranberry Juice
  Pomegranates.
  Foods to avoid:
  Raw or undercooked beef, pork, fish, chicken
  Sugars and carbohydrates
  Mountain water (unless it is boiled 20 minutes)
  Water chestnuts and watercress
  Fruits and vegetables that are unwashed or washed in
- **Always wash your hands prior to eating. Wash hands with soap and water after going to the bathroom, changing a baby's diaper, or handling pets.**
- **An unhealthy colon is a breeding ground for parasites. Don't allow yourself to become constipated.**
- **Have a water filter installed in your home, even if you are on well water, or buy bottled water.**
- **Do not walk outside without shoes on.**
- **Cook all meats, poultry and fish well done.**
- **Be careful with imported produce from Mexico and other Latin American countries. Wash foods.**
- **Don't sit on a bare toilet seats without first wiping it or protecting it with toilet paper. This goes especially for mud baths, water baths and sauna benches.**
- **Don't use tap water to clean our contact lenses. Buy sterilized lens preparation for all cleansing and disinfecting purposes and remove your contact lenses before swimming.**

- **Don't walk barefoot, especially in warm, moist sandy soil.**
- **Cooking:**
  Vegetables: 180 F
  Beef: 160 F internal temp.
  Lamb, veal, pork: 170 F internal temp.
  Fish: 140 F internal temp. for fish for at least 5 minutes. Cook fish till flaky and white. Bake at 400 F for
  8-10 minutes per inch of thickness.
- **Avoid sampling dishes like sausage and gelfite fish before they are thoroughly cooked.**
- **Parasites thrive on sweets and simple carbohydrates so limit even natural sources of sugar from fruit and fruit juice to 2-3 portions a day.**

CHILDREN:

- **Keep toddlers away from puppies and kittens that have not been regularly dewormed.**
- **Make sure children wash after contact with pets. With infants you will have to assume this responsibility.**
- **Don't let toddlers kiss household pets or allow themselves to be licked by them.**
- **Don't allow children to eat dirt.**
- **Don't allow children to play in yards, playgrounds, or sandboxes in which animals are allowed to roam loose.**
- **Clean children's bedrooms with a damp mop or vaccuum to avoid stirring up possibly infested dust.**
- **Sanitize toilet seats and bowls used by children, clean also the undersurface of the seat.**
- **Clean children's toys with mild soapy water.**
- **Keep children's fingernails short and clean.**
- **If children are infected:**
  - **bathe daily**
  - **use one washcloth and towel for the face and hands and a different one for baths.**
  - **scrub hands thoroughly after bathroom use and before each meal.**
  - **wear close-fitting underpants at all times (under sleeping garments also)**
  - **do not share a bed**
  - **have bedclothing and personal clothing laundered daily**
  - **keep toothbrushes in containers (don't expose to bathroom dust that transmit pinworms)**
  - **scrub toilet seats daily**
  - **clean and vacuum daily, removing eggs along with the dirt.**
  - **keep all rooms, esp. bedrooms well aired**
  - **once in a while superheat the home to 95 F for a day. You may want to do it when the family is out. It is an effective way to kill embryos in the eggs.**
  - **If you have a nanny or babysitter, make sure she or he understands the rules for cleanliness.**

IF YOU HAVE PETS:

- *** Keep pets free of parasites and fleas.**
- **Have puppies and kittens dewormed on a regular basis.**
- **Keep an eye out for signs of infection and take to vet at the first sign for a checkup:**
- **dull coat, pot belly, poor growth, diarrhea, constipation, vomiting, fatigue, anemia.**
- **Avoid feeding animals raw meat or raw fish which harbour tapeworms. Well fed animals are less likely to hung and eat rodents and birds etc. No chemical can yet kill all the toxocara eggs in the soil so best protection is to look after your animals. Consider worming every 6 months or so (have treatment prescribed by proper veterinarian). Don't use pet manure for**

composting.

- **Do not sleep with your animals.**
- **Don't allow your animals to use the neighborhood as their bathroom; use a pooper-scooper. Burn or flush feces.**
- **Keep the cat litter clean daily. Wear plastic gloves when cleaning cat litter.**
- **Give clean water to your pets daily.**
- **Routinely check animal's stool for worms.**
- **Buy flea collars or apply topical insecticides to dogs and cats if fleas are present. Check to see if there are "natural" type available. Flea baths will help an infestation too.**
- **Adding fennel, rosemary, rue or garlic to the pet's food helps repel fleas. Garlic and yeast wafers are parasite and flea-proof foods for animals.**
- **Regularly disinfect animal's food dish and water bowl.**
- **Keep sandboxes that children play in, covered.**
- **Make sure eating surfaces or food preparation counters are off-limits to pets.**

TRAVELLING?

Be careful when traveling to drink clean water and wash fruit and vegetables in the same. Use bottled water.

- **Take lots of acidolphilus when traveling to other countries to build up healthy bacteria in the intestines. You may need to take up to 20 capsules a day.**
- **Do not swim in tropical water.**
- **Do not walk on the beach or sand without shoes.**
- **Have a parasite examination twice a year if you travel frequently.**
- **Avoid regional foods and special dishes that include raw, pickled, smoked or dried fish, crabs and crayfish. All beef and lamb should be thoroughly cooked.**
- **Avoid having ice cubes in drinks.**
- **Eat only cooked or peeled fruits and vegetables.**
- **Don't use tap water to brush your teeth.**
- **Bentonite, a clay-like liquid, is a good preventative. Take at least 1 tbsp in the morning and another in the evening. It protects by absorbing poisons in the intestinal tract and flushes them out of the system.**
- **Avoid swimming in freshwater lakes.**
- **(If sleeping in a tent in a tropical area, don't wear perfumes or aftershaves, use well-screened netting.**
- **In the tropics, Africa, Asia, Middle East, stay covered up with long sleeves and long pants, esp. at night. The malaria mosquito comes out between dusk and dawn. You might also try taking 100 mg B1 a day or 3 tablets 3 times a day of Brewer's yeast to help repel fleas and mosquitoes.**

WOMEN:

- **after urinating, wipe from front to back**
- **when having pap smear, have lab look for pinworms, roundworms or sexual disease problems**
- **if pregnant, be screened for toxoplasmosis**
- **if pregnant, limit exposure to cats**
- **if pregnant, avoid undercooked meat**

CLARKE'S PARASITE CLEANSE

You can go online and get her products. We notice they have changed somewhat over the years and so we won't bother to print out her old formulas, probably no longer available. Here is Hulda Clarke's website:

https://drclarkstore.com/?adgroupid=1244648509952386&msclkid=2a7c84512f5112b1915deeff1b52708&utm_source=bing&utm_medium=cpc&utm_campaign=Brand%20Search&utm_term=para%20cleanse%20dr%20clark&utm_content=Brand

KLINGHARDT'S Parasite Treatment Basic Steps

• Step 1: stop foods, behaviors and supplements that feed the parasite (processed foods, mushy foods, sweet and processed foods, unfermented dairy, all cooked or baked grains
• Step 2: establish toxic metal detoxification and mineral (=good metals) replacement protocol.
• Step 3: Simon Yu 6 week protocol (dosing in Klinghardt Academy protocol manual, with medical anti-parasitics)
• Step 4: Enema/suppository protocols: daily, 18 months, repeated courses of oral anti-helminthics (klinghardt protocols for liposomal artemisinin cocktail, curcumin/ginger mix (CurcuSyn), mimosa pudica and freeze dried garlic.
MMS Protocol for Parasites: Chlorine Dioxide enemas – activate as instructed by your practitioner. Very effective for children with Autism and those suffering with the effects of parasites. Used as rectal enemas, and by oral brushing and sinus washing with a netti pot.
Russian Protocol for Rope Worm - These protocols are from Gubarev's patents and communications: All enemas are preceded with a 2 liter cleaning water enema. Each type can be done once in 4 days. They should be followed by another 2 liter water enema at the end of the day, or the next morning. This is when the ropes come out.
Find the type of enema that is the most effective from the protocols.
• Step 5: Optional (but powerful): elecromagnetic fields (Bemer, PEMF, Rife, etc.)

SIMPLE BUT EFFECTIVE FORMULA WE USE AT OUR CLINIC:

2 ½ parts wormwood
4 ½ parts black walnut hull
¼ part ginger
¼ part garlic
2 ½ part cloves
Grind and cap in "00" caps. Take 2 caps in the morning and evening. Best to start just before full moon when some of the parasites are known to be quite active.

If you would like a more indepth look at parasites, continue with these next educational pages.

A LOOK AT SPECIFIC PARASITE SPECIES

SYMPTOMS

Often there are no symptoms, however if you are living with pets or handling animals you have an excellent chance of acquiring parasites. If you like eating rare or raw meat or fish you most likely have parasites also.

*** periodic asthma attacks can be caused by larva development of ascarities in the lymph system.**
*** arthritis: check for protozoa**
*** stool samples near the new moon rarely show activity, better to take around full moon.**
*** fatigue**
*** asthma (roundworms/ascaris)**
*** eye pain**
*** insomnia**
*** rashes, eczema: check for roundworms**
*** liver problems: watch for worms in the liver**
*** nervousness around full moon, watch for worm infestations**
*** blisters on lower lip inside of mouth of children**
*** constipation invites parasites**
*** seizures: check for ascaris getting into the brain**
*** schizophrenia and depression: check for brain parasites**
*** itchy rectum: check for pin worms, round worms**
*** irregular ulcers in rectum with red borders and gray bases: amoeba. They may be found in fresh stool specimens.**
*** pyloric valve trouble, check for parasites/worms in liver**
*** children picking nose frequently: check for pin or round worms**
*** hyperactivity, bed wetting, headaches, light sensitivity, twitching eyelids, nosebleeds**
*** grinding teeth**
*** enlarged and painful liver with fever: facioliasis, abscesses in the liver**
*** intestinal abscessing: pinworms**
*** intestinal, gall, or pancreatic obstruction: roundworm**
*** appendicitis: roundworm**
*** diabetes: check for pancreatic fluke from cattle Eurytrema**
*** migraines: check for threadworm strongyloides**
*** diarrhea: many types cause this, it's nature's way of removing toxins. Check for giardia as a routine, then strongyloides. Cryptosporidium for severe diarrhea.**
*** acne rosacea: check for leishmania**
*** heart disease: check for dog heartworm**
*** arthritis: check for protozoa**
*** gas and stomach bloating - upper intestinal parasites**
*** immune dysfunction**
*** fever in afternoon: amoeba**

*** appendicitis**
*** peritonitis**
*** hemorrhagic pancreatitis,**
*** loss of appetite**
*** poor absorption of digested foods**
*** nervousness: from waste products of parasites**
*** tired, weak: check for leishmania, hookworm, dog heartworm (all eat blood).**
*** allergies: check for worm infections. Tissue becomes inflamed and reactions to foods happen when the white blood cells are increased. Skin rashes with blisters and food sensitivities may result.**
*** especially in children:**
blisters on inside of lower lip, wiping nose, restless, grinding teeth at night, dark circles under eyes, hyperactive, bedwetting, headaches, sensitive to light, twitching eyelid, gum, rectum, nose bleeding
*** reflexology signs:**
*** on soles of feet see tapeworm sign across sole at waist level, a crease.**
*** a line shows under large toe for round worm, and under the next second toe from the end (next to little toe), about 1 - 1 1/2" below.**

VARIETIES

There are 3200 varieties of parasites, usually divided into four major categories:

Protozoa, Trematoda, Crestoda and Nematoda.

PROTOZOA

Protozoa make up about 70% of all parasites. They are invisible to the nakes eye. The are called one celled microscopic organs, a diverse group of mostly mobile unicellular eukaryotic organisms, between 10-52 micrometers, but can grow as big as 1 mm and can be seen with a microscope. They move around with whip like tails called flagella, have hair like structures called cilia or foot like structures called pseudopodia. Some do not move at all. Amoebas surround their food and engulf it, others have openings or mouth pores into which they sweep food and engulf it.

Certain protozoans, through their intensely rapid reproductive ability, can take over the intestinal tract of their host and from there go on to other organs and tissues. Some feed on red blood cells. Some protozoa produce csts (closed sacs in which they may be safely transported through food and water from one person to another). In the cyst state, protozoans are safe from destruction by human digestive juices. These one celled vampires can actually destroy the tissues of their hosts. An estimated 7 million people across the U.S. have some form of protozoa living inside them.

Endolimax nana	**Cryptosporidium muris**
Giardia lamblia	**Pneumocystis carinii**
Entamoeba histolytica	**Plasmodium malariae**
Cryptosporidum parvum	**Plasmodium ovale**
Blastocystis hominis	**Plasmodium vivax**
Trichomonas vaginalis	**Plasmodium falciparum**

There are many subgroups, some examples:
flagellates (giardia lambilia)
amoeboids (entamoeba histolytica)

sporozoans (plasmodium knowlesi)
Different types can cause any number of diseases in humans:
malaria
amoebiasis
giardiasis
toxoplasmosis
cryptosporidiosis
trichomoniasis
chagas disease
leishmaniasis
sleeping sickness
dysentery
acanthamoeba keratitis
acanthamoeba keratitis
primary amoebic meningoencephalitis

TREMATODA is a class within the phylum Platyhelminthes. They include 2 groups of parasitic flatworms, known as flukes. They are internal parasites of molluscs and vertebrates. They are flattened oval or worm-like animals, usually no more than a few centimetres in length, but monogenea is only 1 millimetre long (.039") and fasciolopsis is 7 centimetres (2.8"). They have 2 suckers, one close to the mouth, the other on the underside. Cycle begins when larvae are released into freshwater by infected snails. The free swimming larvae can then directly penetrate the skin of the human host or are ingested after encysting in or on various edible, vegetation, fish or crustaceans. They have protection against digestive enzymes. They have both male and female organs (hermaphrodites). Infection can be found anywhere where human waste is used as fertilizer.
The flukes are classified into 2 groups:
The tissue flukes infect bile ducts, lungs or other biological tissues. This group includes the lung fluke, Paragonimus westermani and liver flukes (Clonorchis sinensis and Fasciola hepatica). Intestinal fluke (fasciolopsis buski)
The Intestinal blood flukes inhabit the blood in some stages of their life cycle eg: species of the genus Schistosoma.
Schistosomiasis (aka bilharzia, bilharziosis or snail fever) is an example of a parasitic disease caused by one of the species of trematodes (platyhelminth infection, or 'flukes') a parasitic worm of the Schstosoma genus.
Blood fluke: schistosoma japonicum, schistosoma mansoni, schistosoma haematobium
Liver fluke: clonorchis sinensis
Oriental lung fluke: paragonimus westermani
Sheep liver fluke: fasciola hepatica

CESTODA

These are the tapeworms. They are among the oldest known parasites. Tapeworms are considered humanity's largest intestinal inhabitant. Each have a scolex (head) that attaches to the intestinal wall. As long as the head remains attached to the intestinal wall, a new worm can grow from it. Tapeworms do not contain digestive tracts, but get their nourishment by absorbing partially digested substances from the host. They are whitish in color, flat and ribbonlike with a covering that is a transparent skin like layer.

There are many types, depending on where they came from: fish tapeworm, beef tapeworm (king of the tapeworms can grow up to 65 feet long); pork tapeworms; rat tapeworms. Tapeworms are flat segmented worms that live in the intestines. Dogs and cats often have them from ingesting fleas or insects. People usually get them from eating undercooked meat where the larvae manage to survive the cooking process or eating raw fish, and our stomach acids which can be poor. True tapeworms are hermaphrodites; having both male and female reproductive system in the body. Most common:
Beef tapeworm: taenia saginata
Pork tapeworm: taenia solium
Fish tapeworm: diphyllobothrium latum
Dog tapeworm: Dipylidium caninum

NEMATODES

Size can vary from .2 to 35 centimeters. While the protozoans are only single celled, the nematode creatures are multi cellular. The adult worms multiply by producing eggs called ova or larvae. The eggs usually become infectious in soil or in an intermediate host before humans are infected. It is interesting to note that unless the worm infection is heavy, many individuals do not show signs of disease. While it may be unpleasant to consider, it is true that the human host can coexist quite comfortably with a few worms, unless they reproduce in great numbers and create organ obstruction. Experts claim that some type of worm is already in the intestines of over 75% of the world's population. List of nematodes:
Roundworm (Ascaris lumbricoides)
Hookworm (necator americanus, Ancylostoma duodenal)
Pinworm (Enterobius vermicularis
Roundworm (toxocaris canis, toxocara cati)
Whipworm
Heartworm
Stercoralis
Caninum
Toxocara
Trichinosis
Heartworm (Dirofilaria immitis)
Strongyloides (stronglyoides stercoralis)
Tricinella (Trichinella spiralis)
Filaria (Wuchereria bancrofti, Brugia malayi, Onchocerca volvulus, Loa loa, Mansonella streptocerca, Mansonella perstans, Mansonella ozzardi)
Anisakine larvae

PROTOZOA

Protozoa are at the core of many modern illnesses. Giardia which are found in all the major lakes and rivers in the U.S., and Amoebas which typically come here from India, Asia and once they are here, they have found really fertile ground. They did a study on salad bars in New York about 15 years ago and virtually every salad bar whether organic or not, found giardia, amoebas and worm eggs. No exceptions. So it was really up to the person's stomach acid to kill off the creatures (taking antacids will be detrimental). They are here and they are here to stay.
All protozoa responds to laprosoma artemesia which is the main treatment for many of these

illnesses. We have a core group of microbes and you may want to look at the intelligence of these microbes.
Syphillis has 27 genes
Lyme spiroketes have 237 genes (almost 10 times more genetic material to vary their immunity to evade the hosts system).
Syphillus was pretty smart, but lyme spiroketes are 10 times smarter, and if you look at protozoa, they have 10 times more genes then lyme spiroketes! Protozoa are far more evolved than the other bugs and far more sophisticated in evading the host's system, and most of them are intracellular so they slip inside the body's macrophages, white blood cells, neurons, and once inside there is no more defences that the body has to cleanup - once past the barrier, they are not recognized.
Note: we have 23,688 genes at birth and when we die we have nearly 40,000 - where did the extras come from? It's all microbes.

Dr. Stephen Fry has been doing work regarding a biofilm-forming protozoa which initially was called FL1953, subsequently named PROTOMYXZOA RHEUMATICA, a hughly immunosuppressive microorganism. He calls this the premier pathogen.
This protozoa loves fats therefore a low fat diet has been helpful to contain the parasite. Lipids and fatty acids also play a role in the formation of biofilms which seem to collapse with lipid restriction. Eating a whole food, plant based diet full of bioflavonoids seem to act as an antibiotic. He suggests many with wheat problems, may not be because of the gluten but due to the high arginine with this protozoan thrives on.

SPIROCHETES

These are long, slender bacteria. Seen tightly coiled they look like miniature springs or telephone cords. They differ from other bacteria because they have a flagella (long tail, called axial filament) which runs lengthwise between the inner membrane and the outer membrane causing the twisting motion which allows them to move about.

The spirochete is released from the parasite into the body, which can ultimately cause the disease. This group causes Syphilis (Treponema pallidum) and Lyme Disease. The spirochete that resides in the mouth is called Treponema Denticola.

Spirochetes are divided into 3 families
- **Brachyspiraceae**
- **Leptospiraceae**
- **Spirochaetaceae**

STOOL TESTING

Klinghardt informs us that the parasites do not live in the poop - they live in connective tissue and biofilm and when we see them in the poop, it is their end, they are finished. Therefore when we do parasite cleansing and we see them in the stool, it is a good sign.

Dr. Klinghardt was head of a Parasitology Dept. in India for several years and he tells us it is difficult to test the stool correctly. Parasitologists know that you only have a 15 minute

window from collecting the stool, to putting it under the microscope to see the results. After 15 minutes the parasite has figured out it is outside its protective environment and it releases an enzyme that completely dissolves the parasite, making it invisible to any technique.

Klinghardt said there is a high rate of infection when dealing with poop, so no one wants to do it. Muscle testing is a cleaner and safer way of detection.

DRUGS FOR PARASITES:

Vitricide
Ivermectin
Ivermectin plus pyrantel pamoate
Albendazole
Alinia/Daxon
Metronidazole/Tinidazole
Combantrin
Entacyl

BIOMEDICINE FOR PARASITES:

Freeze dried garlic (note: garlic is good for spiroketes, but not protozoa, get rid of protozoa first).
Artemisinin
Oral 1000-2000 mg mimosa pudica twice daily
Frequent colonics
No grain, no sugar
10 - 1,000 mg salt tablets with 10 - 1,000mg Vit. C in divided doses daily for a year (can only do if no high blood pressure - every time you take a salt tablet, take a vit. c)
After tolerance is established: lyme cocktail (lipososomal artemisinin).
Suggest doing suppositories of the garlic and artemisinin for a couple of weeks, then can do other herbal and homeopathic helpers.
Diatomaceous Earth for tapeworms
Pumpkin seed oil

BLOOD BORNE PARASITES

African trypanosomiasis
American trypanosomiasis
Babesia divergens
Babesia microti
Babesiosis
Bancroftian filariasis
Brugia malayi
Filariasis
Loa loa
Malaria
Mansonella ozzardi
Mansonella perstans
Plasmodium falciparum
Plasmodium malariae
Plasmodium ovale
Plasmodium vivax
Sleeping Sickness (African trypanosom.)
Trypanosoma brucei gambiense
Trypanosoma brucei rhodesiense
Trypanosoma cruzi
Trypanosomiasis, American (Chagas disease)
Wuchereria bancrofti

Schistosoma species **(haematobium, japonicum,mansoni)**

PARASITES OF INTESTINAL TRACT

Amebiasis
Ancylostoma ceylanicum
Ancylostoma duodenale
Ancylostomiasis (hookworm)
Ascariasis
Ascaris lumbricoides
Balantidiasis
Balantidium coli
Bilharziasis (schistosomiasis)
Blastocystis hominis
Capillaria (paracapillaria) phillippinensis
Capillariasis
Clonorchis sinensis
Clonorchiasis
Cryptosporidiosis
Cryptosporidium spp.,
Cyclospora cayetanensis
Cyclosporiasis
Dientamoeba fragilis
Diphyllobothriasis
Diphyllobothrium latum
Dipylidium caninum
Encephalitozoon intestinalis
Entamoeba histolytica
Enterobiasis (pinworm)
Enterobius vermicularis
Enterocytozoon bieneusi
Fasiola hepatica
Facioliasis
Fasciolopsiasis
Fasciolopsis buski
Giardia intestinalis/lamblia
Giardiasis
Hookworm (Ancylostomiasis)
Heterophyes heterophyes
Heterophyiasis
Hymenolepiasis
Hmenolepis diminuta
Hymenolepis nana
Isospora belli
Isoporisis
Metagonimus yokogawai
Metagonimiasis
Microsporidiosis
Necator americanus
Opisthorchiasis
Opisthorchis felineus
Opisthorchis viverrini
Paragonimiasis
Paragonimus westermani
Pinworm (Enterobiasis) Infection
Schistosoma haematobium
Schistosoma intercalatum
Schistosoma japonicum
Schistosoma mansoni
Schistosoma mekongi
Strongyloides stercoralis
Strongyloidiasis
Taenia saginata
Taenia solium
Taeniasis
Trichuriasis
Trichuris trichiura
Whipworm (Trichuriasis)

PARASITES FOUND IN OTHER SITES

Acanthamoeba
African trypanosomiasis
Amebiasis
American trypanosomiasis
Amoebe - Naegleria fowleri (brain)
Angiostrongylus cantonensis
Angiostrongylus costaricensis
Anisakiasis
Anisakis simplex
Balamuthia mandrillaris
Bancroftian filarisis

Baylisascariasis
Baylisascaris procyonis
Bilharziasis (Schistosomiasis)
Capillaria (=Eucoleus) aerophila
Capillaria (=Calodium) hepatica
Cercarial dermatitis (swimmer's itch)
Chagas disease (American trypanosomiasis)
Clonorchis sinensis
Clonorchiasis
Cysticercosis
Dirofilaria immitis
Dracumuculiasis
Dracunculus medinensis
Echinococcosis (hydatid disease)
Echinococcus granulosus
Encephalitozoon cuniculi
Encephalitozoon hellem
Enchinococcus multilocularis
Echinococcus oligarthrus
Echinococcus vogeli
Encephalitozoon inestinalis
Entamoeba histolytica
Vari strongylida (lung worm)

PREVENTION

1. **Make your own salad dressing with apple cider vinegar. 2 Tbsp a day is needed**

2. **Foods that discourage parasites:**
   Garlic
   Pumpkin Seeds
   Mission Figs
   Calimyrna figs (tears the skin off the worms)
   Apple Cider Vinegar
   Cranberry juice
   Pomegranates

3. **Worms and parasites are disturbers of balance to the entire system. To attract them you need:**
   a toxic colon; chemicals or other poisons; an alkaline medium.

3. **Native remedy:**
   1 part cinnamon oil, 1 part tea tree oil 1 part eucalyptus oil
   Mix with 3 parts almond oil. Take 4 drops once a day

4. **Mix 1 part apple cider vinegar, 2 parts apple juice, 1 part apple brandy**
   Take 1 Tbsp every day in water.

5. **Mix 4 parts psyllium seed (ground), and 1 part diatomaceous earth/clay. Take 1 rounded tsp every day for rebuilding and worm destroying.**

7. **Moisten the skin after cleaning it with soap and water with a little vinegar water (1 Tbsp vinegar and 3 Tbsp water). Dab all over body. Soap is alkaline and vinegar is acid which protects you against infection and parasitic influences.**

8. **Diet:**
High carbo, low protein makes infections worse. When body is in an alkaline condition, the parasitic infection sets in.
Keep diet slightly acidic when treating infection.
Add apple cider vinegar and cranberry juice.
Food to avoid: raw or undercooked meat; sugars and carbohydrates, mountain water, water chestnuts, watercress, fruits and veggies that are unwashed or washed in questionable water.

9. **Rebuilding:**
For Brain: Royal Jelly, Blessed Thistle, Gingko Biloba
For Lungs: Vit A, E, carrot juice, flaxseed oil, garlic, C/L Lung
Intestines: Acidolphilus, Vit. A, Aloe Vera juice, minerals, alfalfa, liquid chlorophyll
Liver: Goldenseal, goldenrod, cloves, B complex, Vit. E, lemon juice, Milk Thistle, dandelion, Maple syrup and calcium.
After Blood Flukes or Spirochete: 1 gallon of hyssop tea a day for 2 days - no food during this time.
Protozoa: 2 tsp liquid chlorophyll in 4 oz water twice daily. Minerals.

10. **Wash all fruits and vegetables carefully. Anything with a nick or recess can harbor a parasite, cut it out. Avoid grapes with open splits.**
Washing in ozonated water, hydrogen peroxide (1 tsp per gallon of water), or bleach (1/2 tsp to gallon of water and soak 10 min) will kill parasites. Rinse well after to remove bleach residue.

11. **Thoroughly cook meats and fish. Don't eat raw or uncooked meats or fish. Check for worms, esp. on fish. Spray with hydrogen peroxide or wash in ozonated water before cooking. Keep work surfaces clean.**

12. **Drink pure water. If camping, boil water or use proper filter.**

13. **Wash hands before eating, after going to bathroom, changing diapers or handing pets. Keep fingernails short and clean. parasites can live for 2 months under the fingernails.**

14. **Keep house clean, free of dust and accumulated soil particles where bugs and parasites can accumulate. If you have older carpets, replace with tile floors that can be cleansed easily.**

15. **Don't walk barefoot on soil or grass.**

16. **Be careful when swimming in rivers, lakes, ponds, and even public swimming pools and avoid swallowing or drinking the water while swimming anywhere. Don't swim if you have cuts or open sores.**

17. **Deworm your pets and keep them outside. The risk for you is greater when they are indoors. Adding garlic to their food helps control some parasites. Homeopathics routinely will help.**

18. **Avoid antibiotics which reduce the friendly bacteria in the colon, allowing for a better home for parasites.**

19. **Be careful when you travel. Take precautions with you and lots of probiotics.**

20. **Adding cloves to meals or in capsule form will help kill the eggs. Use often.**

21. **CATS**

    Protect cats from infection (or re-infection) by preventing access to birds, rodents, uncooked meat, and non-pasteurized dairy products.

    Avoid handling litter boxes. Even if a cat is antibody-positive and hence most likely immune, there exists a potential for reshedding of oocysts (although in much smaller numbers than during the initial infection). For safety, litter boxes should be changed daily or every other day by another person to eliminate any potential for accidental infection.

    Avoid handling free-roaming cats, because the fur or paws could be contaminated with oocysts, which might be transmitted by hand-to-mouth contact. Any cat allowed indoors should be kept off the bed, pillows, blankets, or other furnishings the woman uses.

    Avoid handling any cat showing signs of illness.

    Wear rubber gloves if working with garden soil. Uncooked vegetables, whether grown in a home garden or supplied commercially, should be washed thoroughly before ingestion, in case they have been contaminated by cat feces.

    Make a habit of vigorously and thoroughly washing hands with soap and water after contact with soil, cats, non-pasteurized dairy products, or uncooked meat or vegetables.

TREATING PARASITES NATURALLY:

- **worms like to eat your vitamins, especially the B vitamins.**
- **tyrosine amino acid is known to be a preferred food of parasites**

- **They do not like minerals. Best not to take vitamins while detoxing.**

- **if worms are not taken care of in children, they will become hard to handle and some evidence shows they are sugar addicts when they are adults.**

- **best to start treatment 5 days prior to the full moon. Many of them sleep on the new moon, wake up 7 days before the full moon and are quite hungry and will feed off whatever is there = herbs that can kill or discourage them.**

- **excess mucus, an imbalance in intestinal flora, chronic constipation and a toxic internal environment promote parasitic infections.**

- **<u>For sinus parasites:</u> swabbing the inside of the nose with a drop or two of Oil or Oregano on a ear swab will help over time. Polyp or tumors which bulge out into the nasal passage may also be filled with parasites. Clear the nasal passages for better breathing - holding a flashlight in front of the nose, look into the mirror and you should see a clear airway almost to the throat. If you can only see about an inch, problems still exist. Dip an ear swab into 3% hydrogen peroxide and swab inside the nose. It may be necessary to plug the other side and breathe in slightly to get it past the obstructions. Let it sit until the sinuses open and then blow out the excess mucus. Repeated use will show where parasites may be dwelling under the tissue by bubbling and oxidation that happens as a result of the hydrogen peroxide. With tweezers you may be able to pull out the parasites and waste matter for disposal. Breathe in aromatherapy also - tea tree, eucalyptus, rosemary - these help open up passageways. Once open you can do a salt bath with the nasal passages.**

- **Another test for parasites is to put 1-2 drops Black Walnut Oil on a swab. If there is burning sensation and the toes twitch or it feels like a rock inside after a few days or scaling may appear on the outside - these are indicators that parasites may exist. Apply ozonated oil or Vit. E on the dry skin can help soften the tissue.**

- **Using ozone: You can apply directly ozone in the ears and nose. Insert ozone hose into each nostril while closing eyes and hold breath during treatment. Sneezing will occur and the sinuses will open. Do as you can tolerate.**

- **Use black walnut oil or tincture to eliminate worms (as well as other good herbs). If you use black walnut oil, you will find when the parasites are exposed to the oil, they will eliminate their toxins to protect their living quarters. The poisons are absorbed into the blood and can cause a rash on the skin. To avoid this, start out slow and increase dosage over a period of time.**

- **High carbohydrate diet, low in protein, and high in alkaline has been found to make parasitic infections worse. Sugar should also be avoided because parasites thrive on it and it is possible you could have Candida. This Candida or yeast infections create an environment in the colon that equals the environment needed for them to thrive. Foods that lower pH from high alkaline conditions in the colon are apple cider vinegar and cranberry juice.**

- **Pumpkin seeds and onions mixed with soy milk is another remedy for worms. Herbal**

combinations for blood flukes are milkweed, pennyroyal and black walnut. Herbal combinations for liver flukes are cloves, goldenrod and goldenseal root. Bitter melon is effective against pinworms. Fasting on raw pineapples for three days helps with tapeworms.

- **Grapefruit Seed Extract is effective in destroying parasites and can be taken internally and used to wash raw fruits and vegetables before eating.**

- **Another remedy for prevention is mixing one or two teaspoons of apple cider vinegar in one glass of water. Alternatively, you can take one tablespoon daily of 1 part apple cider vinegar, 2 parts apple juice, 1 part apple brandy.**

- **Constipation problems can be helped with friendly bacteria, cascara sagrada bark, chamomile tea, or elder flowers. Licorice added to herbal teas has slight laxative action.**

- **Liquid multi vitamin and mineral nutrients derived from plants is a better choice for using supplements.**

- **Best to take parasite formulas on empty stomach.**

- **Increase nutrients when treating and rebuilding from infestation.**

- **High carbs, low proteins, high in alkaline seems to make infections worse. Avoid sugar which they feed on (as well as candida feeding on it). Candida or yeast infections create an environment in the colon that provides a good home for the parasites. Foods that lower pH from high alkaline are apple cider vinegar and cranberry juice.**

- **Other foods that are beneficial: pumpkin seeds and onions mixed with soy milk.**

- **Acidolphilus (probiotics) helps restore normal friendly bacteria levels to the intestines, helping repair damage.**

- **Drinking aloe vera juice helps soothe the intestinal system.**

- **Cayenne, garlic, turmeric support the immune system, helping destroy worms.**

- **Bromelain (pineapple enzyme) may help destroy tapeworms.**

- **Witch Hazel may be used to reduce anal itching.**

- **Some herbs for parasites and detoxifying the body: Elecampane root, garlic, licorice rt., irish moss, anise leaves, alfalfa leaves, pink root, peppermint leaves, buckthorn bark, sage, goldenseal, wormwood, fennel, cloves, thyme, tansy, oil of oregano, male fern, cranberry powder**

- **Homeopathic remedies:**
  Liver flukes: chelidonium
  Hookworm/roundworm: Chenopodium
  Pinworm: Cina

Tapeworm: Felix mas
Roundworm: Santonium

GOAL OF TREATMENTS:

Cleanse the intestinal tract
Modify the diet
Tale parasitic elimination substances
Recolonize the GI tract with friendly bacteria
Avoid re-infection by eliminating risk factors

CLEANSING

This process is important because parasites often are embedded in the intestinal wall and can be more difficult to treat because of mucus and encrusted matter overlying the worms.

Guidelines for a thorough cleanse include:

- **Using products containing psyllium seed husk fiber, flaxseed fiber and bran fiber all of which are gentle and effective bulking agents for removal of accumulated wastes.**
- **Drinking plenty of water, as water absorption lubricates old fecal matter.**
- **Irrigating the colon through colon hydrotherapy dislodges and removes toxins in the large intestine.**

Modifying the diet, the goal being to support the host and starve the parasite. A diet high in simple carbohydrates like sugar, white flour and processed foods provides an ideal feeding ground for worms. A diet low in fiber may have initially provided a breeding ground for parasites, slowing down food passage, allowing food to decay and putrefy (producing stagnation in the colon).

A good modified diet would include:

- **25% good-quality fat, including one to two tablespoons of unprocessed expeller pressed safflower, sesame, flax oil or omega oil blends.**
- **25% protein, which provides amino acid building blocks for tissue regeneration. Good sources of protein would be well-cooked meat, chicken, fish and eggs. High fiber protein sources such as beans, nuts, seeds, peas, and legumes may produce flatulence and may be more irritating to the GI tract than bulking agents like psyllium, flaxseed, and bran.**
- **Avoidance of foods that produce an alkaline condition (see appendix 6). An overly alkaline condition in the GI tract provides a favorable environment for parasites. Soy products leave an alkaline residue in the GI tract and should be eaten in moderation, i.e. not more than 1-2 servings a week.**
- **Limiting or avoiding dairy products. Some parasites like Giardia and roundworm may**

precipitate a secondary lactose intolerance that may persist for months after elimination of parasites.

- **Limiting gluten in diet. Giardia can produce gluten intolerance. All protozoan infection can damage the intestinal villi, so reduce grain intake should be encouraged (gluten-free rice and millet are acceptable).**
- **Avoiding raw fruits and vegetables. Raw fruits and vegetables, plus cold or iced drinks, can cause the intestines to contract, thereby holding in toxins. Cook most fruits and vegetables so that they are more easily digested.**
- **Digestive enzymes. Well-absorbed vitamin and mineral supplementation will be helpful. (A tapeworm is able to absorb up to 75-100% of physiological dose of vitamin B12.) Digestive enzymes with meals are important for complete digestion of foods.**

Administering parasite elimination substances may mean assaulting the parasite using a combination of substances, including prescription and herbal, plus the device described next.

Sputnik is a metal capsule with a battery inside that is taken orally. See www.parasiteremedies.com which says the cap emits frequencies lethal to parasites as it passes through the GI tract. The cap consists of 2 hemispheres which serve as electrodes. It switches itself on as soon as it finds itself in the electrolyte environment of the GI system. The cap is 11 x 22.5 mm. The pulse is 10mA, amp is 4.5V and frequency is 50hertz. Average passage through the body is 24-36 hours. Not every administration will produce evidence of parasites. The smaller ones disintegrate and are not seen. Tapeworms emerge shredded into sections.

THE DOWN SIDE OF PARASITES:

1. **How they get in:**
   food or water
   skin or nose
   an agent such as a mosquito
   sexual conduct.

2. **Parasites will eat the same foods you eat (or they will eat you). Some feed off your blood (hookworm).**

3. **People with intestinal parasite infections are usually weak, undernourished, may be infected with virus, fungus or bacteria, may have chemical and metal poisoning.**

4. **They secrete toxins and defecate into the body their waste product which poisons our bodies and therefore our bodies have to work harder to clean up the mess. They may irritate or exaggerate current health problems.**

5. **Having a bowel full of waste invites a problem. The build up of fecal material on the walls of the colon from constipation, junk food, chemicals, bad fats and sweets are an**

invitation to a parasite, this is a great home for them.

6. **Hulda Clarke in her book "A Cure for all Cancers" believes ascara and other parasites and worms are at the root cause of some cancers. She finds them present in almost all cases.**

7. **Kroeger believed many tumors are parasite nests where the body is encapsulating the nest to protect the body. Worms lump together and look like tumors. Some female worms can release up to 200,000 eggs a day.**

8. **A parasite nest may cause a blockage in the bowel if it gets big enough.**

9. **Some parasites have the ability to fool the body into thinking they are a normal part of the tissue or organ so the immune system doesn't try and fight it off. Once they are established they can eat holes in the organs, intestines, lungs, liver. They can erode, damage or block certain organs by lumping together in balls or tumors. They can be mistaken for cancer tumors and travel into the brain, heart and lungs.**

10. **They rob us of vitamins, minerals, amino acids. Some because anemic, or are drowsy after meals.**

11. **They depress the immune system, leading further into degeneration, fatigue and illness, destroying the cells faster than they can regenerate.**

12. **They can take up residence in those little nooks and crannies of the sinus system, very difficult to eradicate. After time, the sinuses can become encrusted in toxic matter like in the colon, with the mycoplasmas causing a drainage with bad nasal odors.**

Preferred Drugs to use (if you need to) [recommended by Klinghardt]

Biltricide: 600mg three times a day for 2 days, can repeat after 6 weeks
Ivermectin: 1 tab (12mg) 4 times a day for 14 days (start after Biltricide, take at same time as Pyrantel pamoate)
Pyrantel pamoate: 1,000 mg at bedtime for 14 days (take at during same 14 days as Ivermectin)
Albenza: 200mg twice a day for 14 days (start after completing Ivermectin/Pyrantel pamoate)
Alinia: 500mg twice a day for 14 days - start after completing Albenza

Others mentioned by Davinci: Antihelminthic "Albendazole" (Albenza); "Mebendazole" (Vermox); "Niclosamide" (Niclocide); "Oxamniquine" (Vansil); "Praziquantel" (Antiminth); "Pyantel pamoate" (Antiminth) and "Thiabendazole" (Mintezol).

INDIVIDUAL PARASITES

ASCARIS (lumbricoides)



DESCRIPTION:

*** part of the round worm family**
*** usually involved with cancer (H. Clarke)**
*** a worm that lives in the small intestine.**
*** infection is usually referred to as ascariasis.**
*** produces significant biotoxins that produce symptoms identical to those of Lyme disease.**
*** adult female worms can grow over 1 foot in length, males a bit smaller.**
*** common in tropical and subtropical areas with poor sanitation and hygiene**

Note: Ascaris lumbricoides is one of the largest and most common parasites found in humans. The adult females of this species can measure up to 18 inches long (males are generally shorter), and it is estimated that 25% of the world's population is infected with this nematode. The adult worms live in the small intestine and eggs are passed in the feces. A single female can produce up to 200,000 eggs each day!

About two weeks after passage in the feces the eggs contain an infective larval or juvenile stage, and humans are infected when they ingest such infective eggs. The eggs hatch in the small intestine, the juvenile penetrates the small intestine and enters the circulatory system, and eventually the juvenile worm enters the lungs.

In the lungs the juvenile worm leaves the circulatory system and enters the air passages of the lungs. The juvenile worm then migrates up the air passages into the pharynx where it is swallowed, and once in the small intestine the juvenile grows into an adult worm. Why Ascaris undergoes such a migration through the body to only end up where it started is unknown.

TRANSMISSION:

* eggs are in human feces. After the feces contaminates oil, eggs become infectious after a few weeks. If we accidental ingest the infectious eggs, once in the stomach the immature worms hatch from the eggs, then the larvae are carried through the lungs, to the throat where they are swallowed. Once swallowed, then reach the intestines and develop into adult worlds. The adult female lays eggs that are then passed in the feces (takes 2-3 months).
* pig ascaris infection can be spread to humans if the eggs in the soil and manure are ingested, often happens if pig feces is used as fertilizer and then the crops become contaminated with the eggs.
* infection is not spread from person to person

SYMPTOMS:

* see gas holes in stools
* may cause slower growth and slower weight gain.
* heavy infection: abdominal pain
* when worms migrate through lungs may cough and have difficulty breathing
* heavy infestation can block bowel.
* brain abscess, temporal lob epilepsy

AREAS IT RESIDES IN:

* lungs when migrating
* intestines
* has been found in brain often

SOURCES OF CONTAMINATION:

* soil, fruits and vegetables grown in infected soil.

PREVENTION:

* avoid contact with soil that may be contaminated
* do not defecate outdoors
* dispose of diapers properly
* wash hands with soap and water before handling food
* if traveling to countries where there is poor hygiene or sanitation, avoid water or food that may be contaminated
* wash, peel or cook all raw veggies and fruits before eating

HOW TO HELP:

* Wormwood Combination by Kroeger. Will need 2-4 bottles.
* salt and vit. c

Wormwood usually kills liver flukes and ascaris, mix with black walnut. Ascaris is not affected by diatomaceous earth. Wormwood stuns, but doesn't kill. Use wormwood, then several hours later on empty stomach mix psyllium and bentonite clary drink to help push the bugs out while they are stunned.

AMOEBA (Entamoeba Histolytica) - also see Entamoeba





DESCRIPTION:

* single cell, microscopic,irregular shape, 25 micrometers in diameter
* part of the protozoa famly
* found all over the world, heavily in tropics
* Infects mostly humans and other primates
* infects the end of the smaller intestine and colon
* animals like dogs and cats can become infected but don't usually shed cysts in their feces which is how the parasite survives so they don't contributemuch to transmission.
* active (trophozoite) stage exists only in the host and in fresh feces; cysts survive outside the host in water and soils and on foods, especially under moist conditions in foods. When swallowed they cause infections in the digestive tract.
* infections can last for years without symptoms or just vague gastrointestinal distress, or perhaps diarrhea with blood and mucus. Most infections occur in digestive tract but other tissues may be invaded.
*complications: ulcerative and abscess pain
more rare is intestinal blockage
* the amoeba's enzymes help it to penetrate and digest human tissue, and it secretes toxic substances.

TRANSMISSION:

Mostly by contaminated water and foods
Direct contact with dirty hands or objects
Sexual contact.

SYMPTOMS:

Amebic dysentary; fever, diarrhea, fecal leukocytes, abdominal pain, inflammatory diarrhea, dehydration, bloody diarrhea, chronic bowel dysfunction

Amebic Colitis: abdominal pain, blood diarrhea, malaise, diarrhea, weight loss

Hepatic amebiasis (liver abscess): fever, malaise, upper right quadrant pain, diarrhea, weight loss, hepatomegaly

Amebiasis is the most common infection and caused by the species Entamoeba histolytica.

Amoebae also release an enzyme that causes ulcers or abscesses where they can enter the bloodstream. They can eventually reach other organs like the brain or liver.

Forms small ulcers causing amebic dysentery. Lesion may be formed around intestines.

If liver affected, may show fever in afternoon, weight loss, headache, nausea with pain, liver abscess, dull headache and thinking.

Fatal brain infections may be caused by Aegleria and Acanthamoeba - both cause meningitis type symptoms and are acquried by swimming in infected water.

Entamoeba gingivalis is found in mouth between teeth and gums, around jaw bones, causing mouth disorders.

If gets into brain: headaches, eyes might weep

AREAS IT RESIDES IN:

Fecal-oral
GI Tract
Lungs
Brain (usually in head, especially behind eyeballs). Two types can cause fatal brain infections: Aegleria and Acanthamoeba. Both cause meningitis type symptoms and usually are acquired from swimming in infected water.
Liver (usually shows by having afternoon fever, weight loss, headache, nausea with pain, liver abscess, dull headache and thinking.
Large intestine (may have diarrhea, constipation, abdominal pain, gas, weight loss, chronic fatigue, immune problems. May come up head and behind.)
Eyes (may weep)
Mouth: Entamoeba gingivalis is found in mouth between teeth and gums, around jaw bones, causing mouth disorders).

SOURCES OF CONTAMINATION:

Contaminated food, water

PREVENTION:

Filter water
Avoid contaminated water or swimming in contaminated water.
Cortisone and other drug therapy provokes infection
Stress plays a role

HISTORY

*** 1933 Chicago World's Fair caused from contaminated drinking water from defective plumbing, allowing sewage to seep into the drinking water. There were 1,000 cases (58 deaths).**

*** 1983 Los Angeles County Department of Health was notified of 38 cases from August to October that year. They failed to identify the source of the problem.**

HOW TO HELP:

*** in India it is controlled with Jasmine tea.**
*** take 1 bottle 6x homeopathic IPECAC to push out larvae. May need X40 kit from Kroeger, and tofu compresses 20 minutes a night to till get headache (for cancer tumor). If non-cancer tumor, use tomato instead of tofu till get pain.**
*** if infected in liver, take Goldenrod, Goldenseal, and Cloves.**
*** a high carbohydrate diet makes infection worse.**
*** disinfect water by boiling, or adding small amount of iodine to water. Chlorine does not kill this off.**
*** boil mulberry twigs in white grapejuice (take 4 oz three times a day; children take 1 tbsp several times a day). Hold in mouth before swallow. Do for one week.**

AMOEBA aka Naegleria fowleri

also known as the brain eating amoeba



(from Wikipedia) Naegleria fowleri, also known as the brain-eating amoeba or brain-eating amoeboid, is a species of the genus Naegleria. It belongs to the phylum Percolozoa and is classified as an amoeboflagellate excavate, an organism capable of behaving as both an amoeba and a flagellate. This free-living microorganism primarily feeds on bacteria, but can become pathogenic in humans, causing an extremely rare, sudden, severe, and almost always fatal brain infection known as primary amoebic meningoencephalitis (PAM), also known as naegleriasis.

There are many species of Naegleria, only fowleri species causes human disease.
N. fowleri disease is known as primary amoebic meningoencephalitis (PAM).
Occurs up to 8 times a year, from July to September.
Rare infection.

AREAS FOUND:

Brain

SOURCES OF CONTAMINATION:

- **loves very warm freshwater, can survive up to 113oF**
- **resides in warm lakes, ponds, rock pits, mud puddles**
- **warm slow flowing rivers especially with low water levels**
- **untreated swimming pools and spas**
- **untreated well water or untreated municipal water (found in children's water park)**
- **hot springs, other geothermal water sources**
- **thermally polluted water like runoff from power plants**
- **aquariums**
- **soil, including indoor dust**

This parasite goes through stages: first is the cyst stage which enables the parasite to withstand harsh environments like below 50^{o}F, then the trophozolite stage which is when it becomes infective for people and during which the parasite feeds and replicates. This second stage find the parasit attaching to the olfactory epithelium in the nose,, through the cribriform plate in the nasal cavity and entering the brain. It transforms around 77oF, thrives best around 108oF. Once inside the nasal cavity it can transform within a few hours.

TRANSMISSION

Enters nose. Can transform within a few hours but between 2-15 days later symptoms appear. Death usually occurs 3-7 days after symptoms appear. Average time to death is 5.3 days.

SYMPTOMS

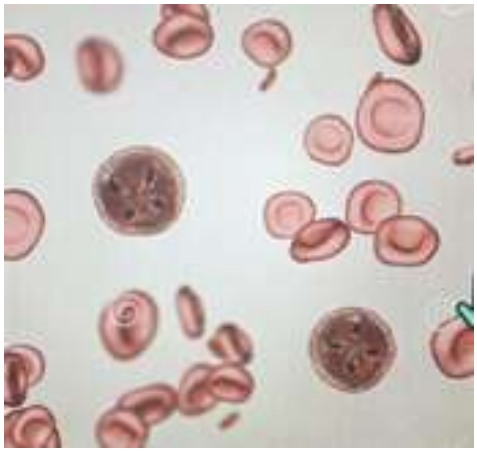
headache
fever
stiff neck
loss of appetite
vomiting
altered mental state
seizures
coma
hallucinations,
drooping eyelid
blurred vision
loss of sense of taste

TREATMENT:

There are some drugs that kill the amoeba in the test tube, but the patients rarely survive these.

There is no rapid test, it can take weeks to identify the amoeba.

BABESIA - Piroplasm (blood parasite)



This is another type of Lymes Disease caused by a tick.

DESCRIPTION

This is a Protozoa parasite of the blood. Causes hemolytic disease known as babesiosis.

Babesiosis is a malaria like parasitic disease caused by infection with Babesia, a genus of protozoal piroplasms. After trypanosomes Babesia is thought to be the second most common blood parasite of mammals. They may have major inpact on health of domestic animals in areas without severe winters.

TRANSMISSION

Similar to other blood parasites, the life cycle of Babesia species involves two hosts. Typically the species infect a tick, then the tick bites and infects a human host. The parasites continue to multiply and pass through life stages until they enter the blood. It is in this location that they are responsible for the clinical symptoms.

Humans will not usually re-infect ticks however humans can transmit this type of parasite to other humans through blood-blood contact such as transfusions.

Transmitted by Ixodes scapularis ticks.

Found in eastern areas of U.S. but widespread throughout N. America.

SYMPTOMS

Similar to lyme but usually starts with high fever and chills(flu like symptoms), then on to fatigue, headache, drenching seats, muscle aches, nausea, vomiting.

Mild fevers

Diarrhea

Symptoms are often unnoticed or unexplained. In severe cases malaria symptoms manifest with fevers up to 105o, shaking chills, severe anemia. Organ failure may follow.

Severe cases in people occur sometimes in people who have had spleen removed, if immunodeficient in some way.

TREATMENT

Lymes Protocol

Quinine and clindamycin - if not tolerated use atovaquone and azithromycin. Another says

use atovaquone (Mepron, Malarone) plus an erythromycin type drug (azithromycin, clarithromycin or telithromycin). Long standing infections need to be treated for months.

May need blood transfusion to remove infected red blood cells and replace with uninfected ones.

BARTONELLA (lymes)



DESCRIPTION

Bartonella are gram negative bacteria that live inside cells; they can infect humans, mammals, and a wide range of wild animals. Not all Bartonella species cause disease in humans. Bartonella henselae causes an important emerging infection first reported in 1990 and described as a new species in 1992. It is mainly carried by cats and causes cat-scratch disease, endocarditis, and several other serious diseases in humans.

Bartonella bacteria are known to be carried by fleas, body lice and ticks, sand flies, mosquitoes. Scientists suspect that ticks are a source of infection in some human cases of bartonellosis. People with tick bites and no known exposure to cats have acquired the disease. People who recall being bitten by ticks have been co-infected with Lyme and Bartonella. More research needs to be done to establish the role of ticks in spreading the disease.

Scientists have identified several species of Bartonella. One is carried by sand flies in the Andes Mountains in Peru, Surveys, and Ecuador. Another is found worldwide in human body lice. Bartonella bacteria have been found in the European sheep tick. Five different Bartonella species have been detected in 19.2% of I. pacificus ticks collected in California.

Cat scratch disease is from Bartonella honselae. Domestic cat is a major reservoir for Bartonella henselae, suspected that 14-50% of the cats in USA have the antibodies. Most of the cats are healthy; the cat flea may be an additional vector.

Bartonella quintana is also known as Trench Fever, usually caused by body lice.

Bartonella vinsonii berkhoffi infects worldwide with those who live and work with animals, it can lead to systemic disease. Transmission is said through dogs and fleas.

Bartonella koehlerae was recently discovered species associated with cat contact, B. koehlerae has been implicated in illnesses impacting the central nervous system in people.

Bartonella bacilliformis is a bacteria that humans can contract various Bartonella infections from. Specific parts of South America have vectors that can transmit this infection, such as Peru and the Andes Mountains. This bacterium is spread through the bite of sandflies that have B. bacilliformis.

SYMPTOMS

Bartonellosis is often mild but in serious cases it can affect the whole body. Early signs are fever, fatigue, headache, poor appetite, and an unusual, streaked rash. Swollen glands are typical, especially around the head, neck and arms. Burrascano suspects bartonellosis when neurologic symptoms are out of proportion to the other systemic symptoms of chronic Lyme. He also notes gastritis, lower abdominal pain, sore soles, and tender subcutaneous nodules along the extremities. Lymph nodes may be enlarged and the throat can be sore.

Bartonella are elusive bacteria, evading immune response by hiding in cells and tissue

TREATMENT

Erythromycin and doxycycline have been used successfully for standard Bartonella, but Burrascano suspects that tick-borne Bartonella is different and recommends levofloxacin or, for children under 18, azithromycin.

There is a large protocol regarding Lymes Disease. Dr. Klinghardt is a leading doctor from Germany who spent time working in the parasitology department of India and who himself had Lymes disease as a young man. He is considered a world authority about Lymes.

BORRELIA BURGDORFERI (Lymes Disease)





Bartonella and Borrelia burgdorferi are different bacteria. Bartonella is spread by fleas, lice, or sand flies, while Borrelia burgdorferi causes Lyme disease and is primarily transmitted by ticks.

This is an infectious spirochete bacteria that is one of the the causative agents of Lyme disease. Borrelia burgdorferi is transmitted to humans through the bite of an infected blacklegged tick (Ixodes scapularis) and western blacklegged ticks (Ixodes

pacificus), also known as the deer tick. The ticks acquire the bacteria from feeding on infected vertebrate hosts, such as mice. When the tick bites a human, the bacterium is introduced into the bloodstream along with the tick's saliva, which contains substances that help evade the immune response.

The infection it causes include a wide range of morbidity and mortality in the continental U.S. and Canada The current testing methods involves looking at microscopy, serologic and molecular diagnostic. Microscope rely on visualizing blood during an early active phase of infection or in biopsies of affected skin, displaying the characteristic erythema migrans rash, however detection of blood-born spirochetes is variable and depends on the level of infection, therefore this method is limited.

Not all Borrelia infections result in a predictable antigenic response and limiting detection methods to a small subset of antigenic proteins is likely to turn up false negatives which is further complicated by the antibody production that may be limited in certain populations.

SYMPTOMS

- **Bull's eye rash**
- **Fever**
- **Chills**
- **Headache**
- **Fatigue**
- **Muscle and joint aches**
- **Swollen Lymph nodes**

If left untreated, it can lead to more severe symptoms affecting the joints, heart and nervous system.

Dr. Klinghardt says that Lymes invites co-infections, other parasites to sit at the table. So you are usually dealing with more than just one parasite.

Using the Rife Machine has been a great help in the past. One of the few things that actually seems to target the offender with its own frequency.

Klinghardt is probably the most knowledgeable doctor in the world about this species because he contracted it in Germany at a young age and has been studying it ever since. Apparently in the Black Forest of Germany, 100% of the population test positive for Lyme.

PREVENTION

Be aware of the tick's habitat. Ticks like dry tall grass. So if you and/or your animals are out in fields, as soon as you come in, check yourself and all your animals for ticks before they start digging into the skin.

Wear clothes that don't allow the ticks to get onto your skin – long socks, tight leggings/pants etc. This is not 100% but will help.

See Lymes Protocol if you need help to treat this.

BILHARZIA (aka Schistosomiasis, Bilharziosis, or Snail fever)



DESCRIPTION:

Schistosomiasis is a parasitic disease caused by several species of trematodes (platyhelminth infections or 'flukes'), a parasitic worm of the genus Schistosoma.

Snails serve as the intermediary agent between mammalian hosts. Individuals within developing countries who cannot afford proper water and sanitation facilities are often exposed to contaminated water containing the infected snails.

Although it has a low mortality rate, schistosomiasis is often a chronic illness that can damage internal organs and in children, impair growth and cognitive development.

The urinary form of schistosomiasis is associated with increased risks for bladder cancer in adults.

This disease is most commonly found in Asia, Africa and South America esp in areas where the water contains numerous freshwater snails which may carry the parasite. When children come into contact with the contaminated water source, the parasitic larvae easily enter through their skin and further mature within organ tissues, statistically identified epidemics of Schistosomiasis within their respective populations.

Adult worms are about 10mm long. They reach mature in 6-8 weeks and then begin to produce eggs. They can product 300-3,000 eggs a day depending on the type. Worm pairs can live in the body for 4-20 years. Trapped eggs mature, secreting antigens that elicit a vigorous immune response. The eggs don't damage the body, it is the cellular infiltration from the immune response that causes the pathology.

SYMPTOMS:

Schistosoma mansoni and Schistosoma intercalatum cause intestinal schistosomiasis
Schistosoma haematobium causes urinary schistosomiasis
Schistosoma japonica and Schistosoma mekongi cause Asian intestinal schistosoma.
Abdominal discomfort
Cough
Diarrhea
Fatigue
Fever
High white blood cell count
Enlarged liver and spleen.
Genital sores

Mild skin itching, papular dermatitis of the feet
Central Nervous system lesions causing cerebral granulomatous disease caysed b eggs in the brain
Transverse Myelitis with flaccid paraplegia from eggs in spinal cord
Continuing infection may cause fibrosis in affected organis which may result in Colonic polyposis with bloody diarrhea usually from S. mansoni. Portal hypertension with hematemisis and splenomegaly. Cystitis, ureteritis. Pulmonary hypertension. Glomerulonephritis. Central Nervous system lesions.
Bladder cancer.
Liver Spots when they plug up the liver
Enlarged blue veins

TRANSMISSION:

From snails in dirty water - usually from Africa, Asia, South Africa. Swimming in the water of infected snails. Parasite secretes enzymes that break down the skin's protein so it can enter the body. It travels to the lungs where it develops, then to the liver (only 8-10 days have passed since infection). In the liver it feeds on red blood cells. From the liver it migrates to the bladder, ureter, kidneys through the hemorrhoidal plexus.

In 6-8 weeks they produce eggs (300-3,000 a day) and the eggs pass through the walls of the blood vessels, through the intestinal wall, and out with the feces. S. haematobium eggs go through the ureter or bladder wall into the urine.

Only mature eggs are capable of crossing into the digestive tract, possibly through the release of proteolytic enzymes.

Up to 1/2 the eggs released by a pair of worms become trapped in the mesenteric veins, or are washed back into the liver where they are lodged.

Trapped eggs mature, secreting antigens that elicit a vigorous immune response. The eggs don't damage the body, it is the cellular infiltration from the immune response that causes the pathology.

AREAS IT RESIDES IN:

Liver, Lungs, Urinary Tract, blood, bowel - all depending on the type involved.

SOURCES OF CONTAMINATION:

Water with infected snails in it.

PREVENTION:

Avoid areas where snails are (eg. Lake Mawaki, Lake Victoria in Africa).

HOW TO HELP: rife machine, drugs

Note: internet recommends a short course of fast acting antibiotic praziquantel which kills the worms.

BLADDERWORM (Cystircercosis) aka Taenia Hydatigena - thin necked bladderworm



DESCRIPTION:

A type of tapeworm, belongs to genus Taenia.
It is a small, sac like vesicle resembling a bladder which is why it is called Bladderworm.
A cysticercus is a bladder-like transparent vesicle. It is composed of two main parts: the vesicular wall and a scolex. The vesicular wall is a complex structure made up of three distinct layers. The outermost is a smooth and undifferentiated layer called cuticular mantle. The middle is composed of cells that resemble epithelial cells. The innermost is made up of muscle and other fibres. Inside the vesicular wall is an invaginated (facing inward) scolex. The scolex contains suckers and hooks, and a neck attached to a rudimentary body segment.

TRANSMISSION:

Requires immediate host beside human. In some cases humans are both hosts and this can **result in dangerous condition called Cystircercosis or Bladderworms. These juveniles may borrow into various organs of the body.**

SYMPTOMS: Same as in other tapeworms.

AREAS IT RESIDES IN:

The gut. It is called Bladderworm because it looks like a bladder, not because that is where it is located.

SOURCES OF CONTAMINATION:

It normally develops from the eggs, which are ingested by the host, like pig and cow. The tissue infection is called cysterercosis. In he host, they settle in the muscles. When people eat raw or undercooked pork or beef that is contaminated by cysticerci, the larva grow into adults worms inside the intestine.

Under certain circumstances, specifically for the pork tapeworm, the eggs can be accidentally eaten by humans through contaminated foodstuffs. In such case, the eggs hatch inside the

body, generally moving to muscles as well as inside the brain. Such brain infection can lead to a serious medical condition called neurocysticercosis.[1] This disease is the leading cause of acquired epilepsy.

PREVENTION:

Don't eat undercooked meat.

HOW TO HELP:

Rascal by Kroeger (black walnut, sassafras, pine needles). Also see how to eradicate tapeworms.

CHAGAS aka American Trypanosomiasis

aka Kissing Bug or Assassin bug, sleeping sickness parasite.







DESCRIPTION:

Occurs in Central and South America, but immigrates to the rest of the world. Parasite is called Trypanosoma cruzi - a blood sucking, predatory bug of the Reduviidae family, also known as "vinchuca", "barbiero", "chipo", "assassin bug".

The bugs live in the crevices and roofs of houses in poorer rural areas and urban slums.

The infected bug deposits its feces which are laden with the T. vrusi parasite at the time of biting, usually at night. The feces can then be rubbed accidentally by the individual into the bite wound or another open wound, eyes or mouth. The disease is called Chagas Disease.

Diagnosis can be done by blood test but rarely done in North America because it is a disease of the very poor in 3rd World countries. Travelers who stay in hotels and well constructed facilities are not at risk.

It is estimated 16-18 million people have this disease worldwide and approx. 50,000 die each year.

TRANSMISSION:

Usually spread by the feces of the reduviid bug, an insect that infests mud, adobe, or thatch houses. People get infected when they unknowingly rub bug feces into their eyes or mouth or into a bite wound. Infection can also be transmitted by blood

transfusions or organ transplants. An infected woman can pass the infection to her baby during pregnancy, at delivery or while breastfeeding.

SYMPTOMS:

Soon after infection can have a fever, and the most recognized acute symptomis swelling of the eye on the side of the face, usually at the bite wound or where feces were rubbed into the eye. Other symptoms are tiredness, enlarged liver, or spleen, swollen lymph glands, sometimes a rash, loss of appetite, diarrhea, vomiting. Infants and very young children can get an often fatal swelling of the brain.

During the indeterminate stage, about 8-10 weeks after infection the person has no symptoms.

Chronic Stage: Some people develop serious and irreversible damage to the heart or intestinal trace 10-10 years after infection. Heart related problems include an enlarged heart, altered heart rate or rhythm, heart failure, or cardiac arrest. Enlargement of parts of the digestive tract can result in severe constipation or problems with swallowing. Some people have little symptoms until it reaches the chronic stage.

AREAS IT RESIDES IN:

Heart or Intestines

SOURCES OF CONTAMINATION: Houses

PREVENTION:

Keep your house clean, free of bugs.

HOW TO HELP:

Medicine can be given in the initial stages of infection but many go undiagnosed. Once it becomes chronic, there is no effective cure. Nifurtimox (Lampit; Bayer) and Benznidazole (Lafepe-benznidasole, Laboratorio Farmaceutico do Estado de Pernambuco/Lafepe) are the current drugs used and are limited to the treatment of children with acute infection and early chronic disease. Once the disease reaches the organs so far there is not much to be done.

There is some light on the horizon. In 2007 it was found that in order to complete its reproductive cycle the parasite must first bind to human cells and to do this it uses large compounds called mucins which are synthesized by enzymes on the parasite's surface. These enzymes were the target of investigation in Brazil and by making relatively small molecules, related to mucins, which can bind to the enzymes, researches aimed to understand how the enzymes operate. They hope to find a drug that will prevent the parasite from binding, thus stopping the disease.

CRYPTOSPORIDIUM aka Crypto





DESCRIPTION: **Cryptosporidium, sometimes called crypto, is an apicomplexan genus of alveolates that are parasites that can cause a respiratory and gastrointestinal illness (cryptosporidiosis) that primarily involves watery diarrhea (intestinal cryptosporidiosis), sometimes with a persistent cough (respiratory).**

TRANSMISSION:

Usually water borne problem. It spreads when germs from infected poop get into a person's mouth, such as through contaminated water (including swimming pool or lake water) or contaminated food . So it is caused by swallowing a microscopic parasite from contaminated water or food.

SYMPTOMS:

Watery Diarrhea and Abdominal pain lasting for about 10 days.
Bloat in full moon
Can be discomfort when they leave (queezy). They leave quickly.
Persistent Cough

AREAS IT RESIDES IN: worldwide

SOURCES OF CONTAMINATION: contaminated water or food

PREVENTION:

There is no vaccine or drug to prevent. Avoid sleeping in poorly constructed thatch, mud or adobe houses, if that isn't possible use a bednet. Use insecticides to kill insects and reduce risk of transmission. Avoid doing blood transfusions in other countries where the blood is not well screened.

HOW TO HELP:

- **Cryptosporidium kit (h) by Kroeger. Start to take 5 days before full moon.**
- **Parasite cleanse with herbs**
- **Make sure getting enough zinc.**
- **John Hopkins: No treatment works fully against the infection. If you have a healthy immune system, you will likely recover on your own. People who are in poor health or have a weak immune system may get a more serious infection. In some cases, you may need to take medicine for diarrhea. It's important to drink plenty of fluids to stay hydrated.**
- **Wash your hands thoroughly with soap and water after using the toilet or changing diapers.**
- **Wash your hands thoroughly before eating or making food.**
- **Wash and peel all raw fruits and vegetables before eating.**
- **Don't drink water from lakes, rivers, springs, ponds, or streams, unless they have been filtered or chemically treated.**
- **Don't drink any water or eat any food that may be tainted.**
- **When traveling to countries where the water supply may be un**
- **unboiled tap water. Also do not eat any raw foods washed with tap water. Choose steaming hot drinks, such as coffee and tea, and pasteurized fruit drinks. Make sure bottled water is safe to drink.**
- **Many home and camping/hiking water filters can remove Cryptosporidium. Read the label for details.**

DOG HEARTWORM (Dirofilaria immitis)



DESCRIPTION:

Round worm common in dogs and other mammals, now common in human.

TRANSMISSION:

Through bite of mosquito. The tiny juveniles live in gut of mosquito, passed from host to host through its bite.

SYMPTOMS:

Cough and chest pain.

Blockages of blood vessels, damage to organs.
Potential fatal condition in dogs.,

AREAS IT RESIDES IN:

Lives in heart and blood vessels and lungs.

PREVENTION:

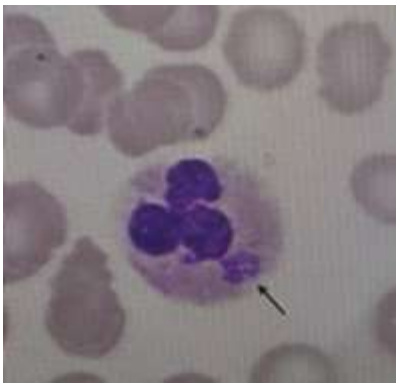
Monthly chewables like Simparica Trio protects dogs and other animals from heartworms, fleas, ticks, roundworms, hookworms. Or Credelio Quattro which adds tapeworm coverage.

HOW TO HELP:

Wormwood combination
Equal parts pine oil and wintergreen oil - take 3 drops three times a day in apple juice.
Apparently Ivermectin does not fix dog heartworm. Veterinarians have remedy for this.
Slater says it has crossed over into humans.
Kroeger has Dog Heartworm Vibrational remedy.

EHRILICHIA





IN DOGS

Ehrlichiosis is a tick-borne infectious disease that occurs in dogs and is usually carried by the brown dog tick. It first gained attention as a significant disease when military dogs returning from Vietnam during the 1970s were found to be infected. The disease seems to be particularly severe in German shepherds and Doberman pinschers.

The organism responsible for this disease is a rickettsial organism. Rickettsiae is a specific group or "genus" of bacteria. Ehrlichia canis (E. canis) is the most common rickettsial species involved in ehrlichiosis in dogs, but other strains of the organism will occasionally be found.
Because of its origin in military dogs in Vietnam, it has also been called tracker dog disease and tropical canine pancytopenia.

In the United States, E. canis is considered endemic (regularly occurring) in the southeastern and southwestern states, though the brown dog tick can be found throughout the United States and Canada. Though the brown dog tick is the main carrier of the E. canis in North America, other tick species have also been shown to transmit the disease in other areas and may carry other subspecies of Ehrlichia.

There are two kinds of ehrlichiosis, both of which are caused by tick-borne rickettsial parasites called EHRLICHIA that infect different kinds of white blood cells. In HME (human monocytic ehrlichiosis), they infect monocytes. In HGE (human granulocytic ehrlichiosis), they infect granulocytes. HGE was renamed anaplasmosis in 2003. Ticks carry many Ehrlichia-like parasites that have not been identified yet. It is likely that the lone star tick transmits HME and that the deer tick transmits HGE.

IN HUMANS

Ehrlichiosis (HME) was originally thought to be only an animal disease. It was described in humans in 1987 and is now found in 30 states, predominately in the southeast, south-central, and mid-Atlantic states, Europe and Africa. Anaplasmosis (HGE)in humans was first identified in 1990 in a Wisconsin man. Before that it was known to infect horses, sheep, cattle, dogs and cats. It occurs in the upper midwest, northeast, the mid-Atlantic states, northern California, and many parts of Europe. Studies suggest that in endemic areas as much as 15% to 36% of the population has been infected, though often it is not recognized.

DESCRIPTION

The worms have a simple structure consisting of a head (which lacks lips), a body, and a blunt tail. The outer body of the worm is composed of a cuticle with three main layers made up of collagen and other compounds which aid in protecting the nematodes while they are inside the digestive system of their host. Juveniles have a similar appearance to adult worms, but are significantly smaller. Male adults range from 20 to 34 mm long and 350 to 430 µm wide. Female adults range from 20 to 70 mm long and can be about 425 µm wide. They vary in color.

SYMPTOMS IN DOGS

Signs of ehrlichiosis can be divided into three stages: acute (early disease), subclinical (no outward signs of disease), and clinical or chronic (long-standing infection).In areas where ehrlichiosis is common, many dogs are seen during the acute phase. In this stage, infected dogs may have a fever, swollen lymph nodes, respiratory distress, weight loss, and bleeding disorders (spontaneous hemorrhage or bleeding). Occasionally, dogs may have neurological disturbances, such as unsteadiness or the development of meningitis. This acute stage may last two to four weeks. Some dogs eliminate the infection and others progress to the subclinical phase.

In the subclinical phase, the organism is present but not causing any outward signs of disease. Sometimes a dog will pass through the acute phase without its owner being aware of the infection. These dogs may become subclinical and have no apparent signs of illness, but will develop changes that can be observed through laboratory testing, such as low platelets. The subclinical phase is often considered the worst because there are no clinical signs, and so the disease goes undetected. During this phase, the only hint that a dog may be infected is

if the dog shows prolonged bleeding from a puncture site where a blood sample was drawn. Dogs that are infected sub-clinically may eliminate the infection or may progress to the next stage: clinical ehrlichiosis.Clinical ehrlichiosis occurs if the immune system cannot eliminate the *E. canis* organism. Dogs are likely to develop a host of problems, such as anemia, bleeding episodes, lameness, eye problems (including hemorrhage or blindness), neurological problems, and swollen limbs. If the bone marrow fails (the site of blood cell production), the dog becomes unable to manufacture any of the blood cells necessary to sustain life.

SYMPTOMS IN HUMANS:

Symptoms typically appear within 1 to 2 weeks after a tick bite and can include:

- **Fever**
- **Chills**
- **Headache**
- **Muscle aches**
- **Nausea**
- **Vomiting**
- **Rash (more common in children)**

If left untreated, symptoms can escalate to severe complications, including respiratory failure and organ failure.

TREATMENT:

For both dogs and humans: Antibiotics like doxycycline – effective if start early. Need do take for about a week.
Another source says Doxycycline 100 mg twice daily for 14-21 days is preferred.

PREVENTION:

- **Preventing tick bites is crucial to avoid ehrlichiosis. Recommended strategies include:**
- **Using tick repellents**
- **Wearing protective clothing**
- **Performing full-body checks after outdoor activities**
- **Safely removing any ticks found on the body**

COMPARE EHRLICHIOSIS TO LYME DISEASE

Ehrlichiosis is caused by bacteria in the Ehrlichia genus and typically causes fever, headache, muscle aches, and sometimes a rash, while Lyme disease is caused by Borrelia burgdorferi and often starts with a distinctive "bull's-eye" rash and flu-like symptoms. Both can lead to serious complications if untreated, but Ehrlichiosis more frequently affects older adults and has higher hospitalization rates.

Ehrlichiosis is caused by obligate intracellular bacteria (Ehrlichia chaffeensis – monocytic ehrlichiosis) or Ehrlichia ewingii (granulocytic ehrlichiosis) E. chaffeensis specifically infects monocytes, while I. Ewingii infects granulocytes. Bacteria multiply in cytoplasmic membrane-bound vacuoles as microcolonies called morulae, which can occasionally be fisualized on Wright or Giemsa-stained blood smears. Morulae are seen in monocytes in peripheral blodo in some E. chaffeensis cases, providing a diagnostic clue not available in Lyme disease. HME (monocytic ehrlichiosis) occurs mostly in the southeastern and south-central U.S. It is

transmitted by Amblyomma americanum (lone star tick). Is geographic distribution is a bit different than Lyme disease, for some overlapping exists.

- **Rash is present in only approximately one-third of patients and is MORE common in children than adults—this is the opposite pattern of many other tick-borne diseases**
- **Fever, headache, malaise, and myalgia are the predominant symptoms**
- **Gastrointestinal symptoms are common**
- **Neurologic manifestations occur in approximately 20% of patients**
- **Patients with ehrlichiosis are typically older and more likely to have fever, chills, or dyspnea compared to Lyme disease patients**
- **Case-fatality rate is approximately 3% for E. chaffeensis ehrlichiosis—significantly higher mortality than Lyme disease.**

Characteristic laboratory findings include leukopenia, thrombocytopenia, and elevated hepatic transaminases in the first week of illness

- **During recovery, relative and absolute lymphocytosis develops**
- **Mild-to-moderate hyponatremia may be present**
- **Blood smear examination may reveal morulae in monocytes (E. chaffeensis) or granulocytes (E. ewingii), though sensitivity is limited**
- **Do not assume presence of rash rules out ehrlichiosis—one-third of ehrlichiosis patients have rash. Confirmatory testing requires serology, PCR, or immunostaining**

Amoxicillin is NOT effective for ehrlichiosis—this is a critical distinction

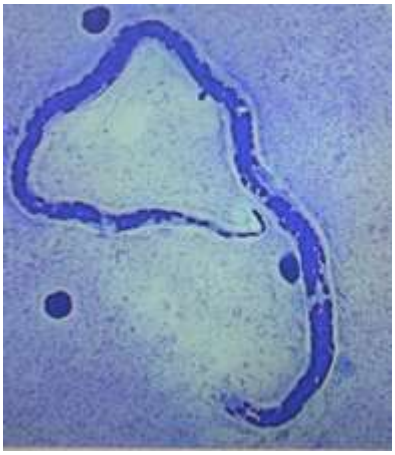
- **Doxycycline is highly efficacious and is the treatment of choice**
- **Delayed therapy is associated with severe or fatal outcome**

Lyme disease

- **is caused by the spirochete Borrelia burgdorferi in North America. It does not infect blood cells an cannot be visualized on routine blood smears. Spirochetes disseminate through tissues and organs rather than residing in leukocytes.**
- **Lyme Disease is most common Northeast, upper Midwest, and focal West coast areas. It transmitted by Ixodes scapularis (blacklegged tick) in the Northeast/Midwest and ilxodes pacificus in California). It causes about 300,000 illnesses each year in the U.S.**
- **Erythema migrans (EM) rash occurs in 70-80% of cases—an expanding annular lesion that is the hallmark of early infection**

- **Progresses through three stages: early localized, early disseminated, and late disseminated**
- **Early disseminated disease manifests as multiple skin lesions, facial palsy, meningitis, or cardiis**
- **Late disease presents as recurrent large-joint arthritis**
- **Fever may be present but is less prominent than in ehrlichiosis**
- **Do not assume absence of rash rules out Lyme disease—30% of Lyme patients never develop erythema migrans**
- **Amoxicillin can be used to treat early-stage Lyme disease 1. Treatment failure rate is approximately 1% . Note: Amoxicillin – is NOT effective for ehrilichiosis.**

EYE WORM (Loa Loa) aka African Eye Worm



TRANSMISSION

Maturing larvae and adults of the "eye worm" occupy the subcutaneous layer of the skin – the fat layer – of humans, causing disease. The L. loa adult worm which travels under the skin can survive up to 10–15 years, causing inflammations known as Calabar swellings. The adult worm travels under the skin, where the female deposits the microfilariae which can develop in the host's blood within 5 to 6 months and can survive up to 17 years. The young larvae, or microfilariae, develop in horseflies of the genus Chrysops (deer flies, yellow flies), including the species C. dimidiata and C. silacea, which infect humans by biting them. After bites from these infected flies, the microfilariae are unique in that they travel in the peripheral blood during the day and migrate into the lungs at night

Two species of *Chrysops* deerflies, *C. silacea* and *C. dimidiata*, are the main vectors for this filariasis.

1. **A fly bearing third-stage filarial larvae in its proboscis infects the human host through the bite wound.**
2. **After entering the human host, the larvae mature into adults, commonly in subcutaneous tissue. Adult females measure about 40 to 70 mm in length and 0.5 mm in diameter. Males measure some 30 to 34 mm by 0.35 to 0.43 mm.**
3. **The adult female produces large numbers of microfilariae, about 250 to 300 μm in length and 6-8 μm in width. She continues to do so continuously for her lifetime, which typically spans several years.**
4. **Microfilariae tend to reside within spinal fluids, urine, and sputum; by day, they also circulate in the bloodstream. Apart from their presence in bodily fluids, however, microfilariae in the noncirculating phase also occur in the lungs.**
5. **The vector fly ingests microfilariae while feeding on the host's blood.**
6. **Once inside the vector, the microfilaria sheds its sheaths and escapes through the walls of the midgut into the fly's haemocoel.**
7. **It then migrates through the hemolymph into the wing muscles in the fly's thorax.**
8. **In the thoracic muscles, the microfilaria develops successively into a first-stage larva, second-stage larva, and finally into the infectious third-stage larva.**
9. **The third-stage larva migrates to the fly's proboscis.**
10. **Once the larva is established in the proboscis and the fly takes its next human blood meal, the cycle of infection continues.**

Usually, about five months are needed for larvae (transferred from a fly) to mature into adult worms, which they can only do inside the human body. The most common display of infection is the localized allergic inflammations called Calabar or Cameroon swellings that signify the migration of the adult worm in the tissues away from the injection site by the vector. The migration does not cause significant damage to the host and is referred to as benign. However, these swellings can be painful, as they are mostly found near the joints.

Although most infections with *L. loa* are asymptomatic, symptoms generally do not appear until years, or even more than a decade, after the bite from an infected fly. However, symptoms can appear as early as four months after a bite. These parasites have a diurnal periodicity in which they circulate in the peripheral blood during the daytime, but migrate to vascular parts of the lungs during the night, where they are considered non circulatory. Therefore, the appearing and disappearing characteristics of this parasite can cause recurrent swelling that can cause painful enlargements of cysts in the connective tissue surrounding tendons. Additionally, chronic abscesses can be caused by the dying worms.

The most visual sign of an adult worm infections is when the worm crosses the sclera of the eye, which causes significant pain to the host and is usually associated with inflammation and less likely, blindness. Eye worms typically cause little eye damage and last a few hours to a week. Other tissues in which this worm can be found includes: the penis, testes, nipples, bridge of the nose, kidneys, and heart. The worms in these locations are not always externally visible.

SYMPTOMS

The clinical manifestations of ehrlichiosis and anaplasmosis are the same. Each is often characterized by sudden high fever, fatigue, muscle aches, headache. The disease can be mild or life-threatening. Severely ill patients can have low white blood cell count, low platelet count, anemia, elevated liver enzymes, kidney failure and respiratory insufficiency. Older

people or people with immune suppression are more likely to require hospitalization. Deaths have occurred.

TREATMENT

Adult worms found in the eye can be surgically removed with forceps after being paralyzed with a topical anesthesia. The worm is not paralyzed completely, so if it is not extracted quickly, it can vanish **upon attempting extraction.**
Ivermectin has become the most common antiparasitic agent used worldwide, but can lead to residual microfilarial load when given in the management of loiasis. Treatment with ivermectin has shown to produce severe adverse neurological consequences in some cases. These treatment complications can be increased in individuals co-infected with onchocerciasis. Some of these patients experienced cases of coma and resultant encephalopathy, parkinsonism, and death. After about 12 hours, the first signs start to appear and include fatigue, pain in joints, mutism, and incontinence. Severe disorders of the consciousness start to develop after about a day.

Although Ivermectin is a common treatment for loiasis, the Centers for Disease Control (CDC) recommends treatment with diethylcarbamazine (DEC). Symptoms may be resolved with as little as 1–2 courses of DEC. DEC is chosen over Ivermectin because evidence supports its ability to kill both the adult worms and the microfilariae, which are the main cause of the severe neurological problems mentioned above. In some cases, albendazole may also be an effective treatment used to reduce the microfilariae prior to treatment with DEC. The body's response to albendazole is slow, so the patient being treated must be monitored closely and frequently to ensure it is effective.

Other Drugs: ehrlichiosis/anaplasmosis is doxycycline with rifampin if first ones fail.

ENTAMOEBA HISTOLYTICA



DESCRIPTION

This is a single celled parasitic animal, i.e., a protozoa, that infects predominantly humans and other primates. Diverse mammals such as dogs and cats can become infected but usually do not shed cysts (the environmental survival form of the organism) with their feces, thus do not contribute significantly to transmission. The active (trophozoite) stage exists only in the host and in fresh feces; cysts survive outside the host in water and soils and on foods, especially under moist conditions on the latter. When swallowed they cause infections

by transforming to the trophozoite stage in the digestive tract.

Entamoeba histolytica is an anaerobic, protozoan parasite that infects humans and other primates.1 Infection can occur when a person ingests water or food that has been contaminated with fecal material containing mature E histolytica cysts — the infective stage of the parasite — or ingests E histolytica cysts present on their fingers or on the surfaces of objects.

E histolytica can also be spread through oral-anal sexual activity.

These mature, quadrinucleated cysts release motile trophozoites in the small intestine; the trophozoites — the activated, growing stage of the parasite — migrate to the large intestine, where they secrete specific proteolytic enzymes. Severity of symptoms associated with E histolytica infection is dependent on parasite density.

Entamoeba species can penegrate the gut into the blood stream on their travels to other organ systems.

The trophozoite stage is very similar to a white blood cell when doing live blood analysis. It looks like a neutriphil!

Very similar to a white blood cell in the microscope.

Change to phase contract and view to be sure.

The life cycle of *Entamoeba histolytica* involves trophozoites (the feeding stage of the parasite) that live in the host's large intestine and cysts that are passed in the host's faeces. Humans are infected by ingesting cysts, most often via food or water contaminated with human faecal material.

The trophozoites can destroy the tissues that line the host's large intestine, so of the amoebae infecting the human gastrointestinal tract, *E. histolytica* is potentially the most pathogenic. In most infected humans the symptoms of "amoebiasis" (or "amebiasis") are intermittent and mild (various gastrointestinal upsets, including colitis and diarrhoea). In more severe cases the gastrointestinal tract haemorrhages, resulting in dysentery. In some cases the trophozoites will enter the circulatory system and infect other organs, most often the liver (hepatic amoebiasis), or they may penetrate the gastrointestinal tract resulting in acute peritonitis; such cases are often fatal. As with most of the amoebae, infections of *E. histolytica* are often diagnosed by demonstrating cysts or trophozoites in a stool sample.

TRANSMISSION

Human cases are diagnosed by finding cysts shed with the stool; various flotation or sedimentation procedures have been developed to recover the cysts from fecal matter; stains (including fluorescent antibody) help to visualize the isolated cysts for microscopic examination. Since cysts are not shed constantly, a minimum of 3 stools should be examined. In heavy infections, the motile form (the trophozoite) can be seen in fresh feces. Serological tests exist for long-term infections. It is important to distinguish the E. histolytica cyst from the cysts of nonpathogenic intestinal protozoa by its appearance.

E histolytica can also be spread through oral-anal sexual activity.

Amebiasis is transmitted by fecal contamination of drinking water and foods, but also by direct contact with dirty hands or objects as well as by sexual contact.
In the majority of cases, amoebas remain in the gastrointestinal tract of the hosts. Severe ulceration of the gastrointestinal mucosal surfaces occurs in less than 16% of cases. In fewer cases, the parasite invades the soft tissues, most commonly the liver. Only rarely are masses formed (amoebomas) that lead to intestinal obstruction. Fatalities are infrequent.

The most dramatic incident in the USA was the Chicago World's Fair outbreak in 1933 caused by contaminated drinking water; defective plumbing permitted sewage to contaminate the drinking water. There were 1,000 cases (with 58 deaths). In recent times, food handlers are suspected of causing many scattered infections, but there has been no single large outbreak.

SYMPTOMS

Affected people are generally asymptomatic or experience mild symptoms. Symptoms of E histolytica infection are similar to those of inflammatory bowel disease and can include diarrhea, constipation, weight loss, and abdominal cramps.
Infections that sometimes last for years may be accompanied by

- **no symptoms,**
- **vague gastrointestinal distress,**
- **dysentery (with blood and mucus). Most infections occur in the digestive tract but other tissues may be invaded. Complications include**
- **ulcerative and abscess pain and, rarely,**
- **intestinal blockage.**

Onset time is highly variable. It is theorized that the absence of symptoms or their intensity varies with such factors as

- **strain of amoeba,**
- **immune health of the host, and**
- **associated bacteria and, perhaps, viruses. The amoeba's enzymes help it to penetrate and digest human tissues; it secretes toxic substances.**

Infectious Dose--Theoretically, the ingestion of one viable cyst can cause an infection.

Severe infection can result in amebiasis (amebic dysentery), amebic colitis, and amebic liver abscesses. According to the Centers for Disease Control and Prevention (CDC), approximately 10% to 20% of people infected with E histolytica become ill. In the United States, amebic colitis is more common than amebiasis and amebic liver abscesses, and amebiasis is observed primarily in immigrants and individuals who travel to and from endemic areas. Symptoms of amebic colitis can include abdominal cramps, pain, and bloody diarrhea. Peritonitis and intestinal perforation may occur

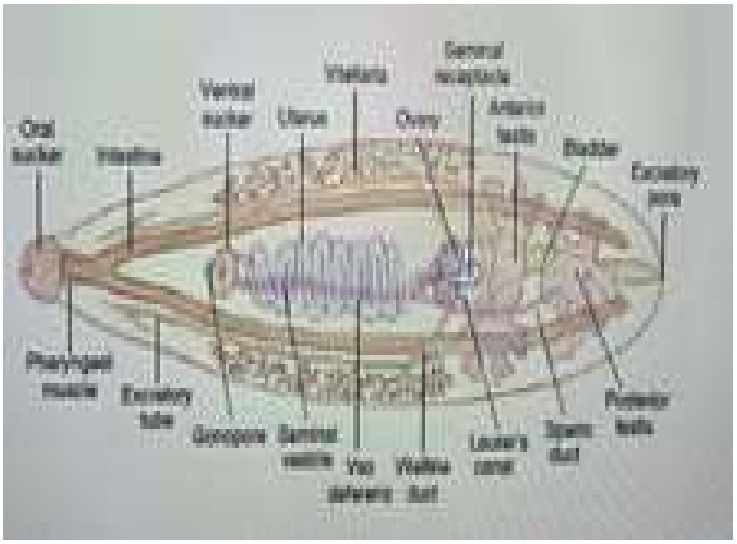
when E histolytica trophozoites invade the intestinal mucosa, causing .

Although amebiasis is relatively uncommon in the United States, approximately 40 to 50 million symptomatic infections with E histolytica occur worldwide annually. Severe disease occurs more frequently in the elderly, children, and people who are malnourished, immunosuppressed, or pregnant. In the United States, those at greatest risk for E histolytica infection include people living in institutions, recent immigrants from endemic areas (especially India, Africa, and Central and South America), people traveling to and from areas of endemic disease, and men who have sex with men.

FLUKES (Trematodes)







DESCRIPTION:

They are large, flat parasitic worms that live in the small intestine and can cause digestive issues, anemia, toxemia, edema, allergic reactions, neurological symptoms and other symptoms of inflammation.

Types: Flatworms, Bladder flukes, Bloodflukes(Schistsoma), Liver flukes(Fasciola Hepatica), Lung flukes(Paragonimus Westermani), Kidney flukes, Lymph flukes, Intestinal Flukes(Fasciolopsis Buski). Although there are thousands of species of flukes, about 70 are known to live in the human digestive tract. They are found worldwide but are most prevalent in East and Southeast Asia. It's estimated that 40-50 million people are infected with intestinal flukes, mostly through contaminated food.
They have 2 Ventral suckers allows attachment.
Human infections of flukes (Schistosomes) are in excess of 250 million worldwide.
Size varies from 1- 2 1/2 centimeters in length (1/2 - 3" long)
Blood flukes have a hook which they hook into blood cells. They attack blood.

TRANSMISSION:

Food such as raw or undercooked fish or crab. Eating infected vegetation like water chestnuts, watercress.
Drinking or wading in infected water.
They can release many eggs which work their way to the digestive or urinary tract and are passed out. The eggs cause damage as they pass through. Each egg has tiny spores on the outside that cause damage. They also release toxins that damage.

SYMPTOMS:

In the early stages of infection, when small numbers of flukes are present in the small intestine, a person may have no or minimal symptoms. Hunger pangs can be an early symptom. One or two months after becoming infected with intestinal flukes, abdominal pain and diarrhea or constipation can occur.
Heavy intestinal fluke infections cause inflammation, ulcers and mucus where the flukes attach to the lining of the intestinal wall. Other symptoms include malabsorption, nausea, vomiting, weight loss, malaise, fever and intestinal obstruction. Allergic reactions and swelling of the face and legs can also occur and anemia may be present.
Severe infections may also result in low albumin, vitamin B-12 deficiency and eosinophilia.
In severe infections, diarrhea may alternate with constipation. Some may experience bloody diarrhea.
As the worm burden increases over time, systemic inflammation and intoxication from metabolites produced by the flukes can cause:

- **toxic and allergic symptoms such as edema of the face, abdominal wall, and lower limbs**
- **abdominal distention and pain**
- **anorexia**
- **nausea**
- **vomiting**
- **if diarrhea persists it becomes greenish-yellow with an exceptionally foul odor**
- **intestinal obstruction**
- **ascites – a build up of fluid in the space between the lining of the abdomen and abdominal organs**
- **some species of intestinal fluke larvae can cause myocarditis, heart failure, and brain bleeds**
- **intestinal fluke eggs in the spinal cord can impact motor and sensory function depending a lesion is located**
- **neurological symptoms**
- **Severe intestinal fluke infestations can be fatal.**

They can cause severe disease of gastrointestinal tract, bladder, liver and destroy blood cells.
About 2.4 million people are infected with Fasciola haepatica - a liver fluke.
About 20 million have paragonimus - family of lung flukes, often then confusing diagnostics with tuberculosis.
Blood flukes: may cause strokes, blood clotting, eventually may affec bone marrow. May keep awake night, sleepy during day. May release proteolytic enzyme that destroys globin in blood. May take up certain amino acids esp. argenine (protein imbalance).
Intestinal Flukes makes lots of mucous, sinus trouble, cause disturbance in intestines, then for 2-5 days there are no symptoms, then it repeats again.
Liver Flukes: often pain in left lobe of liver, in center part right rib cage. Jaundice, swelling of liver, general poisoning condition
Lung Flukes: short of breath, anemia, oxygen starved blood. Open to pneumonia, fungi infection. Deep dry cough from lung. If severe infection - may cough blood
Lymph Flukes; person a little flushed, edema

AREAS IT RESIDES IN:

Lungs, Liver, Pancreas, Blood, Lymph, Bladder, Kidney, Intestines

SOURCES OF CONTAMINATION: Water, Food

PREVENTION:

Avoid wading in water that you don't know is clean.
Avoid eating any fish, or crab that is undercooked.
Avoid water chestnuts and watercress that may have been in contaminated water.

HOW TO HELP:

Hanna Kroeger developed several homeopathic type remedies for various flukes. Can still get online.
After Blood Flukes or Spirochete: 1 gallon of hyssop tea a day for 2 days - no food during this time.

Blood flukes: milkweed, pennyroyal, black walnut.

Intestinal flukes: homeopathic

Liver flukes: cloves, goldenrod, goldenseal. Liver fluke homeopathic.

Lung Flukes: Lung fluke homeopathic formula. Rebuild with Vit. A and lung herbs

Lymph Flukes: Lymph X homeopathic

If you wish to go with medical approach:
Praziquantel is the drug of choice for most intestinal fluke infections, although niclosamide has also been shown to be a helpful treatment.
Artesunate has been used to treat certain types of intestinal fluke infections, with promising results.
Combination parasite drug protocols may be more helpful to eradicate persistent infections.
Tetrachloroethylene as capable of reducing faecal egg counts by up to 99%. Other parasite drugs that may be helpful include thiabendazole, mebendazole, levamisole and pyrantel pamoate, oxyclozanide, hexachlorophene and nitroxynil.
Ivermectin is mostly used for strongyloides, scabies, parasitic skin infections. Unsure if

works on flukes.

GIARDIA



DESCRIPTION:

Single cell, pear shaped.
Occurs worldwide. Most commonly identified intestinal parasite in Canada.
Also called "Beaver Fever" because it used to be in waters commonly occupied by beavers long ago. When drinking water in a stream or lake, you never knopw upstream what problem might be lurking.

TRANSMISSION:

Found in drinking unclean water.
This is a common intestinal parasite that enters the body through contaminated food, water or soil.
More prevalent in summer in Medicine Hat area, coming from Banff area originally.
Originating source is usually animals urinating in lakes that is then used as drinking water.
Diapers, infected clothing

Life Cycle of Giardia Lamblia

Cysts, which are resistant to adverse environmental conditions, are passed in the faeces of an infected host, and the next host is infected when it ingests cysts in food or water contaminated with faeces. Giardiasis is diagnosed by finding cysts or trophozoites in the faeces, and both life cycle stages have a characteristic appearance.

Giardia cysts and trophozoites can be mistaken for WBC's and possibly parasitized thrombocytes in the chondroit stage

SYMPTOMS:

- **Millions of these organisms can coat the intestinal walls preventing absorption of nutrients which can lead to further types of illness.**
- **Symptoms of giardiasis normally begin 1 to 2 weeks (average 7 days) after becoming**
- **infected. In otherwise healthy persons, symptoms of giardiasis may last 2 to 6 weeks. Occasionally, symptoms last longer.**
- **Mild to moderate abdominal cramps, intestinal gas**
- **Light coloured fatty stools**

- **Poor absorption**
- **Slight fever**
- **watery or soft stools, constipation**
- **foul smelling diarrhea and gas**
- **dehydration**
- **abdominal bloating, pain, cramps**
- **belching, halitosis, foul smelling breath**
- **fatigue**
- **heartburn, indigestion**
- **loss of appetite, weight loss**
- **Weakness, chills, nausea**
- **Lactose and meat intolerant.**
- **May have deficiency in folic acid and fat soluble vitamins.**
- **Damages intestinal wall**
- **Often in multiple sclerosis in spine**

AREAS IT RESIDES IN:

Small intestine
Sometimes gallbladder

SOURCES OF CONTAMINATION:

- **Giardia is found in soil, food, water, or surfaces that have been contaminated with the feces from infected humans or animals.**
- **Most commonly be aware of lakes, streams, rivers that may contain infected feces of animals**
- **You can become infected after accidentally swallowing the parasite;**
- **You cannot become infected through contact with blood. Giardia can be spread by:**
- **Accidentally putting something into your mouth or swallowing something that has come**
  into contact with feces of a person or animal infected with Giardia.
- **Swallowing recreational water contaminated with Giardia. Recreational water includes water in swimming pools, hot tubs, jacuzzis, fountains, lakes, rivers, springs, ponds, or streams that can be contaminated with sewage or feces from humans or animals.**
- **Eating uncooked food contaminated with Giardia.**
- **A gust of wind can pick up the cysts from infected manure on farmland and blow it in any direction.**
- **Accidentally swallowing Giardia picked up from surfaces (such as bathroom fixtures, changing tables, diaper pails, or toys) contaminated with feces from an infected person.**

HOW TO HELP:

- **Consider all natural water infected and protect yourself.**
- **Avoid touching diapers or infected clothing.**
- **If going camping or out in nature, take fresh water with you or boil the water at least a minute before ingesting. Don' drink ice water.**
- **Wash hands thoroughly with soap and water.**
- **Wash hands after using the toilet and before handling or eating food (especially for persons with diarrhea).**

- **Wash hands after every diaper change, especially if you work with diaper-aged children, even if you are wearing gloves.**
- **Protect others by not swimming if you are experiencing diarrhea (essential for children in diapers).**
- **Giardia infection can be very contagious. Follow these guidelines to avoid spreading giardiasis to others:**
- **Wash your hands with soap and water after using the toilet, changing diapers, and before eating or preparing food.**
- **Do not swim in recreational water (pools, hot tubs, lakes or rivers, the ocean, etc.) if you have Giardia and for at least 2 weeks after diarrhea stops. You can pass Giardia**
- **in your stool and contaminate water for several weeks after your symptoms have ended. This has resulted in outbreaks of Giardia among recreational water users.**
- **Avoid fecal exposure during sexual activity.**
- **Wash and/or peel all raw vegetables and fruits before eating.**
- **Use safe, uncontaminated water to wash all food that is to be eaten raw.**
- **Avoid eating uncooked foods when traveling in countries with minimal water treatment and sanitation systems.**
- **Avoid fecal exposure during sexual activity.**
- **If my water comes from a well, should I have my well water tested?**

You should consider having your well water tested if you can answer "yes" to any of the following questions:

- **Are members of your family or others who use your well water becoming ill?**
- **If yes, your well may be the source of infection.**
- **Is your well located at the bottom of a hill or is it considered shallow? If so, runoff from rain or flood water may be draining directly into your well causing contamination.**
- **Is your well in a rural area where animals graze? Well water can become contaminated with feces if animal waste seepage contaminates the ground water. This can occur if your well has cracked casings, is poorly constructed, or is too shallow.**
- **Tests used to specifically identify Giardia are often expensive, difficult, and usually require hundreds of gallons of water to be pumped through a filter. If you answered "yes" to the above questions, consider generally testing your well for fecal contamination by testing it for the presence of coliforms or E. coli instead of Giardia. Although tests for fecal coliforms or E. coli do not specifically tell you whether Giardia is present, these tests will show whether your well water has been contaminated by fecal matter.**

These tests are only useful if your well is not routinely disinfected with chlorine, since chlorine kills fecal coliforms and E. coli. If the tests are positive, it is possible that the water may also be contaminated with Giardia or other harmful bacteria and viruses.

Contact your county health department, your county cooperative extension service, or a local laboratory to find out who offers water testing in your area. If the fecal coliform test comes back positive, indicating that your well is fecally contaminated, discontinue drinking the well water and contact your local water authority for instructions on how to disinfect your well.

HOOKWORM (Ancylostoma Caninum) (Ancylostoma duodenale)







DESCRIPTION:

* Ancylostoma duodenale found in southern Europe, Northern Africa, Northern Asia, South America.
* Necator americanus is in southeastern U.S.
* lives in the small intestine of its host which could be a mammal (dog, cat) or human.
* hookworms are thought to infect 800 million people worldwide. There are various species that infect dogs and cats.
* they are much smaller than the large roundworm, ascaris lumbricoides, and the complications of tissue migration and mechanical obstruction so frequently observed with roundworm infestation are less frequent in hookworm infestation.
* Eggs need warm, moist, shaded soil to hatch into larvae.
* female produces 10,000-30,000 eggs a day

TRANSMISSION:

*** acquire by direct contact with contaminated soil by walking barefoot where the tiny larvae, barely visible borrows into the skin (may cause blisters, itching), then pass into circulatory system and are carried to the lungs via the blood, they climb up the lungs through the bronchi and trachea and then are swallowed where they pass into the digestive tract, attaching themselves to the wall of the small intestine where they attach to walls and drink blood - this journey takes about a week. In the small intestine they mature into 1/2" worms, mate and feed on the blood of the host (human). Adult hookworms may live up to 10 years.**
*** Adult worms can produce thousands of eggs which are passed in the feces. If the eggs contaminate soil and conditions are good, they will hatch, molt and develop into infective larvae again within 5-10 days.**
*** they do not proliferate in the intestine, the only way to increase your worm load is to come into skin contact with stage one larvae.**
*** acquire also by accidental swallowing contaminated soil.**
*** from horses, dogs and their feces**
*** found in the vetables grown in land that doesn't freeze eg. Florida, Georgia**

SYMPTOMS:

*** light infection may cause no symptoms or just mild diarrhea, cramping**
*** they can drink upto 1/2 cup of blood a day - anemia may easily happen**
*** lots of explosive gas, stool explodes apart**
*** it likes to eat dirt, makes you stupid a bit. Rare in black community, more in white (white trash, lower IQ's)**
*** itching and rash at the site where skin touched soil or sand is usually the first sign of infection. These symptoms occur when larvae penetrates skin.**
*** heavy infection can create serious health problems for newborns, children, pregnant women and those malnourished. May cause anemia, abdominal pain, diarrhea, loss of appetite, weight loss. From the blood loss a protein and/or iron deficiency may arise.**
*** heavy, chronic infections can cause stunted growth and mental development, may be irreversible.**
*** loss of blood may cause tiredness, difficulty breathing, enlargement of heart, irregular heartbeat.**
*** most risk of infection is anemia, loss of iron (and protein) in the gut. The works suck blood voraciously and damage the mucosa. However blood loss in the stools is not visibly apparent.**
*** ankylostomiasis, aka helminthiasis, "miners anemia", "tunnel disease", "brickmaker's anemia" and "Egyptian chlorosis" is the disease caused by hookworms when present in large numbers, produced an iron deficiency anemmmia. The name is derived from Greek 'ancylo': crooked, bent, and 'stoma': mouth.**
*** hookworm is a leading cause of maternal and child morbidity in the developing countries of the tropics and subtropics. In susceptible children, hookworms cause intellectrual, cognitive and growth retardation, intrauterine gfrowth retardation, prematurity, and low birth weight amount newborns born to infected mothers. Hookworm infection is rarely fatal, but anemia can be significant in the heavily infected individual.**
*** it is said that about 44 million pregnant women have hookworm infections which cause chronic blood loss from the intestine and leads to iron deficiency anemia.**
*** coughing often occurs as they pass from the lung into the pharynx.**
*** infections occur mostly in tropical and subtropical climates**

*** estimated 1/5 of world's population is infected.**
*** may be fatal among infants**

AREAS IT RESIDES IN:

- **Larvae are released, grow in the feces and/or the soil, and after 5 to 10 days (and two molts) have become filariform (L-3) larvae that are infective.**
- **These infective larvae can survive 3 to 4 weeks in favorable environments.**
- **On contact with the human host, the larvae penetrate the skin and are carried through the veins and the heart to the lungs.**
- **They penetrate into the pulmonary alveolae, ascend the bronchial tree to the pharynx, and are swallowed.**
- **Upon reaching the small intestine, they undergo two more molts yielding fourth stage larvae (L4) and then adult worms.**
- **adult worms live in the lumen of the small intestine where they attach to the intestinal wall with resultant hos blood loss. Eggs are passed in the stool, and under favourable conditions (moisture, warmth, shade), hatdh in 1-2 days**
- **also found in liver, lungs, brain.**
- **Five weeks or more are required from invasion by the L3 to oviposition by the adult female.**
- **Most adult worms are eliminated in 1 to 2 years, but longevity records can reach several years.**
- **Some *A. duodenale* larvae, following penetration of the host skin, can become dormant (in the intestine or muscle!).**

SOURCES OF CONTAMINATION:

*** usually infects dogs, upon contact with soil contaminated by dog or other animal feces, the larva which lives in the soil will burrow into the skin of a human. It travels around the skin causing "creeping eruption", itching, discomfort in skin. After a few months, the worm dies**

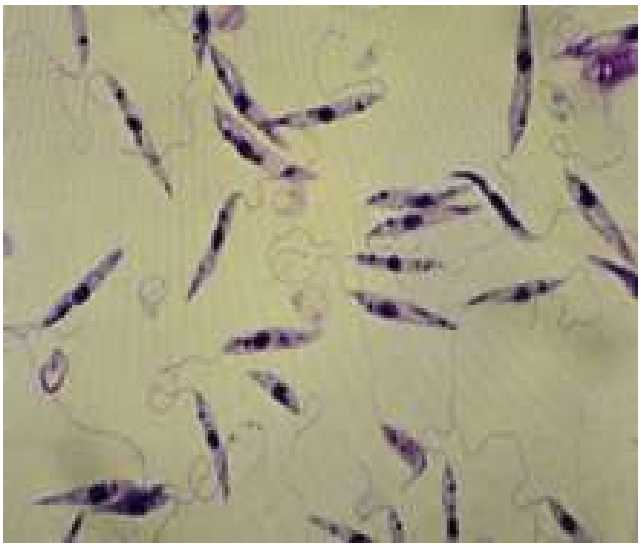
PREVENTION:

*** avoid walking with bare feet**
*** avoid handing feces (children are especially at risk in the yard where they pick up anything)**

HOW TO HELP:

*** homeopathic "hookworm" from Kroeger, available at 3rd St. Market and Natural Healing Clinic**
*** if infested eat very well, take extra iron to keep blood built up**
*** B vitamins feed parasites, avoid taking while treating**
*** 2 cups strong thyme tea will paralyze the worms 1/2 hour laer take good dose of Epsom salts.**
***herbs to help: Male Ferm, Eucalyptus, Condurago Bark, Acacia Bark, Oil of Peppermint, Wormwood**

LEISHMANIS (sometimes referred to as kala-azar)





There are 3 main forms of leishmaniases:

1. **visceral (the most serious form because it is almost always fatal without treatment),**
2. **cutaneous (the most common, usually causing skin ulcers), and**
3. **mucocutaneous (affecting mouth, nose and throat).**

Kala azar is visceral leishmaniasis, the most acute form of the disease caused by L. donovani. The name Kala-Azar is derived from Hindi meaning "black fever".

DESCRIPTION:

Kalazaar mostly in Africa, Kenya.

Amastigote: Small intracellular, rounded or oval body 1.5-3 X 2.5-6.5 um in size, found in vacuoles within mytoplasm of macrophages. No free flagellum. Organism has relatively large nucleus andkinetoplast consisting of rod like body and dot like basal body.

Promastigote: elongated extracellular organism, body size 15-20 X 1.5-3.5 um with single flagellum 15-28 um long, arising close to kinetoplast at anterior. Nucleus is situated centrally.

Single cell family

Gets in actual blood cell

Retrovirus cases usually have this and often other cancers.

Boosts white blood cell count 20 points.

Attacks dogs, but lately is seen to mutate over into human.

TRANSMISSION:

- **Congenital infection also proved (through mother during pregnancy).**
- **The disease is transmitted by the bite of infected female sandflies. The sandflies breed in large ant hills.**
- **Incubation period varies from 1-16 months.**
- **Direct transmission by personal contact with nasal secretion, urine, feces is possible,**

usually found in overcrowded areas.

- **It invades the reticuloendothelial cells (spleen, liver, lymph nodes and bone marrow) and is also seen occasionally in leucocytes (white blood cells) in peripheral blood, never inside hepatic parenchyma and central nervous system.**

SYMPTOMS:

- **This is life-threatening parasitic disease caused by the protozoa Leishmania donovani.**
- **It affects the reticuloendothelial system (spleen, liver and bone marrow most)**
- **Irregular fever, splenomegaly (enlarged spleen), hepatomegaly (enlarged liver), cachexia.**
- **Blackening of Skin, scaly skin**
- **Coughing**
- **Night sweats**
- **Weakness, weight loss**
- **Many children show dysentery, typhoid and pneumonia apart from usual fever.**
- **It is progressive ad systemic, presenting over weeks or months.**

AREAS IT RESIDES IN:

- **Visceral Leishmaniasis is endemic in West Bengal, where it was first discovered. It is prevalent in tropical and subtropical regions, esp. parts of India, Bangladesh, Nepal, Sudan and Brazil.**

HOW TO HELP:

Blood Cell Parasite homeopathic formula
Liposomal Amphotericin B drug 10mg single dose
Miltefosine orally for 28 days
Other drugs: Paromomycin; Pentavalent antimonials

PREVENTION:

Pentostam is primary medication.

LOA LOA – see Eye Worm

Loiasis is an infection caused by the roundworm Loa Loa.
Like river blindness, loiasis is spread by day biting flies. About 3-14 million people in equatorial Africa have been infected with Loa Loa.

LUNG WORM



Lungworms are parasitic nematode worms of the order Strongylida that infest the lungs of vertebrates, causing respiratory issues like bronchitis or pneumonia. They can damage lung tissue and are typically treated with antiparasitic medications

DESCRIPTION:

Parasitic nematode worm, order of STRONGYLIDA. Infests lungs of vertebrates. They migrate to hosts lungs or respiratory tracts and will gradually damage airways or lung tissue by inciting inflammatory reaction inside the tissue.

Reproduces in the respiratory tissues. Two common groups: Trichostrongyloidea or Metastrongyloidea (but not all species in these groups are lungworms).

Dictyocaulus infests gastrointestinal tract of mammals - hoofed animals (cattle and deer (D. viviparus), donkeys and horses (D. arnfeldi) and sheep and goats (D. filaria). These animals have direct life-cycles. Can infest cats and dogs.

In humans testing has revealed that 80% of chronic fatigue people have this, as well as most Lyme patients. It supresses the immune system of the lung.

TRANSMISSION:

In animals slugs and snails can be intermediate hosts, whee habit of sniffing at slug trails or even licking them causes the parasite egg to enter dog's respiratory tract. A cab may become infected by eating a bird or rodent that has itself eaten the original host.

SYMPTOMS:

Bronchitis or pneumonia, sneezing (caused by larvae that reside in lungs where immunity develops and accumulation of mucus cause blockage of the airway into the

lungs)
Fatigue, lack of zest, insomnia
Weight loss

SOURCES OF CONTAMINATION: **animals such as dogs**

PREVENTION:

Don't allow animals to roam or hunt outdoors. Can have chest xrays, fecal sample to monitor.

HOW TO HELP:

Drug Oxibendazole for nematode infestations
Drug: Ivermectin 12 mg 2-4 times a day in a cocktail formula
Fenbendazole or moxidectin should kill the parasite
Inhale potassium iodide
Freeze Dried Garlic and Artemisinin
1-2g oral mimosa pudica
colonics
no sugar
If severe: corticosteroids has been given as anti-inflam. Prednisone fior 5-10 days.
Drug fenbendazole, safe and does not harm animal.

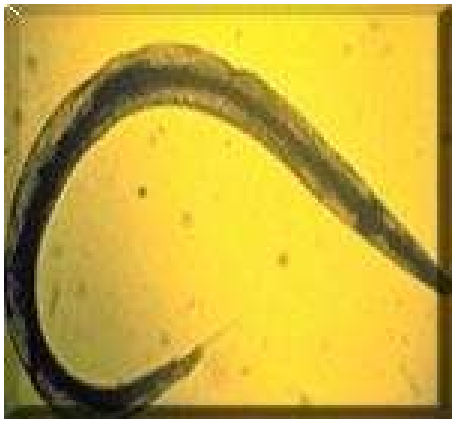
LYMPHATIC FILARIASIS aka Elephantiasis



A lymphatic filariasis infection happens when a person is bitten by a mosquito containing the roundworms WUCHERIA BANCROFTI, BRUGIA MALAYI, or BRUGIA TIMORI.

Over 6 - 12 months, adult worms mature and live in human lymph vessels and nodes. They release eggs that circulate through the blood. About 90 million people worldwide have been infected with these roundworms.
Over 657 million people in 39 countries worldwide remain threatened by lymphatic filariasis and require preventive chemotherapy to stop the spread of this parasitic infection.
However, as of 2018, 51 million people were infected – a 74% decline since the start of WHO's Global Programme to Eliminate Lymphatic Filariasis in 2000.
Due to successful implementation of WHO strategies, 871 million people no longer require preventive chemotherapy.
An essential, recommended package of care can alleviate suffering and prevent further disability among people living with disease caused by lymphatic filariasis.

PINWORM (Enterobius vermicularis)



These are also known as Threadworm.

DESCRIPTION:

Member of round worm family
The worm is white and can grow to about 1/2" in length. Usually remains in last foot of the colon near the rectum.
Worldwide about 500 million are infected with pinworm.
Pinworms can infect 1/5 of the children.
Can lay 5,000-16,000 eggs in a day. The eggs are light, carried in the air. The adults inhabit the cecum part of the large intestines as well as small intestines. Eggs are laid outside anus, easily passing onto sheets and infecting others in the bed. They may also invade the vagina.

TRANSMISSION:

- **This is a common intestinal parasite in humans.**
- **They are tiny white or light gray worms that cause enterobiasis, a common infection, and it is highly contagious, occurring most often in children.**
- **A pinworm infection happens when a person consumes food or drink contaminated with feces. The eggs hatch in the small intestine, and adult worms live in the large intestine. The pregnant female worms move to the anus and deposit large numbers of eggs in the skin around that area. Pinworm, which is often spread in day care centers, schools, and camps, affects as many as 1/3 of all American children.**
- **Female worms crawl out of the anus and lay about 15,000 eggs per day. Once airborne, the eggs can survive about 2 days anywhere in your living environment. After laying her eggs, the female dies. At body temperature the eggs develop quickly and are infective (contain 3rd stage juvenile worms) in about 6 hours. When ingested by another person the eggs hatch in the small intestine and the juvenile worms grow into adult, sexually mature worms in about a month.**
- **They love clean conditions.**
- **Pinworm can infect one in five children.**
- **Worldwide about 500 million are infected with pinworm.**

SYMPTOMS:

- **Itching and irritation of anus. Worst at night when female worm deposits her eggs on the person infected, may lead to difficulty sleeping also.**
- **Sometimes can see on sheets**
- **Digestive disorders**
- **Can cause bloody bowel movements**
- **Fevers**
- **Poor appetite**
- **Insomnia**
- **Irritability**
- **Nervousness**
- **Picking Nose**
- **itching and irritation of vagina**
- **Children show digestive disturbance,nervousness, irritability, insomnia.**
- **Rarely do that migrate into vagina or urinary tract in girls, but if they do, they cause irritation in these areas, usually goes away on its own.**

AREAS IT RESIDES IN:

rectum

SOURCES OF CONTAMINATION:

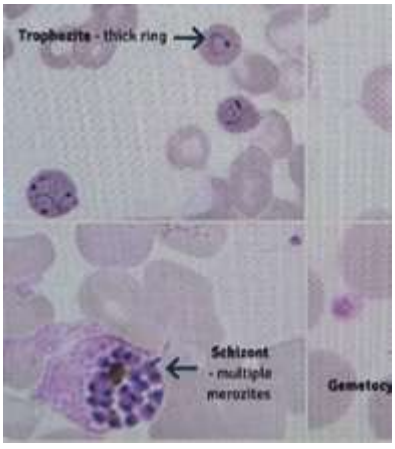
East to catch from someone who is infected. Spread by tiny eggs deposited around the anus by the worms. When someone with pinworms scratches this area, eggs lodge under the fingernails and can be spread to anything the or she touches. Eggs are also spread by dust, clothing, bedding or toys.

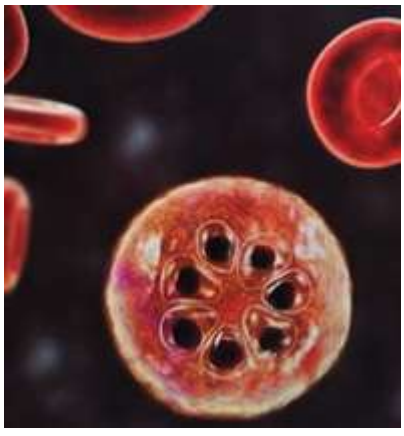
When someone else accidentally eats the eggs they also become infected with pinworms. When eggs hatch, new worms crawl back into intestine to reinfect the same person.

HOW TO HELP:

- **oral anti-parasitic medications that can kill the worms in just two doses**
- **Bitter melon**
- **Treat whole family with pinworm or threadworm homeopathic.**
- **Herbal: mash 2 cloves garlic, boil in 6 oz milk, let cool and strain. Prepare enema by injecting 4 oz of this into rectum 3 nights in a row, wait 7 days and repeat.**

PLASMODIUM SPECIES (blood parasites)





Plasmodium is a genus of unicellular parasites that cause malaria, infecting red blood cells in human and other animals. It is spread when a female Anopheles mosquito injects sporozoites into the bloodstream.

Of the 156 names species of Plasmodium, only 4 are known to infect humans:

P. falciparum

P. vivax

P. ovale

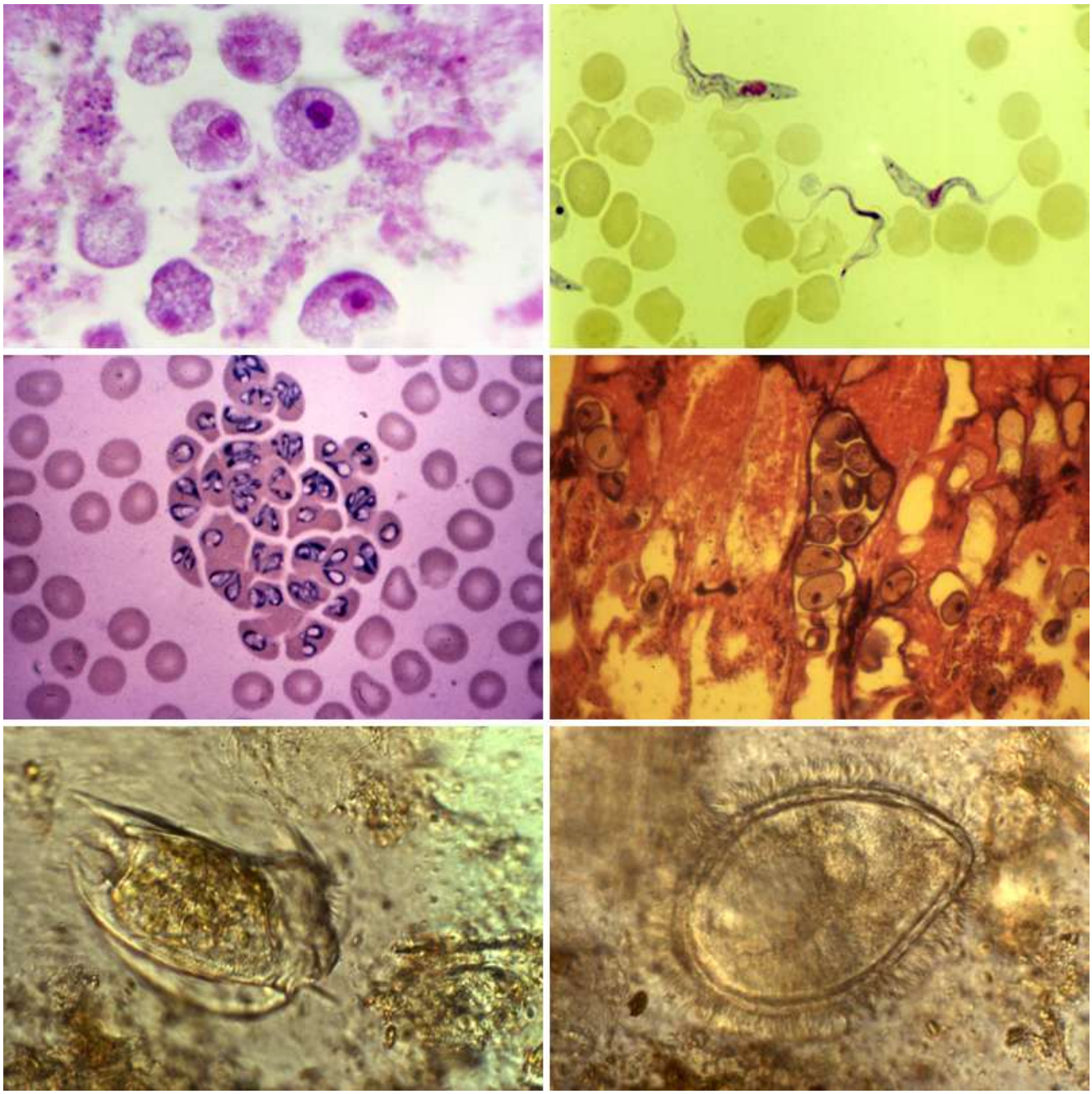
P. malariae

These blood parasites utilize two separate hosts to assist with the life stage development. The cycle begins with an infected mosquito of the genus Anopheles. The mosquito injects sporozoites of the parasite into a human host as it simultaneously draws blood for its meal. These sporozoites then continue to infect liver cells and pass through several life stages in the liver (these parasites can remain dormant in the liver, reinfecting the host weeks or even years after the initial infection)

The parasites multiply while occupying the liver and then pass into the red blood cells. Once in the blood, the parasites will set about causing the damage that is ultimately responsible for the symptoms of malaria.

They can also then be passed on to a mosquito during a blood meal, beginning the cycle anew.

PROTOZOA



DESCRIPTION:

- **Single cell parasite.**
- **Member of amoebae family.**
- **HIghly intelligent. Spiroketes have 10 times the number of genes that Syphillis has; Protozoa has 10 times the number of genes that spiroketes have.**
- **Neospora caninum is a member of protozoa family, found mostly in brain and spinal cord, similar to Toxoplasma and may be factor in some multiple sclerosis.**

- **Isospora are found in intestine**
- **Plasmodium malariae uses the mosquito to spread malaria**
- **Leishmania donovani spreads leishmaniasis**
- **Trypanosoma gambiense uses the sandfly to spread sleeping sickness**
- **Pneumocystitis are in lungs**
- **Dientamoeba and Chilomastix are in the digestive tract**
- **Sarcocystis is found in muscle tissue, releasing toxins.**
- **Balantidium are found in intestines, releasing tissue destroying enzyme "hyaluronidase"**
- **Cryptosporidium and Babesia and Retortamonas are less common.**

TRANSMISSION:

It is easily passed by food handlers in the cyst stage of the parasite.
Air borne cysts can be inhaled.

SYMPTOMS:

Simulates arthritis, leukemia, Hodgkin's
Favours joints, esp. upper ones at first
Mimics many disease eg. MS, diverticulosis, cancer, arthritis, lupis, irritable bowel, ulcerative colitis, hepatitis, lymphoma, hodgkins, leukemia, ovarian cysts
Causes Crohn's disease
Can lead to stomach cancer
Paget's disease is protozoa
Weakens immune, stresses, traumatizes and leaves body unable to produce enough antibodies to keep organisms under control.
Can bind with chickenpox or smallpox
Coxsackie binds with protozoa, test together.

AREAS IT RESIDES IN: joints

SOURCES OF CONTAMINATION: food

HOW TO HELP:

Protozoa: 2 tsp liquid chlorophyll in 4 oz water twice daily. Take lots of Minerals.
use protozoa kit homeopathic.
Protozoa homeopathic kit. Also take Thuja and Ipecac
While fighting infection avoid white potatoes, eggplant, tomatoes, red peppers.
Before each meal take 3 cuprum homeopathic copper formula (12X potency) and 3 ipecac homeopathic formula(12X potency) and 10 drops of protozoa homeopathic formula.

ROPE WORM

It is possible that these are intestinal lining shedding and not parasitic worms. People using MMS which is a bleach to regain health, notice these 'rope worms' after using the MMS. It was removed from the market due to its uncertainy.



Wikipedia:

Rope worms (or ropeworms) are long thin pieces of intestinal lining that are misidentified as human parasitic worms. "Rope worms" were described in 2013 in two self-published papers by Volinsky, Gubarev et al. They are not actual parasites, but intestinal lining shed from the gut following the use of bleach enemas (sodium chlorite mixed with citric acid, forming chlorine dioxide and marketed as Miracle Mineral Supplement) and other similarly ineffective and dangerous cleanses and treatments, such as the lemon enema described by Volinsky intended to remove parasites.

Symptoms:

- **Bloating of the abdomen.**
- **Unusual gas that does not go away with treatment.**
- **Bubbling sensation in the belly.**
- **Food intolerances and environmental sensitivities.**
- **Skin problems like acne and eczema.**
- **If they are a parasite, how do they get in? raw food? or vaccinations? or pharmaceutical drugs?**

ROUNDWORM (Ascaris lumbricoides) also see under Ascaris





DESCRIPTION: Ascaris lumbricoides is the human form.

Egg of this nematode has relatively thick warty shell wall, highly resistant to external environment.

Adult resembles large earthworm, white or pinkish-white, cylindrical roundworms, slightly narrower at head. The more slender males measure between 10-30cm long and have a cured tail with 2 spicules, but no copulatory bursa. Females sligtly larger 20-35 cm long, a vulva approx. 1/3 of the length from the head, with blunt tail. Both have smooth, finely striated, cuticle and a mouth characteristic of all of the Ascarids (eg. Toxocara), having 3 lips each, equipped with small papillae. Intenally, they follow the generalized body plan of all nematodes, with cylindrical oesophagus opening into flattened ribbon like intestine.

TRANSMISSION:

Extremely common. 1500 million cases worldwide.

Can catch from eating raw foods if larvae present.

Cannot catch from dogs or cats - they are a different species.

In 16th century it was believed they were spontaneously generated in the intestines - not true.

They have a direct lifecyle, no intermediate hosts. Adult parasite lives in the lumen of the small intestine of man, usually only feeding on semi-digested contents of the gut, although some evidence of feeding on blood and tissue fluids. Female is highly prolific, laying 2,000,000 eggs daily. In the intestine these only contain an unembryonated mass of cells, differentiated occurring outside the host.

This requires temp. less than 30C, moisture, oxygen, before the development of young L1 larvae after approx 14 days. Eggs contain the L2 larvae take another week to develop before they are infective to man and they may remain viable in soil for many years if conditions are optimal.

Infection occurs on ingestion of raw food such as fruit or vegetables that are contaminated with these infective eggs. The eggs then hatch in the small intestine to release the L2 rhabditiform larvae (meas. approx 250 X 15um in size). These do not simply grow into the adult forms in the intestine, but must then undergo a migration through the body of their host. These L2 larvae penetrate the intestinal wall, entering the portal blood stream, then migrate to the liver, then heart, then after between 1-7 days, the lungs. Here they molt twice on the way to form L4 larvae, meas. 1.5mm long), then burrow out of the blood vessels, entering the bronchioles. From here they migrate up through the air passages of the lungs, to the tracea. They then enter the throat and are swallowed, finally ending up in the small intestine where they mature and mate, to complete their lifecycle.

Up to 85% of infections appear to be asymptomatic, no gross pathology. However the presence of these parasites appears to be associated with the same general failure to thrive in their hosts seen with many of these intestinal nematodes.

SYMPTOMS:

Has been known to cause intestinal obstruction and appendicitis.

Calcium deficiency

Pathology regarding Ingestion and Migration of Larvae: severe symptoms of ascaris infection may be associated with migrating larvae, esp. in lungs. If large numbers of these larvae are migrating through the lungs, similtaneously, this may give rise to a severe haemorhagic pneumonia. More commonly, this is on a smaller scale, but

breathing difficulties, pneumonia, fever may occur.
Many of the parasites proteins are allergenic. Because of this the presence of migrating larvae in the lungs is often associated with allergic hypersensitivity such as asthma attacks, pulmonary infiltration, urticaria, edema of the lips.

Adult Parasites in Intesting: generalized digestive disorders such as vague abdominal discomfort, nausea, colic. If heavy infection there may be undernourishment. If mass of worms block intestine, may need to be surgically removed or it can be fatal. This may also occur sometimes on treatment for other intestinal nematodes such as hookworms where the curative drug dose for these parasites irritates the ascarids.

Wandering Adults outside of Intestine: adult parasites often leave small intestine to enter other organis, sometimes in response to antihelminthic drugs used to treat other intestinal nematode infections) where they may cause various problems. Adult ascaris worms may migrate to bile duct, creating blockage and causing jaundice and interference with fat metabolism. If they to into the appendix or through the intestinal wall, it may cause fatal peritonitis as they may carry intestinal bacteria to these sites. If they go forward through the intestinal tract they can be vomited up or emerge through the nose or enter the trachea and cause suffocation.

AREAS IT RESIDES IN:

see above

SOURCES OF CONTAMINATION:

Food

PREVENTION:

not contagious
wash foods carefully
do periodic parasite cleansing
Drugs used: mebendazole, piperazine
Herbs: anthelmintics such as black walnut, artemisia, butternut, cloves, cascara, calendula to soothe, echinacea if infection
also berberine herbs such as goldenseal, barberry, oregon grape.

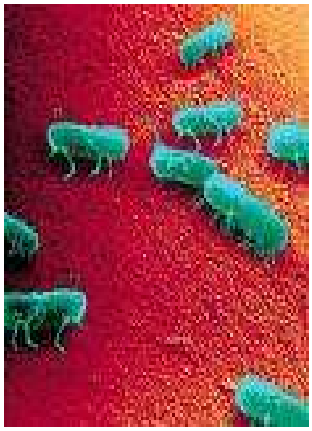
HOW TO HELP:

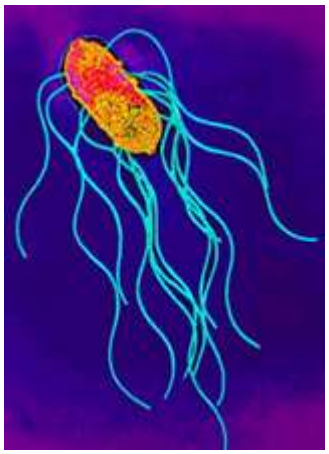
General herbal cleanses usually handles easily.

note: in Europe and Far East it has long been believed that ascaris worm entering heart would cause sleep walking at full moon, sometimes sudden death.
Ascaris worms have been ground, juiced, burned to ash, dried or partially decomposed and used by ancient Chinese to treat eye problems. Some cultures used as aphrodisiac.
These eggs have been found fossilized, oldest being 30,000 years old.

SALMONELLA (classified as a bacteria, not a parasite)







The name was in honor of Daniel Elmer Salmon, an american veterinary pathologist.

DESCRIPTION:

Salmonella is a genus of motile, gram-negative bacillus, nonspore-forming, aerobicto facultatively anaerobic bacteria of the familyh Enterobacteriaceae. In 1880 Karl Ebert was the first to observe Salmonella from a specimen of typhoid fever. In 1884 confirmed the findings. It was thought incorrect that it was a germ caused by the hog cholera, later more findings until we arrive today and quite a body of evidence.

This is a rod shaped bacterium in same family as escherichia coli, the family Enterbacteriaceae or "enteric" bacteria. They live in the intestinal tracts of warm and cold blooded animals. Other species are specifically adopted to a particular host. In humans they are the cause of two diseases called 'salmonellosis: enteric fever (typhoid), resulting from bacterial invasion of the bloodstream, and 'acute gastroenteritis' resulting form a foodborne infection.

TRANSMISSION:

Spoiled food
Chicken meat undercooked
Eggs

SYMPTOMS:

Nausea, fever,
diarrhea beginning 12-72 hours after consuming a contaminated food or beverage
Stomach cramps
Vomiting for 1-4 days if severe
Illness usually lasts 4-7 days, most recover without antibiotics but the frail, aged may need hospitalization.

Salmonella typhi is considered typhoid fever. People with typhoid fever carry the bacteria in their bloodstream and intestinal tract and can spread the infection to others by contaminating food or water. Symptoms of typhoid fever is constant fever up to 104F, diarrhea, constipation,

stomach pain, headache, tired, cough, slow heart rate, anorexia and symptoms usually occur within 1-2 weeks after exposure but can occur from 3 days to 3 months after exposure. The fever is treated with antibiotics and the person recovers in 2-3 days after prompt treatment. If not treated promptly, it can last weeks or months and as many as 20% can die from complications.

SOURCES OF CONTAMINATION: **Undercooked food, raw meat, esp. poultry**

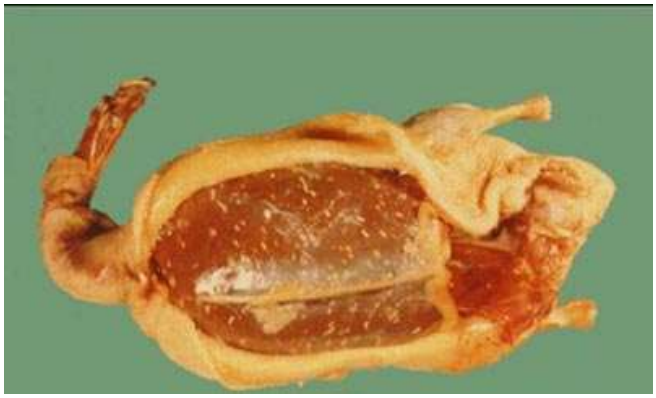
PREVENTION:

Wash hands after touching raw meat
Refrigerate dairy and egg products
Cook poultry products well.

HOW TO HELP:

Homeopathic Salmonella formula
Apple cider and vinegar
Combination: Echinacea, Black Walnut leaves, Russian Black Radish: equally. Grind and fill caps and take 2 caps three times a day 15-30 minutes before meal.

SARCOCYSTIS



DESCRIPTION:

Protozoa family

Similar to Toxoplasma gondii

unicellular, found in muscles and other tissues of mammals, birds, reptiles. In recent years it has been shown that some species of Sarcocystis in cattle and sheep are the intermediate stage of coccidian parasites found in cats, dogs and humans. There are some morphological differences between the cysts of different animals.

TRANSMISSION:

At first it was thought the transmission was from animal to animal by eating the flesh containing sarcocysts. However now they find carnivores and omnivores pass an infective stage of the parasite in their feces and an animal is infected by ingesting material contaminated by the infected feces.

SYMPTOMS:

Infects muscle, causing pain, swelling, degeneration

Releases toxin "sarcocystin" which may affect central nervous system, heart, lung, adrenals, liver, intestines

Lameness and weakness, paralysis if heavy infestation. Diagnosis finds cysts in striated muscle after the animal's death.

AREAS IT RESIDES IN:

Muscle tissue.

SOURCES OF CONTAMINATION:

Undercooked meat or ingesting spores

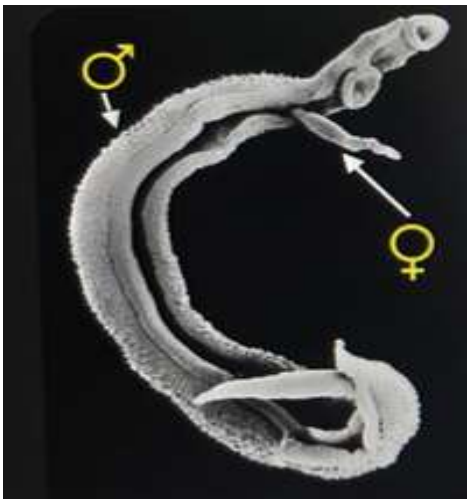
PREVENTION:

Proper sanitation. Careful of wildlife as well as domestic animals you eat that may be contaminated.

HOW TO HELP:

Treat same as toxoplasmosis.
They say no effective treatment.

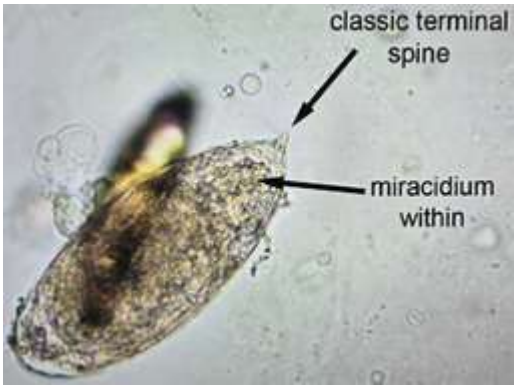
SCHISTOSOMA SPECIES (blood fluke parasite)



Mansoni



Japonicum



Haematobium

The Schistosoma species of blood fluke parasites, genus of trematodes. They are responsible for the disease called schistosomiasis. There are three species in the Schistosoma family that are known to infect humans:

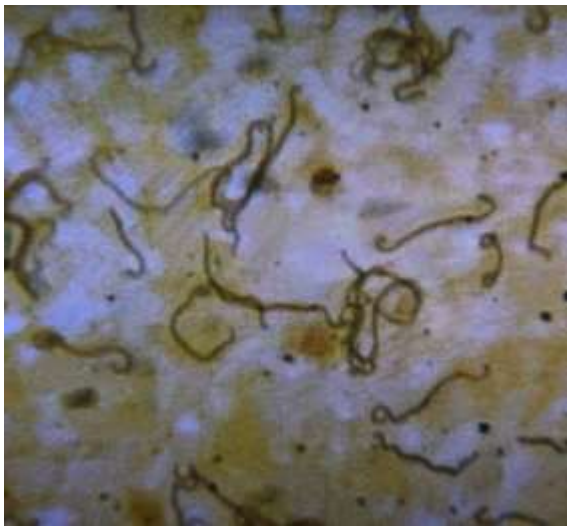
1. **Schistosoma haematobium is a urinary blood fluke. Found in Africa and Middle East. This is the most prevalent infection. They live in the vascular system (portal blood) of humans and other vertebrates. It is the only blood fluke that infects the urinary tract causing urinary schistosomiasis, leading cause of bladder cancer.**
2. **S. japonicum. Infects at least 31 species of wild mammals. At risk are farmers who might wade in their irrigation water, or if people wash their clothes in streams. Occurs in China, Philippines, Indonesia, Southeast Asia. These have a long oval body with a fork tail, 2 suckers, short lived at only 24-72 hr. Male/female similar to other Schistosomas.**
3. **S. mansoni – they have the female living in the canal within the male parasite. The females are longer and more slender.**

Two other species, more localized geographically, are S. mekongi and S. intercalatum. Schistosoma parasites begin their lives as eggs that are excreted from a host in feces or urine. Once the eggs hatch, the parasites will swim in the water until they infect a SNAIL as their new host. They pass through several life stages within the snail and are again excreted as parasites that can penetrate the skin of the newest host, humans.

Schistosoma migrate through several tissues and pass through several life stages until they make their permanent home in the veins. These blood parasites may occupy the veins around with the large or small intestine, and they are capable of migrating between the two sites. Once in the veins, the female parasites will begin to lay eggs that will gradually progress from the intestines to the bladder until they are subsequently excreted with the fees or urine. Schistosoma parasites average 7 - 20 millimeters in lenth.

They are found in the waters in certain parts of South America, Africa, the Carribean, Asia and Middle East.

SPIROCHETE (classified as a bacteria, not parasite)





DESCRIPTION:

Tiny organisms.
Spiral shaped.
Multiply in the blood and lymph system.
Spirochete is the largest, Treponema (syphilis) is the smallest. Also: Borrelia (lyme disease-has no LPS), Saprospira, Cristispira, Brachyspira, Brevinema, leptonema, leptospirosis, spirochaeta and many others.

Many organisms within the Spirochaetota phylum cause prevalent diseases. Pathogenic members of this phylum include the following:

Leptospira species, which causes leptospirosis. Enters the body from contaminated water or soil. Affects various animals and people. Can lead to kidney damage, meningitis. It is spread in the urine (pee) of infected animals. The risk of this disease increases after a hurricane or flood when people have contact with contaminated water or soil.

Borrelia burgdorferi, B. mayonii, B. bissettiae, B. garinii, B. afzelii, B. spielmanii, B. lusitaniae, which cause LYME disease. This is a tick borne parasite that normally doesn't hurt small mammals, but in people can result in Lyme disease.

Borrelia recurrentis, from lice or ticks, which causes relapsing fever

Treponema pallidum subspecies which cause treponematoses such as SYPHILIS and yaws. Enters the body through mucosal surfacaes or microabrasions of epithelium usually during sex contact with infected person or from mother to child during pregnancy or childbirth

Brachyspira pilosicoli and Brachyspira aalborgi, which cause intestinal spirochaetosis. Enters the body through ingesting contaminated food or water, then colonizes intestinal tract of animals and people. It then attaches to the surface of colonic enterocytes, disrupting intestinal absorption.

TRANSMISSION:

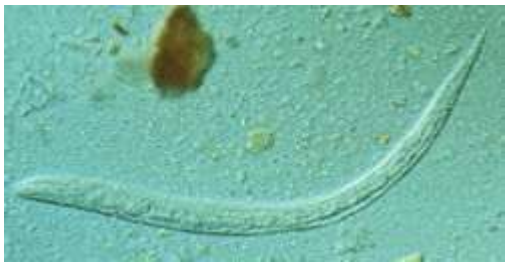
Lice, ticks, fleas, mites, flying insects, contaminated water/food.

SYMPTOMS:

Spirochete spiral away from antibiotics, burrowing into bones, cells, joints, and nerves. They can even cross the blood-brain barrier, bringing Lyme disease into your central nervous system. They replicate and spread; all it takes is one dormant spirochete to start reproducing for a Lyme infection to flare up. This is why late-stage Lyme—which goes untreated for a long time and has spread around the body and into the central nervous system—is difficult to treat, if not virtually impossible to fully eradicate.

Relapsins fever – fever episodes separated by periods when you feel better. Fever, headache, muscle pain.
Infectious jaundice – liver inflammation, pale yellow skin, dark urine, pale stools, fatigue.
Lyme disease - fatigue, brain fog, inflammation, and migraines
Sores, ulcers-
Vincent's angina - from fusiform and spirochetal organisms, causing painful ulcerative membrane tissue of mouth and throat (trench mouth)
Wiles disease - severe form of leptospirosis, a bacterial infection caused by the Leptospira bacteria, typically spread through contact with contaminated water or animal urine. Symptoms can include fever, jaundice, and severe complications like kidney failure and meningitis

STRONGYLOIDES stercoralis aka Threadworm



Threadworm usually happens when someone walks barefoot on contaminated soil, and larvae get into the skin. Inside the body, they move to the lymph nodes and then to the lungs and throat. When the person coughs, the larvae are swallowed and move to the intestines. There they grow into adults and produce eggs. About half of the population of some African countries has been infected with threadworm

DESCRIPTION: small intestinal nematode. Causes disease of strongloidiasis. It lives in tunnels in mucosa of small intestine. Stronglyloides contains 53 species. Stercoralis has been found in cats and dogs also but in dogs is not typical and is the related S.

canis species.

TRANSMISSION: Hanna says can get from walking barefoot in south (eg. Florida, Puerto Rico, Central Africa, New Guinea). It is rarely found where fecal contaminated soil or water is rare. Usually in tropical and subtropical slimates.
Was first noted in 19th century by French soldiers coming home from IndoChina, Vietman, Canbodia, Laos.

It can reproduce one or more generations without a host. First stage larvae pass out in the feces, develop in feces on the ground to infective larvae. This can occur directly from molds or indirectly. Indirect route results first in development of free living adult females and males which mate, females lay eggs which hatch, then develop to IL stage. Direct route is 3 days vs. indirect route of 7-10 days). Indirect route however results in increased number being produced. Free living males and females die after one generation, the don't persist in the soil.

The infectious larvae penetrate the skin when there is contact with the soil. They are attracted to chemicals like carbon dioxide or sodium chloride - these chemicals are very non-specific. Larvae have been thought to locate their hosts via chemicals in the skin, eg. urocanic acid which is a histidine metabolite on the uppermost layer of skin that is removed by sweat or the daily skin-shedding cycle. The urocanic acid concentrations can be up to 5 tims greater in the foot that any other part of the human body. some of them enter the superficial veins and ride the blood vessels to the lungs where they enter the alveoli - they are then coughed up and swallowed into the gut where they live in the intestinal mucosa (duodenum and jejunum).

However most penetrate the skin and migrate randomly through the body until they reach the small intestine.

Only females will reach reproductive adulthood in the intestine. They reproduce through parthenogenesis (don't need fertilization by a male). The eggs hatch in intestine and young larvae are then excreted in feces. It takes about 2 weeks to reach egg stage from the initial skin penetration.

Adult worms can live up to a year in dogs.

They have been found living up to 65 years in adult.

SYMPTOMS: Dermatitis: swelling, itching, mild hemorrhage at site where skin is penetrated. If they reach lungs: chest may feel as if burning, wheezing, coughing, pneumonia like symptoms. Eventually intestine could be invaded: burning pain, tissue damage, sepsis, ulcers. In severe cases, edema may result in obstruction of intestinal tract as well as loss of peristaltic contractions.

AREAS IT RESIDES IN: larvae can migrate to different organs and tissues eg. lungs, intestines.

SOURCES OF CONTAMINATION: soil

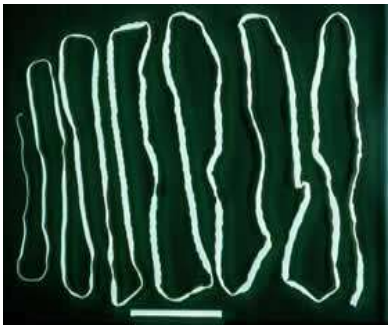
PREVENTION: **Wear shoes when you walk around on the ground. Wash hands.**

HOW TO HELP:
Immunosuppressive drugs that you might use for tissue transplantation eg. corticosteroids, can actually increase the rate of autoinfection to the point where there is an overwhelming number of larvae migrating through the lungs and this may prove fatal.
Ivermectin boasts its ability to correct stronglyoides infection.

TAPEWORMS (Cestoda)



Dwarf tapeworm





Beef tapeworm (king of the tapeworms)







Fish Tapeworm: Diphyllobothrium Latum
Dwarf Tapeworm: Hymenolepis Nana
Beef Tapeworm: Taenia Saginata
Pork Tapeworm: Taenia Solium
Rat Tapeworm: Hymenolepis diminuta (200-60cm long)

DESCRIPTION:

Types:
Bladderworms; Beef Tapeworm (biggest and usually only one present)
Pork tapeworm; Broadfish; Dog tapeworm; Cat tapeworm; Dwarf Tapeworm; Rat tapeworm
Broadfish may grow to 35 feet long and live 10 years inside the intestines
Beef tapeworm is known as the 'king of the tapeworms' and usually one exists in the bowel.
Some tapeworms can lay as many as a million eggs per day.
Their bodies are in separate segments with hooks and suction cups on their skull.

TRANSMISSION:

From eating undercooked fish, beef, pork.
Humans can become infected by ingesting the larva of the tapeworm, found in contaminated beef. The cattle ingest the tapeworm eggs from contaminated feed, the larva develop in the cattle's muscles and then humans consume the undercooked beef containing these larva.
Rat tapeworms usually from picking up grain from the ground and eating it. (Host is the rat which excretes the parasite in its feces, then this is eaten by beetles and the juvenile tapeworms claw their way out of the beetle but and way for the rat to ingest the host beetle where they mature to adult form, lay eggs and start over again.

SYMPTOMS:

Weight loss (or gain)
Abdominal discomfort, pain, cramping, colic
flatulence,
diarrhea, constipation
nausea
dizziness
vomiting
restlessness
headache
tiredness
malabsorption
anemia, megaloblastic anemia
muscle pain
vitamin deficiency
intestinal blockage
jejunal perforation
appendicitis
pancreatitis
pseudo-incontinence
rectal flutters

spontaneous voiding of segments from anus
depression, psychosis

Beef tapeworm can be several feet in length but there is only one present at a time as they lead a solitary life, however they can live up to 30 years of age. Despite its size of several feet in length, the beef tapeworm doesn't produce many symptoms. It thrives on carbohydrates that the host has consumed, utilizing the tissue of its host for a source of protein. Most symptoms are diarrhea, cramping, nervousness, nausea, loss of appetite. Drug used is Biltricide.

Pork tapeworm is similar to beef tapeworm, but shorter in size. They are transmitted through undercooked port such as fresh or smoked ham or sausage. They produce multiple worms living in the same host. Immature larvae can migrate into the muscles, heart, eyes, brain. Drug treatment: Biltricide

Fish tapeworm is the largest parasite found in humans, acquired from eating raw or lightly cooked freshwater or migratory fish (Alaskan salmon, perch, pike, pickerel, American turbot). Symptoms are pain, fullness of abdomen, nausea, anorexia. Most debilitating effect is a B12 deficiency or pernicious anemia. Treatment: Biltricide.

Rat tapeworm is not common but we have seem a farmer in Saskatchewan acquire it from eating a strand raw grain as he walked the fields, and the grain had the larvae from a tapeworm of a rat.

AREAS IT RESIDES IN:

Bowel usually

SOURCES OF CONTAMINATION:

Meat, fish, grain

PREVENTION:

Don't eat raw meat or fish
Don't eat grain in the field until it is cooked
Don't undercook meat

HOW TO HELP:

Fasting on raw pineapples for 3 days.
1 heaping tsp in the morning of diatomaceous earth on an empty stomach - mix with water or juice. It slices and dices them. Use for 2 weeks. Don't breathe the diatomaceous earth into the lungs (delicate tissue there)
One person felt that pumpkin seed oil kills some of his tapeworms.
See our handout re: tapeworms

THREADWORM – See Strongloides

TOXOCARA



Visceral larva migrans or VLM (toxocariasis). VLM is an infection causes by the roundworms Toxocara canis, Toxocara cati, or Baylisascaris procyonis.

These parasites usually infect dogs, cats, and raccoons. People can get infected by eating soil contaminated by animal feces. While the larvae do not grow to be adults in people, they go through the intestinal wall and move to various parts of the body, particularly the lungs and liver.

DESCRIPTION: Toxocariasis is an infection of the roundworms Toxocara Canis and Toxocara Cati, the dog and cat roundworms. Toxocariasis typically infects children since they are often playing in the dirt, playing with cats and dogs and putting their fingers into their mouths.

TRANSMISSION: Dogs and cats pass the toxocara roundworm eggs in the stool which subsequently infects the soil.

OCULAR larva migrans happens when the roundworms enter the eye, causing inflammation and scarring on the retina - this can cause partial loss of vision and blindness. Eye pain, redness, floaters, vision changes, possible vision loss.

VISCERAL Larva Migrans happens when there is multiple infections, causing swelling of organs and central nervous system. Symptoms are fever, coughing, asthma, pneumonia. Abdominal pain, rash, liver and lung issues.and often the symptoms are treated with anti inflammatory medications.

SOURCES OF CONTAMINATION: Toxocara in humans (toxocariasis) happens when people accidentally swallow parasite eggs from dog or cat feces—often through contaminated dirt, soil, sand, or unwashed hands. Many people have no symptoms, but more severe cases can affect organs like the liver and lungs or cause ocular toxocariasis, which can lead to vision loss.
Other transmission: sandboxes, unwashed fruits and vegetables.
Once ingested, the eggs hatch in the intestines, and larvae penetrate the intestinal wall, spreading through the bloodstream to various organs.

PREVENTION:

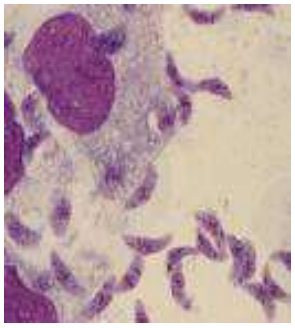
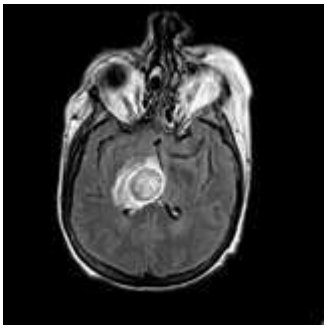
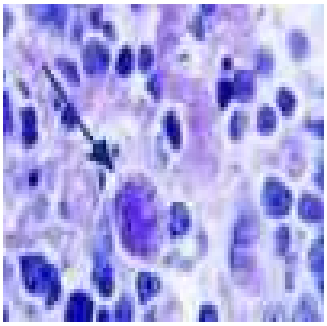
- **Get dogs dewormed regularly. Wash hands after handling pets, especially feces/stool.**
- **Wash hands regularly, especially before eating**
- **Wear gloves while gardening**

- **Teach children not to eat soil or sand, careful of the sandpit or playground they play in.**
- **Ensure pets are regularly dewormed**
- **Clean up pet feces promptly to prevent contamination**
- **avoid consuming unwashed raw fruits, vegetables, or unpurified water harvested from environments exposed to infected animal waste**
- **avoid eating raw or undercooked meat that may contain the encysted roundworm.**

HELP:

Kroeger has homeopathic remedy "Toxocara"
Albendazole or mebendazole to kill larva
Corticosteroids for severe symptoms or eye involvement
American wormseed extract. Do not overdose, it can cause severe poisoning. Don't do if pregnant or nursing.
Garlic bulb extract. High doses can upset stomach, careful not to use much if on anticoagulant drugs.
Pumpkin Seed Extract.
Papaya seed extract. High doses can cause stomach irritation, nausea, and laxative effects. Avoid use during pregnancy
Neem leaf extract good for roundworm larva.

TOXOPLASMA (toxoplasma gondii)

DESCRIPTION: **Causes disease known as Toxoplasmosis. Protozoan. Infects warm blooded animals and people, most especially cats. Animals are usually infected by eating infected me or eating cat feces which has been infected or by transmission from mother to fetus.**
Up to 1/3 of the world's population is estimated to carry a Toxoplasma infection.

IT HAS ALWAYS BEEN A PRECAUTION OF PREGNANCY TO AVOID CONTAMINATION BECAUSE OF THE RISK TO THE FETUS.

TRANSMISSION: **From contaminated cat feces. Hand to mouth contact when gardening, cleaning cat litter box, contact with children's sandpits, touching anything that has come into contact with cat feces.**
Also from drinking contaminated water, and infected organ transplant or blood transfusion. And from eating undercooked meat.

It is quite hardy, can survive freezing down to 12 below celsius, bleach, and can survive in the environment for over a year. However above 66 degrees celsius (150F), it is killed, therefore killed by cooking. Also killed keeping 24 hr in domestic freezer.

SYMPTOMS: During first few weeks, mild flu like symptoms, swollen lymph nodes or muscular aches and pains (or no symptoms at all). After the first few weeks of infection have passed, parasite rarely causes any symptoms in a healthy adult, but if the person has a weak immune system eg. HIV, or pregnant, or having undergone chemo, or organ transplant, may become seriously ill and occasionally can be fatal. Parasite can cause encephalitis (inflammation of brain) and neurologic diseases and can affect heart, liver, eyes.

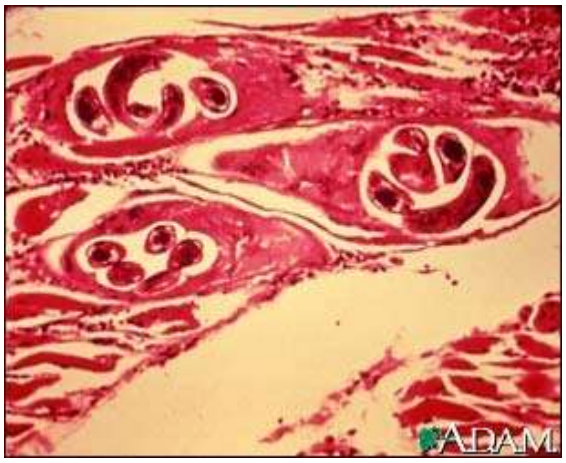
AREAS IT RESIDES IN: Contaminated cat feces.

SOURCES OF CONTAMINATION: Cat litter boxes, sandboxes, soil. Drinking water. blood transfusion

HOW TO HELP:

Kroeger has homeopathic remedy "Toxoplasmosis"
Daikon root, cooked or raw
Oregano
Oregon Grape Root
Wormwood
Goldenseal
Garlic
Berberine
Essential oil Thyme, Nutmeg
Homeopathic "Toxoplasmosis" is made from the parasite

TRICHINA SPIRALIS (causes trichinosis "trichinellosis trichinellosis")



DESCRIPTION:

Discovered in human cadaver in 1835.

TRANSMISSION:

Usually from eating pork, bear, or boar undercooked that has the tiny eggs present.

After trichinotic flesh has been eaten the capsules are dissolved off by the gastric juice; the worms pass into the small intestine where they reach their sexual maturity. Copulation then takes place and on the 6th or 7th day after ingestion of the meat, the first embryos appear. From the intestine the embryos pass to the muscular tissues. It may bore through loose connective tissue or distribute itself through the vascular and lymph system (opinions differ). After embryos have reached the muscles, changes take place.

SYMPTOMS:

Severe trichinosis infestation may result in death within 6 weeks. Muscle biopsy can determine presence of encysted larvae of Trichinella spiralis. The eggs or worms don't occur in stools.

Causes Trichinosis.

Observation of victim: pale, tongue thickly coated, slight fever, soreness in limbs, great pain when pressure on muscles, tender bones and skin. Person reported 6 weeks earlier as having vague pains and heavy feelings in the leg muscles and had eaten incompletely cooked pork.

AREAS IT RESIDES IN:

Muscle tissue

SOURCES OF CONTAMINATION: **food**

PREVENTION:

- **Don't eat undercooked pork.**
- **Kroeger has homeopathic remedy for Trichinosis**
- **Early research focused on antiparasitic herbs (e.g., black walnut, wormwood) but shifted to polyphenol-rich foods, probiotics, and immune-modulating compounds as mechanistic understanding of Trichinella spiralis life cycles advanced . So onions, apples and dark berries.**
- **Lactobacilluis rhamnosus GG probiotic**
- **Berberine**
- **Garlic**
- **Vitamin C for faster recovery**

TRICHIMONAS (causing Trichomonas Vaginalis)



DESCRIPTION:

Trichomonas is caused by a single cell pear shaped protozoa parasite with a tail (flagellate).. First discovered in 1836, proven common sexually transmitted disease. Rarely causes symptoms in men but they can reinfect their partners.

Not to be confused with another common vaginal infection is bacterial vaginosis which is seen as clear grayish, foul smelling like fish. Also Candida vaginitis is very common from using antibiotics, oral contraceptives, steroids, immune diseases, pregnancy, and diabetes (symptoms are intense burning, pruritus and erythema, thick curdy cottage cheese discharge)

TRANSMISSION:

Sexual transmission

Taking antibiotics or birth control pills often set the stage for the weakened tissue that this predator can work in.

SYMPTOMS:

Frequently has no symptoms. Usual discharge is yellowish or can be whitish or greenish, frothy. Vaginal itchiness is common. May feel burning. Lower abdominal pain or pain with urination, pain during intercourse. Usually symptoms worsen around menstruation period. Vagina and cervix can be swollen and irritated (strawberry cervix)

AREAS IT RESIDES IN:

vagina in females

Urethra, epididymis and swelling in prostate gland in males.

HOW TO HELP:

Trichomonas Vaginalis is a protozoa that lives in the vagina and urinary tract of females, and in the prostate and urinary of males.

Try "trichomonas" (h) and Marshmallow Root Tincture or Tea.

TRYPANOSOMA BRUCEI (blood parasite)



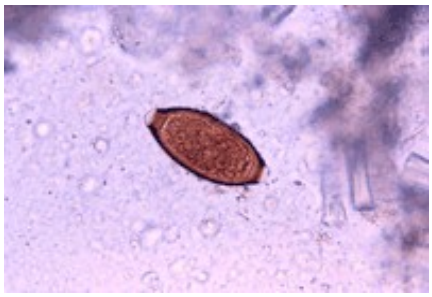
Trypanosoma brucei is a species of parasitic protozoan that causes African trypanosomiasis, also known as sleeping sickness, in humans. It is transmitted by the bite of infected TSETSE FLIES. It has two species:
Gambiense is responsible for West African sleeping sickness, causes chronic form of the disease.
Rhodesiense causes East African sleeping sickness, lads to more acute form of disease.

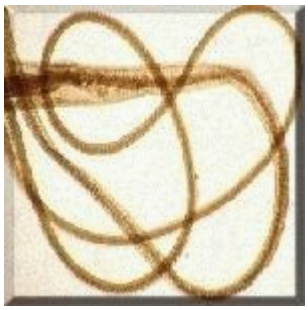
The tsetse fly is critical to the development of these blood parasites. Life cycle begins with an infected tsetse fly that then bites a mammalian host.

With each bite the fly injects metacyclic trypomatigotes into the skin tissue of the host. This passes the parasites into the lymph system of the host where they can then pass into the blood stream. Once inside the host they pass through several life stages, moving to various sites of the body, and infecting other blood fluids such as lymph fluid and spinal fluid. If this mammal were then bitten by another tsetse fly, it would pass the blood parasites on to that fly and can allow the process to begin again. It takes approx. 3 weeks before an infected fly can become an infecting fly.

Be very careful when travelling to countries that have the tsetse fly.

WHIPWORM (Trichuris Trichiura)





Whipworm causes infestation after consumption of eggs contaminating foodstuffs. It reproduces in the intestinal tract and the eggs are found in the feces. Heavy parasite loads may result in dysentery in the host.

There are approximately 60 species of whipworms that infect mammals. Only two are considered here, the human whipworm, *Trichuris trichiura*, and the canine whipworm, *T. vulpis*. These two species have a high degree of host specificity, but canine whipworms have been recovered from humans on rare occasions. Whipworms get their name from the characteristic shape of the adults.

Ascariasis and trichuriasis are the scientific names of these infections. Ascariasis is commonly the large roundworm infection and trichuriasis is whipworm infection. Whips are parasitic roundworms that infect the large intestine. They develop in climates that are warm and moist. They are very long and have a whiplike shape. Whipworm disease is called Trichuriasis.

DESCRIPTION:

1-2" long

TRANSMISSION:

- **Infections from whipworm are estimated at several hundred million worldwide.**
- **It is estimated that over 500 million people are infected with whipworm.**
- **A whipworm infection happens when a person eats food contaminated with soil that has the eggs of the worm. After eggs are eaten, larvae hatch and attach themselves to the large intestine.**
- **Infection occurs through the ingestion of eggs that are usually found in dry goods such as rice, beans and other grains.**
- **The adult whipworm burrows its thinner end into the large intestine where it will grow up to 2 inches in length. The adults live in the host's large intestine with their anterior ends embedded in the cells that line the intestine; each female can produce in excess of 10,000 eggs each day, and the worms can live several years. The eggs are passed in the host's feces, and they become infective in about three weeks. When an infective egg is eaten by the appropriate host it hatches in the small intestine, and the juvenile worm migrates to the large intestine where it reaches sexual maturity.**
- **The unembryonated eggs are passed with the stool. In the soil, the eggs develop into a 2-cell stage , an advanced cleavage stage , and then they embryonate ; eggs become infective in 15 to 30 days. After ingestion (soil-contaminated hands or food), the eggs hatch in the small intestine, and release larvae that mature and establish themselves as adults in the colon. The adult worms (approximately 4 cm in length) live in the caecum and ascending colon. The adult worms are fixed in that location, with the anterior portions threaded into the mucosa. The females begin to oviposit 60 to 70 days after infection. Female worms in the cecum shed between 3,000 and 20,000 eggs per day. The life span of the adults is about 1 year.**

SYMPTOMS:

Infection may be in apparent unless noticed when passed in feces or occasionally crawling up into troat and trying to exist mouth or nose. Infection with numerous worms may result in pneumonitis during migratory phase when larvae have hatched from the ingested eggs in the lumen of the small intestine, penetrated into the tissues and by way of lymph and blood systems, reached the lungs. In the lungs, the larvae break out of the pulmonary capillaries into air sacs, ascend into throat and descend into small intestine where they grow, becoming as large as 31 X 4 cm.

Molting occurs at various points, typical for roundworms, the male and female adults in the intestine are 5th stage nematodes.
Value digestive tract discomfort, with perhaps intestinal infection. If large amounts, may create blockages. May penetrate into tissues of other organs.
See Round worms - similar.
Blood streaked stools
Dysentery
Blood loss which may lead to anemia due to iron deficiency
Vit A deficiency is possible
Pain in lower abdomen
Weight loss
Rectal prolapse
Nausea
Anemia
Hemorrhage can occur when worms penetrate intestinal wall and bacterial infections usually follow.

AREAS IT RESIDES IN:

Bowel, Sinus cavity

SOURCES OF CONTAMINATION:

Food that contain the eggs.

HOW TO HELP:

Kroeger homeopathic "whipworm"
If in sinus cavity, do nasal wash and add 1 drop oregano oil
Use usually herbal helpers

HERBS FOR PARASITES:

Angelica (*A. archangelica* and *A. sinensis*)

Along with *Echinacea purpurea*, are widely used herbs for the treatment of the protozoa, Trichomonas. Angelica contains coumarin compounds that have been effective against this organism, as well as other worms and parasites. The American and European species are two commonly used species of Angelica. *A. archangelica*, along with the Chinese variety, *A. sinensis* or dong quai, is also reported to be superior as a treatment for all ailments of the female reproductive system. It also relieves pain by reducing cramping in muscles, but may not be as effective in the treatment of Trichomonas. Pregnant women should not use this herb, nor should diabetics, as it tends to raise blood sugar levels.

Artemisia Annua Extract (Sweet Wormwood)

Exhibits strong antimalarial properties, as well as being effective against worms and various other parasites.

Berberine-containing plants

Have been used as an antibiotic and antiparasitic for thousands of years around the world. Goldenseal (*Hydrastis canadensis*), barberry (*Berberis vulgaris*), Oregon grape (*Berberis aquifolium*), and goldthread (*Coptis chinensis*) share similar effects on parasites because of their high concentrations of berberine. It has been used in cases of infection caused by fungi, protozoa, and even viruses and bacteria. It also inhibits the overgrowth of yeast, a common side effect of antibiotic use, nor does it appear to be harmful against the normal flora bacteria. These plants also have a remarkable antidiarrheal property, even in the most severe cases of infection, and are particularly useful in infections that cause profuse diarrhea. It is also known to increase the blood supply to the spleen, thereby improving the body's immune system, plus activating the white blood cells called macrophages. Under supervision, the herb is safely used in treating children. Berberine can be used prophylactically if travelling. Suggested use begins one week before and and ends one week after the trip to areas of anticipated poor sanitation. Berberine is generally considered non-toxic at recommended dosages, but high doses can cause a lowering of blood pressure, difficulty breathing, flu-like symptoms, GI discomforts, and heart damage. Therefore, it is best used under the direction of a knowledgeable herbalist.

Black Walnut hulls (*Juglans nigra*)

Have been used for a long time to kill many kinds of intestinal worms, especially tapeworms. The active ingredient, however, is only in the green hull surrounding the nut, and must be harvested before the nut falls from the tree. This active ingredient is called juglone and exerts antifungal, antiworm, antiviral, and antibacterial effects. An extract can be used safely in recommended doses for adults, but should not be used for infants or children.

Butternut (*Juglans cinerea*)

Is a good all-purpose herb to relieve constipation and expel worms, especially threadworms and pinworms. Butternut can be safely combined with any other mixture for decreased bowel tone and as a soothing laxative in cases of chronic constipation, but should not be taken over a long time.

Calendula (*C. officinalis*)

Is commonly used as a topical remedy for the healing of wounds, pain, or irritations. A tea made from 1 tbsp. Flowers to ¼ quart of water is said to expel worms, as well as to repair tissue damage

done by them.

Cascara (*C. sagrada* and *Rhamnus purshiana*)

Helps eliminate waste as a mild, but effective, laxative, and is especially good in cases of chronic constipation. Using this one hour after eating raw pumpkin seeds will eliminate from the body the parasites that the seeds have paralyzed. Cascara is milder than Senna, with the main site of action being in the lower bowel.

Cat's Claw (*Uncaria tomentosa*)

Is a giant woody vine that grows in the Peruvian tropical forests. It has properties that help in resistant cases of imbalanced intestinal flora, infection, sluggish digestion, poor assimilation, and bile stimulation. It is very effective as an intestinal cleanser and immune system rejuvenator, possessing antimicrobial and antiinflammatory properties. It has the ability similar to white blood cells to engulf and digest harmful microorganisms. It is a good companion herb for treating most parasites except Giardia, which actually thrives when there is bile stimulation. It is virtually nontoxic, but should not be used by pregnant women.

Cayenne

Can be added to a treament plan to kill parasites. The volatile oil, capsaicin, is also recommended for digestive disorders and strengthening internal organs, particularly the heart muscle. It has an analgesic effect similar to ginger, but does present a danger if there is an existing ulcer or chronic irritation of the bowel. Bleeding and serious damage can be exacerbated.

Chaparral (*Larrea divaricata*)

Is an excellent herbal antibiotic that can be used both internally and externally against viruses, bacteria, and parasites. It is often used for intestinal tract infections, diarrhea, or urinary tract infections, and it is frequently combined with such other antibiotic herbs as goldenseal and echinacea. Externally, chaparral can be applied to wounds as an antiseptic and to the skin for itching, eczema, or scabies.

Cloves (*Eugenia caryophyllata*)

Is an ancient herbal medicine used for killing internal parasites and their eggs. The spice exhibits a broad range of antimicrobial activity against other organisms as well, including fungi and bacteria. Cloves also helps to increase the circulation of the blood, promote digestion, and eliminate gas and intestinal spasms.

Cranberry concentrate

Is rich in acids (citric, malic, quinic, and benzoic), that aid in the digestion of protozoa.

Echinacea (*E. purpurea)*

Or purple coneflower, is used to treat all manner of chronic and acute infections. It is one of the most widely used herbs for the treatment of *Trichomonas vaginalis* and as an effective douche for the treatment of other vaginal infections. Echinacea is also used as an effective blood and lymphatic cleanser and for strengthening the immune system.

Elecampane (*Inula helenium*)

Is specific for the roundworm (*Ascaris lumbricoides*), having a paralyzing effect on the worm's central nervous system. It is recommeded as the safest herb for children and has been known to be a benefit for lung ailments and digestive disorders.

Essential oils

Have a diverse antimicrobial action that can kill many types of worms and protozoa. The essential oils of peppermint (*Mentha piperita*) and lavender (*Lavandula angustifolia*) have the fastest killing effects, acting within twenty minutes and fifteen minutes, respectively. The essential oil thymol is specific for hookworms. Caution should always be taken when using essential oils to treat parasitic infections. Many of them are toxic, especially to children. Those with heart, liver, kidney, stomach, or intestinal disease should also use caution, as well as in pregnancy.

False Unicorn Root

Stimulates digestion and helps to kill and expel worms and parasites.

Fennel seed (*Foeniculum vulgare*)

Helps to remove waste material, as well as parasites, from the body. Fennel is most often used as a digestive aid and flavoring agent. It is not a dangerous plant, but the oil extracted can cause skin irritation, nausea, vomiting, seizures, and edema of the lungs. This type of fennel should not be confused with other types, including dog fennel.

Ficin (*Ficus glabrata*)

Is a well-known anti-worm remedy used in the tropics by the natives of South America and the Panama region. The latex gathered from these trees has been commercially exploited for decades because of its enzyme properties of papain and bromelain. Even though the enzymes in the plant digest living worms, it is well tolerated and nontoxic to humans when taken internally. Despite this, it still should not be used by pregnant women.

Garlic (*Allium sativum*)

Is used worldwide as a food, spice, and medicine. The active ingredient, allicin, is released after the clove is crushed. It is responsible for the characteristic odor. Deoderized concentrates contain only 30-100 parts per million of allicin and are of a questionable value if using for medicinal purposes, especially for parasites. Garlic prevents and fights infections from various sources, including fungi, bacteria, viruses, and protozoa, as well as parasites. As far as parasites are concerned, garlic is effective against roundworms, tapeworms, pinworms, and hookworms, but it can cause dermatitis in some people, as well as irritating the digestive tract. Some may also not be able to detoxify allicin and other sulfur-containing componenets effectively, but generally, garlic is the best and cheapest means of ridding any infection.

Ginger (*Zingiber officianalis*)

Works against roundworms, as well as blood flukes, and is effective in treating dog heartworm and *Trichomonas vaginali*. It is believed to have some analgesic and antispasmodic effects, as well as having properties similar to cayenne that helps relieve inflammation. It also has a long history of treating all manner of digestive upsets.

Grapefruit seed extract

Has been proven to be effective against over 800 strains of viruses and bacteria, 100 strains of fungi, plus a great number of single-celled parasites. No other antimicrobial can make such claims. Despite destroying harmful intestinal parasites, it does not significantly harm the normal bowel flora. For some time in foreign countries, grapefruit seed extract has been used as a broad spectrum antibiotic, antifungal, antiprotozoan, antiviral, antiseptic, disinfectant, and as a preservative in cosmetics. In South America, it has long been used instead of chlorine in

swimming pools and sewage treatment plants as well, as in treating drinking water, since chlorine does not kill a variety of pathogens, including Giardia. In Peru, it is used to disinfect agricultural products. The FDA is finally acknowledging that it is as effective as any other amebicide now available and perhaps more effective, without causing the side effects that chlorine is known to cause. When travelling abroad, including Mexico, it is proving to be an exceptional and simple alternative to the more harsh methods of killing parasites and other harmful organisms. Animals also respond well to grapefruit seed extract since it does not cause the side effects common in chemical dewormers.

The extract should never be used full strength when applied to the skin. The standard dilution is 33% extract and 67% glycerin. For some applications, it is best used with almond, olive, sesame, or avocado oils instead of water. Keep it away from the eyes. A few drops can be added to household cleaners and soaps for a germ-free cleanser. By using eight drops to a gallon of water, it makes a safe and effective food wash that increases the shelf life of fruits and vegetables by as much as 400%. The extract should not be used full strength when taken internally. Start with drop drop dissolved in glycerin, and then mixed with a glass of water or fruit juice. Slowly increase according to your reactions. Work up to about eight drops (or a corresponding number of pills) in a full glass of water two or three times a day until symptoms disappear. When the organisms you are trying to kill begin to die, the toxins are released, leading you to feel some discomfort or tiredness. If the symptoms become too uncomfortable, reduce the extract a little and begin to increase it again when you are feeling better. Since grapefruit seed extract can be very bitter, the debittered powder used in capsules may be a preferable choice.

For children, a capsule can be opened and the powder mixed into juice. In pill form, it can take 100-300 mg. per day to be effective for adults. One or two drops in a glass of water once or twice a day can act as a preventative against traveler's diarrhea. The extract is nontoxic and environmentally friendly. Caution should be used if there is a sensitivity to citrus. The extract is not absorbed into the intestinal tissue, so can be safely taken for long periods of time, as in the cases of Giardia and yeast infections where it may take months to eliminate.

Horsemint (*Monarda punctata*)

Can be used both internally and externally against worms, bacteria, and fungus. Horsemint contains a large amount of thymol, making it a powerful disinfecting agent. Almost 50% of this oil is excreted in the urine when taken internally, making it useful as a urinary antiseptic. There have been no reports of toxicity, but it can be irritating when applied topically. A significant amount of this plant would be needed to be toxic when taken internally.

Male Fern Root

Stuns intestinal parasites, making them easier to expel from the body.

Olive leaf extract (*Olea europea*)

Is a bitter substance produced by the olive tree, but eliminated from olives once they are cured. A new processing technique applied to an old herbal remedy has produced a nontoxic herbal parasite remedy. Olive leaf is also effective against fungi, molds, worms, and bacteria, and can be used for yeast infections. For about 4,000 years, countries of the Mediterranean, as well as those bordering, have chopped up olive leaves in liquid or salad form to prevent and treat parasitic infections. It also proved to be superior to quinine for treating malaria, but not as easy to administer, so quinine became the preferred treatment. Studies in the 1960s confirmed that olive leaf extract has the ability to counteract the malaria protozoa. The manufacturing method of this product is very important, otherwise, the ingredients bind rapidly to serum proteins in the blood, rendering them virtually useless in living organisms. Those treating parasites that are causing chronic fatigue syndrome or are harboring a large infestation of parasites may experience extreme fatigue when starting this form of therapy. Headaches, muscle or joint pain,

or flu-like symptoms may also appear. It is important to reduce the therapeutic dosage to a more comfortable level, and then increasing it slowly, allowing the body time to detoxify at a slower pace. Normally, olive leaf extract does not produce any adverse side effects.

Picrasma excelsa (*Quassia amara*)

Is a common Jamaican tree that produces a bitter tonic useful for killing amoebas, giardia, malaria, pinworms, and some roundworms. The herb does not have an odor, but does have an intensely bitter taste, which distinguishes the pure form from adulterations. This herb contains a group of alkaloids known to inhibit protozoa from reproducing by affecting their basic metabolic processes. Considerable evidence suggests that quassia is also effective against mosquito larva. Toxic symptoms are rare, but if they occur, it is usually in the form of diarrhea or vomiting. It is also a nontoxic, inexpensive, and effective means of treating head lice.

Pinkroot (*Spigelia marilandicus*)

Is a highly effective vermicide originally used by Native Americans, who introduced it to settlers and early physicians. The plant has the ability to cure infections from intestinal worms and is even effective for treating the fevers caused by parasites. It can produce some unpleasant side effects if large doses are taken; therefore, only the recommended lower doses should be given to children.

Pomegranate (*Punica granatum*)

Roots had widespread use against tapeworms until less toxic substances were discovered. The fruit rinds and bark are very astringent and effectively used to remove tapeworms and roundworms. The plant does contain an alkaloid that can be toxic if consumed in large quantities, producing such symptoms as muscle weakness, dizziness, vomiting, and diarrhea.

Propolis

Has proven to be 100% effective against some lethal protozoa and will also decrease inflammation associated with parasite infection. It is a natural antibiotic found in leaf buds or the bark of some trees. Bees collect it and add their own enzymes to line their hives, making the environment a sterile place. Propolis can create an antibiotic disease-fighting reaction to almost any illness, stimulating the thymus gland, and enhancing the body's immune system.

Pumpkin seeds (*Cucurbita pepo*)

Is a traditional remedy for worms, used for both animals and humans. Seeds of several varieties of the species *Cucurbita* have long held the reputation for paralyzing, but not killing, worms. However, the viable substance that affects the worms varies even in seeds of the same species, causing reliability to vary too much to be accurate. Therefore, it is important to take a natural laxative to move the worms out of the digestive system before they regain function. It is important to leave the fine inner skin beneath the shell intact. Children are given ten to fifteen seeds a day, and adults, twenty to thirty seeds a day for about two weeks, increasing the number of seeds if tapeworms are a problem. Follow this with a laxative about one hour after each dose of seeds. The treatment can be repeated as often as necessary without any harmful side effects -- as long as the laxatives are not taken over a lengthy period of time. When dealing with tapeworms, it is important that the entire worm be expelled, or else it will grow back. Daily consumption of pumpkin seeds may help to prevent parasites from taking up residence in the first place. Another suggestion is for pumpkin seeds and watermelon seeds to be ground to a powder and mixed with a little aloe vera juice and taken on an empty stomach every morning.

Red clover (*Trifolium pratense*)

Will kill flukes in all stages when used with cloves, black walnut hulls (green), and wormwood.

Sage

The garden variety (*Salvia officinalis*) and thyme were both used by the Romans as digestive aids, as well as for the treatment of intestinal worms and bacteria. Sage was often mixed with wormseed or white wine to relieve diarrhea or dysentery. Garden sage is not toxic, but excessive amounts can cause a dry mouth or local irritation.

Sarsaparilla (*Smilax ornata*)

Is a useful blood purifier that can also be used externally to treat skin parasites. When toxins absorbed by the intestines are excessive because the liver is not filtering properly, toxins begin to circulate in the bloodstream. Therefore, this herb can play a vital role in assisting the liver to filter and bind toxic compounds more effectively, especially those released from parasites or bacteria.

Senna (*Cassia angustifolia* and *Cassia senna*)

Is an ancient herb known for its laxative action. Today it is one of the most popular stimulant laxatives and is generally regarded as being safe for short term use, but long term dependence can develop. Senna's chief action is on the lower bowel, causing mucus secretions with rapid contractions. It is best to use it in combination with such other aromatic herbs as cardamom, ginger, fennel, etc., to reduce the cramping. As in the case of Cascara, Senna can be used one hour after eating pumpkin seeds.

Slippery elm (*Ulmus fulra*)

Is a soothing herb that quickly heals irritations of the intestinal tract, including ulcers and Crohn's-like symptoms often caused by parasites. It also normalizes bowel function, relieving constipation or diarrhea. In addition, it is an excellent binder and cleanser. Externally, slippery elm can be moistened and applied to sores, wounds, and infected areas.

Tansy (*Tanacetum vulgaris*)

Is largely used for expelling worms in children, but only under the supervision of a qualified herbalist since there are some side effects if used improperly.

Tea Tree Oil (*Melaleuca alternifolia*)

Is a powerful all-purpose antiinfective, especially against *Trichomonas vaginalis*, when used as a daily douche (0.4% solution of oil in 1 quart of water twice a day).

Thyme (*Thymus vulgaris*)

Is an ancient remedy used as a digestive aid, antiseptic, and for treatment of intestinal worms. It should not be used in large amounts, however. Externally, it can be used as a mouthwash and for cleansing the skin. It will destroy such fungal infections as athlete's foot and such skin parasites as scabies, crabs, and lice. For these purposes, a tincture or an essential oil is used. When used internally, essential oils leave very little margin for error, so use it only with supervision from a knowledgeable herbalist.

Turmeric (*Curcuma longa*)

Is a common root used in Indian dishes. It has long been used to treat dysentary and to expel worms from the body. It is also known as a body purifier, and can be use both internally and externally to heal wounds. Turmeric contains a substance that limits the inflammation caused by extensive tissue damage from parasites. Because turmeric may also stimulate the production of

bile, it should be avoided when treating the amoeba, Giardia, since bile stimulates the growth and proliferation of this organism. Regular use poses no threat, but high doses can cause ulcers.

Wormwood (*Artemisia absinthium*) - aerial parts

Is an ancient remedy used to kill various parasites -- as indicated by the name. It is effective against a variety of worms, including the giant intestinal roundworm (*Ascaris lumbricoides*). Wormwood is intensely bitter, and parasites are generally repelled because of this. The dried and powdered flowers are excellent for expelling worms, and the leaves are sufficient to eliminate all live worms and many other parasites. WORMWOOD IS MORE TOXIC WHEN USED ALONE, so it is best to combine it with other herbs. The oil of wormwood is especially toxic. Avoid giving it to children. The Chinese wormwood (*Artemisia annua*) is known as the sweet variety used to treat the parasite that causes malaria, *Plasmodium falciparum*. It contains the chemical artemesin, not found in any other species of Artemesia, and is now being viewed as a possible prototype for a new antimalarial medicine. This herb shows a broad spectrum of activity against protozoa and yeast. It is also effective against the liver fluke (*Clonorchis sinensis*), the blood fluke (*Schistosoma japonicum*), and the amoeba Giardia and other protozoa. This herb has a low toxicity level, and no side effects have been reported. It appears safe to use, even with heart, liver, or kidney diseases, as well as during pregnancy. The herb is not only effective, but quick-acting. It is able to cross the blood-brain barrier, making it effective against amoebic infections of the brain.

High doses of antioxidant supplementation should be withheld during treatment of protozoan infection, especially when using *A. annua*. When taking for a Cryptosporidium infection, use 1000 mg. three times a day for twenty days. This herb may be given along with grapefruit seed extract or other antiparasitic herb. When treating malaria with *A. annua*, use for ten days. *A. cina* is very effective against worms. Since this herb is very bitter, it is advised that children take it in pill form. *A. cina* combines well with *Cassia marilandica* (American senna). HOWEVER, this herb can be fatal, so it must be dosed out accurately and only under the care of a knowledgeable herbalist.

Yellow gentian (*Gentiana lutea*)

Is an ancient herb used for treating malaria. This gastric stimulant is used to improve digestion, and has antiseptic properties. It also possesses a strong activity against the protozoa, *Entamoeba histolytica*, as well as expelling other intestinal worms. Yellow gentian strengthens the body system, and is an excellent tonic when combined with an herbal laxative. This prevents gentian from becoming toxic. In addition, because it is a bitter herb, combining it with an aromatic herb, makes it more palatable. It is not well tolerated, however, by those with high blood pressure or pregnant women.

OTHER:

Diatomaceous Earth - 1 tsp mixed in water or juice. Will shred the skin off tapeworms.
Peppermint helps relieve gas during parasite cleansing
Turmeric root helps irritable bowel and gastro disorders.
Licorice root can be anti-inflammatory, healing expel mucous.